The Corporation of the Village of Cumberland
Regular Council Meeting Agenda

Wednesday, September 21, 2022, 5:30 p.m.
Council Chamber, 2675 Dunsmuir Avenue

We are honoured to gather on the unceded traditional territory of the K'ómoks First Nation.
The public may view the meeting live on the Village of Cumberland YouTube channel
**The Regular Council Meeting of Sep. 19, 2022 was postponed to Wednesday Sep. 21, 2022

Pages

1. Call To Order

2. Approval of Agenda

2.1. Agenda for Regular Council Meeting, September 21, 2022

Recommendation:
THAT Council approve the agenda for the September 21, 2022 Regular Council Meeting.

3. Minutes

3.1. Adoption of Minutes 5

Recommendation:
THAT Council adopt the following minutes:

- Committee of the Whole Meeting, September 6, 2022
- Regular Council Meeting, September 6, 2022

3.2. Receipt of Minutes 12
Heritage Committee August 15, 2022

Recommendation:
THAT Council receive the following minutes:

- Heritage Committee Meeting, August 15, 2022

4. Delegations

5. Correspondence

6. Unfinished Business

7. Reports

7.1. Wastewater Upgrade Project – Progress Update and Budget Amendment 16
Prepared by: Paul Nash, Project Coordinator, Liquid Waste Management Planning

Recommendation:
THAT Council receive the report “Wastewater Upgrade Project - Progress Update and Budget Amendment”.

Recommendation:
THAT Council approve the additional expenditure of up to $2,710,000 for “Phase 1 Wastewater Upgrade Project” with:

- $1,550,000 to be funded through Sewer and Water Infrastructure Asset Replacement Reserve; and
- $1,160,000 to be funded through GMF (borrowing/grant).

THAT Council approve the expenditure of up to $650,000 for “Phase 2 Wastewater Upgrade Project – Pre-Construction Program” with:

- $195,000 to be funded through Sewer and Water Infrastructure Asset Replacement Reserve; and
- $455,000 to be funded through GMF (borrowing/grant).

THAT Council direct staff to bring forward an amendment to the adopted 2022-2026 Financial Plan Bylaw to reflect these expenditures.

Recommendation:
That Council approve an increase of $2,710,000 to the Maple Reinders contract, for the “Phase 1 Wastewater Upgrade Project”.

Recommendation:
THAT Council authorize staff to enter into contracts totalling $650,000 to execute the “Phase 2 Wastewater Upgrade Project – Pre-Construction Program”.

7.2. Development Variance and Heritage Alteration Permit Amendment Applications, 2714 Dunsmuir Ave 27
Prepared by Karin Albert, Senior Planner

Recommendation:
THAT Council receive the “Development Variance and Heritage Alteration Permit Amendment Applications, 2714 Dunsmuir Ave” report.

Recommendation:
THAT Council approve heritage alteration permit (2022-01-HAP) for 2714 Dunsmuir Avenue, properties legally described as Lot 1, Block 6, District Lot 21, Nelson District, Plan 522 and The West1/2 of Lot 2, Block 6, District Lot 21, Nelson District, Plan 522.

THAT Council approve development variance permit (2022-07-DV) to vary Zoning Bylaw No. 1027, 2014 to increase the front maximum setback for the proposed development to 2.15 metres for 50 percent of the façade.

7.3. Fire Service Review Report 104
Prepared by Kevin McPhedran, Interim Deputy Chief Administrative Officer

Recommendation:
THAT Council receive the Fire Service Review Report.

Recommendation:
THAT Council direct staff to consider the recommendations of the Fire Service Review report in the 2023-2027 financial planning process.

7.4. Local Government Climate Action Program 268
Prepared by Courtney Simpson, Manager of Development Services

Recommendation:
THAT Council receive the Local Government Climate Action Program report.

Recommendation:
THAT Council direct staff to post on the Village website a completed and signed attestation form to confirm all Local Government Climate Action Program funds were, or will be, used towards climate action; and a completed PDF version of the required program survey.

7.5. Municipal Finance Authority Financing for 2022 Vehicle/Equipment Purchase 278
Prepared by Michelle Mason, Chief Administrative Officer

Recommendation:
THAT Council receive the Municipal Finance Authority Financing for 2022 Vehicle/Equipment Purchase report.

Recommendation:
THAT Council approve the short-term borrowing from the Municipal Finance Authority through the Equipment Financing Program up to $65,000 for the purchase of a 2022 bylaw enforcement van for a five year term that must be repaid in five years.

8. Bylaws

8.1. 2023 Permissive Tax Exemptions 281
Prepared by Michelle Mason, Chief Administrative Officer

Recommendation:
THAT Council receive the 2023 Permissive Tax Exemptions report.

Recommendation:
THAT Council consider first, second, third reading of the “Permissive Tax Exemption 2023 Bylaw No. 1177, 2022”.

8.2. Zoning Amendment, 4699 Cumberland Road, First and Second Reading of Bylaw 1176 286
Prepared by Meleana Searle, Planner

Recommendation:
THAT Council receive the “Zoning Amendment, 4699 Cumberland Road,

First and Second Reading" report.

Recommendation:
THAT Council give first and second reading to Bylaw 1176 cited as "Zoning Amendment Bylaw No. 1176, 2022".

9. New Business

10. Notices, Motions and Announcements

Matters considered here may include notices or motions to hold a meeting of the Committee of the Whole, a Village Hall meeting, a Public Hearing, and noticed of motion introduced by a Council Member.

- Homelessness & Affordable Housing Committee, September 21
- Public Hearing - Accessory Dwelling Units Modernization Bylaws, September 26 7:00 pm
- Committee of the Whole & Regular Council Meeting October 3

11. Question Period

A member of the public may only inquire about items included on the agenda for that meeting during a question period.

- Please send questions by email to info@cumberland.ca using subject line "Question Period"; Note: please limit to questions only - comments will not be read.

12. Closed Portion

Recommendation:
THAT Council close the meeting to the public pursuant to Section 90 of the *Community Charter* to consider:

(a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality;

13. Adjournment

The Corporation of the Village of Cumberland

Committee of the Whole Meeting Minutes

September 6, 2022, 2:00 p.m.
Council Chamber, 2675 Dunsmuir Avenue

Council Present:	Mayor Leslie Baird Councillor Jesse Ketler Councillor Vickey Brown Councillor Sean Sullivan
Regrets:	Councillor Gwyn Sproule
Staff Present:	Michelle Mason, Interim CAO/CFO Kevin McPhedran, Deputy CAO/Manager of Parks Mike Williamson, Manager of Protective Services Rachel Parker, Corporate Officer Stephane Dionne, Deputy Fire Chief

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1. Approval of Agenda

1.1 Agenda for Committee of the Whole meeting, September 6, 2022

Motion 22-511

Moved by: Ketler
Seconded by: Brown

THAT the Committee approve the Agenda for the September 6, 2022 Committee of the Whole Meeting.

Carried Unanimously

2. Closed Portion

Motion 22-512

Moved by: Ketler
Seconded by: Sullivan

THAT Council close the meeting to the public pursuant to Section 90 of the *Community Charter* to consider:

c) labour relations or other employee relations;

k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public;

Carried Unanimously

3. Adjournment

The meeting adjourned at 2:53 p.m.

_____

Mayor

_____

Certified Correct by Corporate Officer

The Corporation of the Village of Cumberland

Regular Council Meeting Minutes

September 6, 2022, 5:30 p.m.
Council Chamber, 2675 Dunsmuir Avenue

Council Present:	Mayor Leslie Baird Councillor Jesse Ketler Councillor Vickey Brown Councillor Sean Sullivan Councillor Gwyn Sproule
Staff Present:	Michelle Mason, Interim Chief Administrative Officer Kevin McPhedran, Deputy CAO/Manager of Parks Courtney Simpson, Manager of Development Services Kaelin Chambers, Economic Development Officer Meleana Searle, Planner Rachel Parker, Corporate Officer

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1. Call To Order

The meeting was called to order at 5:30 p.m.

2. Approval of Agenda

2.1 Agenda for Regular Council Meeting, September 6, 2022

Motion 22-513

Moved by: Sproule
Seconded by: Sullivan

THAT Council Approve the Agenda for the September 6, 2022 Regular Council Meeting.

Carried Unanimously

3. Minutes

3.1 Minutes

Motion 22-514

Moved by: Sullivan
Seconded by: Brown

THAT Council adopt the following minutes:

- Committee of the Whole, August 8, 2022
- Regular Council Meeting, August 8, 2022

Carried Unanimously

4. Delegations

None

5. Correspondence

5.1 R. Kishi regarding Obon Tour Sponsorship

Motion 22-515

Moved by: Brown
Seconded by: Ketler

THAT Council receive the correspondence from R. Kishi regarding the Obon Tour Dinner;

THAT Council support funding the 2022 Obon Tour event from the Obon Tour donations held by the Village in the amount of $500.

Carried Unanimously

6. Unfinished Business

None

7. Reports

7.1 Development Permit – Proposed Lot 4 (2787 Beck Avenue)

Motion 22-516

Moved by: Brown
Seconded by: Ketler

THAT Council receive the "Development Permit – Proposed Lot 4 (2787 Beck Avenue)" report.

Carried Unanimously

Motion 22-517

Moved by: Brown
Seconded by: Sullivan

THAT Council approve the development permit (2022-06-DP) for the property described as Proposed Lot 4 (2787 Beck Avenue).

Carried Unanimously

7.2 Comox Valley Regional Tourism Service Summary

Motion 22-518

Moved by: Ketler
Seconded by: Brown

THAT Council receive the Comox Valley Regional Tourism Service Summary report.

Carried Unanimously

Motion 22-519

Moved by: Brown
Seconded by: Sullivan

THAT the Village of Cumberland consents to the adoption of the Comox Valley Regional District Bylaw No. 725 being "Comox Valley Economic Development Service Conversion Bylaw No. 345, 2016, Amendment No. 3" under section 346 of the Local Government Act.

Carried Unanimously

7.3 Council Monthly Report August 2022

Motion 22-520

Moved by: Ketler
Seconded by: Sullivan

THAT Council receive the Mayor and Council monthly reports for August 2022.

- Mayor Leslie Baird
- Councillor Vickey Brown
- Councillor Gwyn Sproule
- Councillor Jesse Ketler
- Councillor Sean Sullivan

Carried Unanimously

8. Bylaws

8.1 Business Licence Amendment Bylaw No. 1171, 2022

Motion 22-521

Moved by: Sullivan
Seconded by: Brown

THAT Council give final adoption to Business Licence Amendment Bylaw No. 1171, 2022.

Carried Unanimously

9. New Business

None

10. Notices, Motions and Announcements

- Advisory Planning Commission, 4:00 p.m. September 8
- Accessibility and Inclusion Committee, 3:00 p.m. September 12
- Heritage Committee, 5:00 p.m. September 12
- Committee of the Whole, 2:00 p.m. September 19
- Regular Council Meeting, 5:30 p.m. September 19

11. Question Period

None received

12. Closed Portion

Motion 22-522

Moved by: Ketler
Seconded by: Brown

THAT Council close the meeting at 6:04 p.m. to the public pursuant to Section 90 of the *Community Charter* to consider:

(a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality;

(b) labour relations and other employee relations.

Carried Unanimously

13. Adjournment

The meeting was adjourned at 6:34 p.m.

_____

Mayor

_____

Certified Correct by Corporate Officer

DRAFT Minutes

Tuesday, August 15, 2022, 5:00 p.m.
Council Chamber, 2675 Dunsmuir Avenue

PRESENT:	Meaghan Cursons	Marianne Bell
	Hugh McLean	Tanis Frame
	Ocea Hill	
REGRETS:	Councillor Gwyn Sproule	
	Ocea Hill	
GUESTS \ STAFF:	Karin Albert, Senior Planner	
	Jesse Garlick, Architect, Studio 531	
	Keven Charpentier, Project Manager, Studio 531	
	Becky Allen, Postmark Group	

Call to Order: 5:12 p.m.

1. APPROVAL OF AGENDA

Bell/McLean: "THAT the agenda of August 15, 2022 be approved".

CARRIED

2. APPROVAL OF MINUTES

Bell/McLean: "THAT the minutes of June 7, 2022 be approved"

CARRIED

3. UNFINISHED BUSINESS

None

4. NEW BUSINESS

4.1 Referral: Development Variance and Heritage Alteration Permit Amendment Applications, 2714 Dunsmuir Ave

The applicant presented their design and answered questions.

DISCUSSIONS

Parkade

- Will not excavate the southeast side because of sewer lines. Electric Vehicle parking needed.
- No loading zone in alley – was waived as part of original Development Variance Permit.

Materials

- Concern that the black corrugated metal will heat up the balcony areas.
- Applicant assured that the overhangs from the balconies above means a large part of the recessed wall will be in the shade.
- Rain on corten steel releases colour that stains surfaces below for a period of time. Not clear if that will be captured.

Dunsmuir Avenue Streetscape

- Concern about visual impact of floating parapet/cantilevered part of building above commercial unit 2 and part of commercial unit 1. Looks really heavy. Would like to see option that replicates the recessed entrances of other heritage buildings on Dunsmuir. Examples: 2701 (Beaufort Botanicals), 2704 a and b (two small commercial units east of the Liquor Store) and 2706 (Big Store) Dunsmuir Ave.
- *Related HCA policy statements:*
    - *The historic form and scale of commercial buildings in the downtown area of Cumberland are integral to the appearance, feeling, and ambience of this predominately commercial area. The objective of this designation is to ensure that revitalization or new development in the downtown area is compatible with the scale and character of the existing downtown heritage character.*
    - *Additional notable features and characteristics of this area include: a. Remaining examples of the "storefront" design incorporating large glazed display frontage, awnings and signage indicative of the late 19th and early 20th century "Pioneer" style;*

Colour

- Many of Cumberland's heritage buildings have more vibrant colour schemes.
- Would like to see more vibrant colour options for the shingles (currently beige) in particular and/or a more vibrant colour option for the areas to be covered with the fibre cement panel. Currently a brown red similar to the Cumberland museum and Brewery colours – a homogeneity not desirable.
- *HCA guideline*
    - *12 Colour - The choice of a colour scheme for a building shall be made on the basis of what is most appropriate for the individual building and also what*

colours may be compatible with adjacent buildings. Respect for nearby buildings will help to give a unified appearance within the Heritage Conservation Area.

Commemoration Wall

- Appreciate commemoration wall. However, looking forward to seeing how the historic, cultural and social significance of the building and its place in the community can be layered into the project in more ways than the commemoration wall.

Second Street streetscape

- Second Street is also a commercial street. Would like to see an option to animate Second Street. E.g. consider moving the interior patio, which would be in the shade most of the day, to front Second Street and be associated with commercial unit CRU-3.
- Could garbage enclosure be fit in garage?
- *HCA guidelines*
    - *2 (e) Site Design - Site layout shall consider locating buildings in order to incorporate pedestrian courtyards, plazas, and common gathering areas with coordinated site furniture and lighting.*
    - *5 (e) Building Form and Character: Building massing shall respond to a human scale with materials and details that are proportionate to human height and provide visual interest at the street and sidewalk level.*

Energy Conservation

- Given transition to more and more electric vehicles, applicant asked to provide energized Level 2 outlets for electric vehicles (a dedicated 40A 240V circuit) for each of the regular underground parking stalls to permit slow charging of electric vehicles.
- HCA guideline:
    - *8 (f) Sustainable Buildings: Electric vehicle plug-ins should be provided for new developments.*

Schulte/McLean:

That the Heritage Committee recommend to Council to request that the applicant provide the following alternate design options for Council's consideration:

- Increase design consideration of the Second Street frontage to increase the animation of Second Street in general as this is also a street with storefront businesses. Examples could include a adding a plaza along Second Street, switching the interior plaza to that location, and/or moving the recycling and garbage bins to the underground parking garage to create room;
- Create greater alignment and cohesion with the rest of Dunsmuir Ave and reduce massing through bringing the ground level floor forward into alignment with the rest of the street and add angled recessed storefront windows/doorways;

- Consider more diverse colours, in particular for the portion of the building that has shingles and the recessed area on Dunsmuir Street. Current colour palate seems to be intending to 'match' Village corporate colours (also Museum and Cumberland Brewing Company). Homogeneity is not the form and character of Cumberland;

- Install electric vehicle plug-ins at each parking stall.

CARRIED

Downtown context statement

- As part of OCP review, Heritage Committee looking forward to reviewing the context statement/justification and notable character defining elements for the historic downtown.

4.2 Heritage webpages

Deferred to September 12 Heritage Committee meeting

5. **NEXT REGULAR MEETING:** Monday, September 12, 2022 at 5:00 pm.

6. ADJOURNMENT: 7:00 p.m.

Certified Correct:	Confirmed:
Chair	Deputy Corporate Officer

COUNCIL REPORT

REPORT DATE: September 14, 2022
MEETING DATE: September 19, 2022

File No. 1855

TO: Mayor and Councillors

FROM: Paul Nash, Project Coordinator, Liquid Waste Management Planning

SUBJECT: Wastewater Upgrade Project – Progress Update and Budget Amendment

RECOMMENDATION

i. THAT Council receive the report "Wastewater Upgrade Project - Progress Update and Budget Amendment".
ii. THAT Council approve the additional expenditure of up to $2,710,000 for "Phase 1 Wastewater Upgrade Project" with:
    - $1,550,000 to be funded through Sewer and Water Infrastructure Asset Replacement Reserve; and
    - $1,160,000 to be funded through GMF (borrowing/grant).
iii. THAT Council approve the expenditure of up to $650,000 for "Phase 2 Wastewater Upgrade Project – Pre-Construction Program" with:
    - $195,000 to be funded through Sewer and Water Infrastructure Asset Replacement Reserve; and
    - $455,000 to be funded through GMF (borrowing/grant).
iv. THAT Council direct staff to bring forward an amendment to the adopted 2022-2026 Financial Plan Bylaw to reflect these expenditures.
v. That Council approve an increase of $2,710,000 to the Maple Reinders contract, for the "Phase 1 Wastewater Upgrade Project".
vi. THAT Council authorize staff to enter into contracts totalling $650,000 to execute the "Phase 2 Wastewater Upgrade Project – Pre-Construction Program".

PURPOSE

The purpose of this report is to

- Update Council on progress of the Phase 1 project
- Update Council on the budget and funding picture for the overall Phase 1 and 2 Projects
- Seek a budget increase for Phase 1
- Seek budget approval for the Pre-Construction Program for Phase 2.

PREVIOUS COUNCIL DIRECTION

Date	Resolution
June 27, 2022	That Council approve making the application to the Gas Tax Strategic Priorities Fund for funding of Phase 2 of the High Performance Wastewater Lagoon Upgrade Project, for a grant value of $2,500,000.
June 27, 2022	That Council commit to funding the municipal portion of project ($2,440,000) using a combination of existing, approved Green Municipal Fund funding and sewer reserves for a total project amount of $4,940,000.
March 14, 2022	THAT Council authorize the expenditure of the remaining $5,960,000 of the currently authorized project budget of $9,700,000.
Feb 14, 2022	That Council approve making the application to the Investing in Canada Infrastructure Program, Environmental Quality stream, intake 3, for funding of Phase 2 of the High Performance Wastewater Lagoon Upgrade Project, for a grant value of $2,260,000.
Feb 14, 2022	That Council commit to funding the municipal portion of project ($2,440,000) using a combination of existing, approved Green Municipal Fund funding and sewer reserves for a total project amount of $4,700,000
Feb 14, 2022	THAT Council adopt Option 2 – the integrated project approach – as the preferred grant funding strategy for the Wastewater Upgrade Project; THAT Council approve applying for scope change to ICIP1 funding to remove the Reed Bed and Wetland components from the Phase 1 project scope;

BACKGROUND

1. Phase 1 Project

Scope

Per Council direction, the scope of the project has been split into two phases. Phase 1 is the current project and is all the items needed to achieve Permit compliance and safe, reliable operation.

Phase 2 is the items that are anticipated to be needed for future regulatory compliance in 2026, and others that achieve seismic stability and enhanced environmental performance.

The current $9.7M budget is allocated to Phase 1 only.

K'ómoks First Nation Consultation

Consultation with K'ómoks First Nation (KFN) is critical to the success of the project given both Council's Strategic Priority of reconciliation with Indigenous peoples, as well as consultation with KFN being a requirement of the federal grant funding. Per the grant requirements, consultation is to be completed before construction begins. Consultation activities were first initiated in 2019 with a presentation to KFN Chief and Council, at which time the Nation communicated their key interests being the protection of downstream aquaculture interests and the critical importance of

an effective disinfection process. For the Phase 1 project, consultation activities have been ongoing since April 2022, with a presentation and project update shared with KFN Chief and Council on 12 May. At that time, while KFN demonstrated satisfaction with the overall intent of the project, they requested additional information in regards to the disinfection process to address outstanding concerns. In response to this, Village and KFN staff have collaborated in the coordination of independent reviews of the proposed Chlorine Dioxide system by third party subject matter experts. These reviews are underway and expected to be completed before the end of 2022, and there is the ability to change the disinfection process pending the outcomes of the reviews. In the meantime, KFN have agreed to support the commencement of civil construction works this fall subject to Village confirmation of a technical disinfection agent regulatory detail.

Project Schedule

Preliminary Design was completed at the end of May and Detailed Design is now about 80% complete. The civil design is 95% complete and mechanical and electrical designs are at about 60 and 70% respectively.

All major equipment has now been sourced, and minor equipment will be sourced over the remainder of 2022.

The overall construction process has been delayed by about three months compared to where it was at in May. This is primarily caused by the hydraulic re-design that was required in changing from gravity flow to pumped flow. This changed the locations and hydraulic arrangements of all major components.

The first construction activity commenced with site clearing in late April and early May. Some areas could not be cleared because of migratory bird nesting activity. Clearing and grubbing resumed in early September, after it was confirmed that the birds had flown the nests. The main works area has also been stripped of topsoil and graded for drainage to protect the area from becoming boggy with fall rains. Clearing works were completed on September 16.

Site fencing is planned for October. Only the south and west sides of the site will be fenced.

Civil construction – drainage, grading, roads, in-ground piping & building foundations will go to tender in late September for an intended start in November. The priority is to do the site grading and drainage first, to “winterize” the site, and then work will carry on through the winter as weather permits. Erection of the main tent, housing the main process equipment, is scheduled for Q1 2023.

Equipment installation and detailed mechanical and electrical work will start in late Q1 and carry on in Q2 of 2023. The last major work will be the lagoon aeration and flow-reconfiguring, which is planned for June 2023. This requires lowering the sustained dry weather and low flow to enable lowering the lagoon water level for the in-lagoon works.

All of Q3 is allocated to commissioning, and there is some allowance for construction activities to go into Q3 and still meet the commissioning target of end of Q3.

The overall schedule is shown in Table 4 below.

Table 4. Phase 1 Simplified Project Schedule as at 31 Aug, 2022

	2022			**2023**		
Activity	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**
Preliminary Design						
Detailed Design						
Detailed Design (Mechanical, Electrical)						
Site Clearing						
Civil Construction						
Process Equipment Installation						
Lagoon Aeration and Flow Changes						
Commissioning & completion of Phase 1						

Within this schedule there is some "time contingency" in that certain things can suffer delays of weeks or a month without delaying the overall completion date. The end date of 30 Sept 2023 is a logical date – the end of summer conditions – but is not a hard deadline. The grant funding deadlines are 31 March 2024 for ICIP and 30 Sep 2024 for GMF. Nonetheless, the project team is committed to getting the project completed and commissioned within this schedule. At this stage, it is considered that it would take a major unexpected site condition or external event to force a delay beyond Q3 2023.

Budget - Project Expenditures & Commitments

With the project now in the execution stage, the cost tracking for the project is done by four ways for each item and category

1. Original Budget – as the project was structured. The total is the Authorized Budget.
2. Committed Cost. This is where a contract has been signed or purchase order has been issued, or a quote/proposal received that is intended to be accepted. If the project were to stop tomorrow, this is the amount that would be spent. This amount – in total - cannot exceed the (total) Authorized Budget.
3. Forecast Additional Cost to Complete. An estimate of additional cost, above the Committed Cost to complete a given item.
4. Forecast Cost at Completion – sum of Committed Cost and Forecast Additional Cost.

Budget and costs can be re-allocated within project categories if needed, but for comparison to the original Authorized Budget, it is the total that counts.

The following summary and detail are drawn from the Cost Tracking Log kept by Colliers Project Leaders, the Project Manager. It is based on information known to 31 August. Where a quote has been received, and is intended to be acted on, it has been included as a committed cost.

Contingency percentages have been applied to each of the categories, according to the level of confidence. With 75% of the equipment having now been sourced, there is only a small contingency required. But the Construction Services category remains the least confident uncertainty. With the detailed design nearing completion, Maple Reinders has been able to estimate quantities and produce a meaningful estimate for Construction Services. However, these services have not yet been tendered, prices are increasing, and there always remains the possibility of unexpected conditions and changes once construction starts. Accordingly, a 20% contingency has been applied to the Construction Services category.

Table 1. Budget and Cost Estimating summary as of 31 Aug, 2022

Date	**2018 (LWMP)**	**May 2022**	**Aug 2022**				
Design Stage	**2%**	**33%**	**~ 80%**				
Item	**Project Total**	**Project Total**	**Committed Cost**	**Forecast Cost to Complete**	**Cont. %**	**Cont. Amt**	**Project Total**
Owners Costs	1.00	1.00	0.75	1.00	0%	0	1.00
Design	1.04	1.04	1.03	1.04	0%	0	1.04
Construction Management	1.50	1.60	1.60	1.60	0%	0	1.60
Equipment	3.08	3.63	3.04	3.65	5%	0.18	3.83
Construction Services	2.58	*2.58 **	0.11	4.11	20%	0.83	4.94
Contingency	0.5	0.5	0	0		1.01	
Total	**9.7**	***10.35 ****	**6.53**	**11.40**			**12.41**

* The Construction Services costs had not been forecast at that time, they were simply the original budget numbers

The August 2022 budget estimates include PST for all applicable items.

The Forecast Cost to Complete represents the best estimate of the project cost is based on all the information currently available. The Contingency is to cover unexpected changes, market changes and allowance for small details that have not yet been designed.

The major cost increases are clearly in construction services, but there has also been an equipment increase, primarily for the two large tent structures and the operators workshop building, neither of which were part of the original project concept.

If there are no more major delays or scope changes, the project team expects to be able to complete within this Project Total of $12.41M.

Therefore, an increase to the Phase 1 project budget of $2.71M (from 9.7M to $12.41M) is requested.

Ground-breaking Ceremony

A ground-breaking ceremony is proposed for after the site clearing and fencing is completed, and before other construction work begins. This is now expected to be in late October.

Operational Costs

With the preliminary design completed, estimates of operating costs can now be made. These will be based upon expected electrical and chemical consumption for the various equipment, sludge disposal costs (to the CVRD composting facility), general maintenance and labour costs. It is likely that the new plant will need a full time operator (five day a week attention). Sewer utility rates have been slowly increasing to stabilize the preliminary estimated operating costs of $400k since 2017. An update to these operating costs are being estimated and will be included in 2023-2027 operating budget requests.

Of note is that the EOCP classification of the wastewater treatment system (a measure of complexity) is likely to increase from 2 to 3. This will require a Level 3 operator, which Cumberland does not currently have. It is recommended that Cumberland recruit a Level 3 Operator while the project is still in construction, so that they will be here to see the detailed construction and participate in the commissioning process.

A schedule of asset management costs will also be prepared as part of the close out documentation of the project.

2. Overall Wastewater Budget and Funding

The Phase 1 and Phase 2 Wastewater Projects have separate and overlapping grant funding sources, and both draw upon the same wastewater reserves for the Cumberland cash contributions. Accordingly, it is appropriate to consider them both as part of the overall wastewater upgrade project budget. With the Phase 1 project budget now finalized at $12.41M, the overall budget and funding picture can be revisited to determine what remains for Phase 2.

Cumberland currently has about $3M in water and wastewater reserve, but some of that is already allocated to other water and wastewater projects, on the collection system, leaving $2.1M as the total that is available for both Phase 1 and 2 projects.

For grant funding, there are three sources:

1. Investing in Canada Infrastructure Program (ICIP 1), for $7.113M, for Phase 1
2. Green Municipal Fund (GMF) for $4.4M loan and $0.66M grant, for Phase 1 and 2
3. Gas Tax Strategic Priorities Fund (GSPF) for $2.5M (awaiting approval spring 2023) for Phase 2 only. (Application was also made to round 3 of ICIP, but the province has indicated that GSPF is the more likely outcome)

Two of the components of Phase 2 – the Reed Bed and Effluent Wetland – are within the defined GMF funding scope and must be completed even if the GSPF grant funding is not received,

creating two possibilities for Phase 2. It has been confirmed with GMF that the extra project components for Phase 2 (tertiary filtration, MLC channel relocation and stormwater wetland) are eligible for GMF coverage, but the total GMF funding remains unchanged at $4.4M loan and $0.66M grant.

Combining all the funding sources leads to the financial picture as shown in Table 2.

Table 2. Overall funding sources as of 31 Aug, 2022 (all figures $M)

Funding Source	Applicable Phase	Total with GSPF	Total without GSPF
ICIP1 Grant	1	7.11	7.11
GMF Grant	1, 2	0.66	0.66
GMF Loan	1, 2	4.4	4.4
GSPF	2	2.5	0
VoC Wastewater Reserves	1, 2	2.1	2.1
Total Funding		**16.77**	**14.27**

The Phase 1 budget is now set at $12.41M. Even though it is possible that not all of the $1.01M contingency will be used, for budget purposes, it must all be allocated to Phase 1 to allow completion of the project.

At $12.41M, the Phase 1 project is 74% of the total budget of $16.77M. For consistency, this percentage will be used for allocating both the Cumberland wastewater reserves and GMF funding to Phase 1, leaving 26% remaining for Phase 2. The only remaining variable is whether the GSPF funding is successful or not, leading to the scenarios in Table 3.

Table 3. Phase 1 and 2 project budgets as of 31 Aug, 2022 (all figures $M)

Funding Source	Phase 1	Phase 2 with GSPF	Phase 2 without GSPF
ICIP1 Grant	7.11	0	0
GMF Grant	0.49	0.17	0.17
GMF Loan	3.26	1.14	1.14
GSPF	0	2.5	0
VoC Wastewater Reserves	1.55	0.55	0.55
Total Funding	**12.41**	**4.36**	**1.86**

The total amount for Phase 2, at $4.36M is less than the total budgeted cost of $4.94M used for the GSPF application (which was $2.5M grant and $2.44 from Cumberland and GMF). This will require some reductions in scope and/or contingency within the Phase 2 project. Given the non-regulated nature of most of the Phase 2 components, there is discretion to reduce the “size" or complexity of these components.

The non-GSPF Phase 2 budget of $1.86M is considered more than enough to complete the reed bed and wetland components, originally budgeted in 2018 at $2M. Due to the way the project has evolved, the reed bed component is still around $1M, but the effluent wetland component is now located immediately to the east of the lagoons, much closer than originally planned, and a smaller area. This means it can be completed for much less cost than the original $1M estimate.

3. Phase 2 Project and Pre-Construction Program

With the Phase 2 budget now defined for both grant and non-grant scenarios, planning for the project can begin. The project components are shown in Table 4.

Table 4. Phase 2 Project Components (all figures $'1000)

Component	Original Budget for GSPF	Revised Phase 2 with GSPF	Revised Phase 2 without GSPF
Biochar Media Reed Bed	1,040	920	920
Effluent Wetland Augmentation	420	370	370
Tertiary Filtration	1,000	900	
MLC channel infill	510	450	
New MLC channel	830	740	
Stormwater wetland	520	450	
MLC Weirs and Fishways	100	900	
Reclaimed water to stormwater wetland	210	190	
Habitat enhancement	140	120	
Recreational trails	160	140	
Total	**4,940**	**4,360**	**1,290**

In preparing the grant applications for the Phase 2 project, it was known that funding decisions would not be made until spring of 2023, just before the summer construction season. All the Phase 2 works - except tertiary filtration - are primarily earthwork type projects in and around Maple Lake Creek that can only be done in summer (Q2 and Q3). In applying for the grants it was intended to do the design work for Phase 2 in Q4 2022 and Q1 2023, such that if the grant is successful, then the team can "hit the ground running" and go straight into construction. The alternative of waiting for the grant decision before starting design would lead to missing the summer construction season entirely and delay the project for a year. This would lead to a de- and re-mobilization of the Construction Manager and other delay costs.

The tertiary filtration equipment has an eight month lead time. This would be ordered as soon as the grant outcome is known, and is then installed in the main process area along with the Phase 1 equipment. Design provision (floor space, piping stubs, electrical servicing) for the filters has been made in the Phase 1 project.

The overall schedule is shown in Table 5 below.

Table 5. Phase 2 Simplified Project Schedule as at 31 Aug, 2022

	2022	**2023**				**2024**	
Activity	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**
Preliminary Design							
Detailed Design							
Civil Construction							

Commissioning of wetlands and new MLC channel							
Filtration Equipment Installation							
Filtration Commissioning & completion of Phase 2							

Accordingly, a Pre-Construction Program has been planned for Phase 2, for the design and preparatory work to be carried out over the winter of 2022-23, to get the design to tender-ready drawings. This work would commence in Q4, 2022 and be completed at the end of Q1, 2023. If the grant is successful, then tenders go out to cover all the work packages, and if not, then just for the reed bed and wetland components.

The Pre-Construction Program is analogous to the Phase 1 design process that has been carried out from May 2021 to date, just for a smaller scope of Phase 2. It consists of:

- Owners costs such as project management, environmental study, survey, geotechnical, KFN consultation, public consultation
- Engineering design
- Construction Manager design participation and construction planning.

Based on the % of budgets expended for the pre-construction period for Phase 1, it is expected that 75% of the owners costs and engineering design, and 25% of the construction manager cost, will be required for the Pre-Construction Program The detailed budget for Phase 2, with the Pre-Construction Program is then as detailed in Table 6.

Table 6. Phase 2 Project Budget and Pre-Construction Program. (all figures $'1,000)

Component	Owners Costs	Eng. Design	Constr. Mgt	Construction	Cont.	Total
Biochar Media Reed Bed	73	73	97	487	170	900
Effluent Wetland Augmentation	36	36	49	243	85	449
Tertiary Filtration	60	60	80	400	140	740
MLC channel infill	75	75	99	497	174	919
New MLC channel	30	30	40	200	70	370
Stormwater wetland	36	36	49	243	85	449
MLC Weirs and Fishways	15	15	19	970	340	179
Reclaimed water to stormwater wetland	7	7	10	49	17	90
Habitat enhancement	10	10	13	65	23	120
Recreational trails	11	11	15	76	27	140
Total	**353**	**353**	**471**	**2,357**	**825**	**4,360**
Pre-Construction %	75%	75%	25%	0%	0%	15%
Pre-Construction Amount	**265**	**265**	**118**	**0**	**0**	**648**

Thus, a budget of $650,000 is requested for the Pre-Construction Program for the Phase 2 Wastewater Upgrade Project.

For Phase 2 (without GSPF), GMF funding makes up 70% of the project, and the Cumberland reserves account for 30%. This split has been applied to the Pre-Construction program, to arrive at $455,000 from GMF and $195,000 from Cumberland Reserves.

The remainder of the budget for Phase 2 will be determined in Q2 2023, based upon the grant funding outcome.

STRATEGIC OBJECTIVE

- ☐ Healthy Community
- x Quality Infrastructure Planning and Development
- ☐ Comprehensive Community Planning
- ☐ Economic Development

FINANCIAL IMPLICATIONS

The request for a budget increase is based on estimates at this stage but is necessary for the project to be able to go out for tender early fall. The fact that this is still based on estimates and not tendered amounts, leaves the Village open to another budget increase request at a later date if the contingency within the estimates is not sufficient to manage unknowns and staff would need to analyze all available funds and come back to Council. Sewer Development Cost Charges (DCC) have now been transferred to the Sewer and Water Infrastructure Asset Replacement Reserve to be used for this budget increase request.

OPERATIONAL IMPLICATIONS

The operational staff have been involved in the Preliminary Design phase and will continue to be involved in all stages of the project.

As noted above, additional resources will be required to operate the upgraded facility including a full time plant operator along with funding to support other operational items. These will be included in the 2023-2027 budget requests for Council consideration this fall.

CLIMATE CHANGE IMPLICATIONS

A fundamental goal of the design of this project has been to reduce GHG's, both in construction and future operation.

For construction, the major GHG reduction action is to minimize the use of concrete. The use of prefabricated, skid mounted steel components has a lower GHG footprint than site built, concrete mounted equivalents.

For operation, the major GHG reduction action is to have all the processes be as energy efficient as possible. The selection of equipment reflects this, with high efficiency motors and control logic to ensure equipment is always operating in the optimum efficiency range.

Two of the major scope changes that have been made in 2021 – diffused aeration and pumped flow - have increased the climate resiliency of the project to future hot summers and wet winters and flood events. Both these changes – particularly diffused aeration - also increase the energy

use of the project, leading to the counterintuitive result of (slightly) increased GHG emissions in order to be resilient to climate change induced events.

Given the environmental importance of maintaining wastewater treatment performance under all weather conditions, increasing resiliency must take precedence over reducing energy use.

ATTACHMENTS

None

CONCURRENCE

Michelle Mason, Chief Financial Officer *MM*

Rob Crisfield, Manager of Operations *RC*

Kevin McPhedran, Interim Deputy CAO *KM*

Respectfully submitted,

P. Nash

_____

Paul Nash

Project Coordinator, Liquid Waste Management Planning

M. Mason

_____

Michelle Mason
Chief Administrative Officer

COUNCIL REPORT

REPORT DATE: 9/2/2022
MEETING DATE: 9/19/2022

File No. 6800-30 – Dunsmuir Ave 2714

TO: Mayor and Councillors

FROM: Karin Albert, Senior Planner

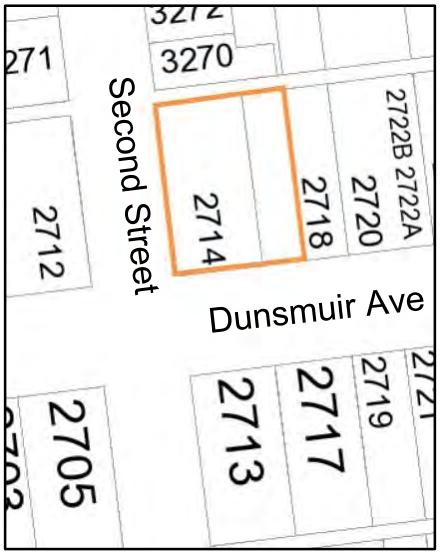
SUBJECT: Development Variance and Heritage Alteration Permit Amendment Applications, 2714 Dunsmuir Ave

RECOMMENDATION

i. THAT Council receive the "Development Variance and Heritage Alteration Permit Amendment Applications, 2714 Dunsmuir Ave" report.

ii. THAT Council approve heritage alteration permit (2022-01-HAP) for 2714 Dunsmuir Avenue, properties legally described as Lot 1, Block 6, District Lot 21, Nelson District, Plan 522 and The West1/2 of Lot 2, Block 6, District Lot 21, Nelson District, Plan 522.

iii. THAT Council approve development variance permit (2022-07-DV) to vary Zoning Bylaw No. 1027, 2014 to increase the front maximum setback for the proposed development to 2.15 metres for 50 percent of the façade.



PURPOSE

The purpose of this report is to seek Council decisions on:

- a development variance permit for 2714 Dunsmuir Avenue to increase the maximum front setback in the Zoning Bylaw from 1 m to 2.15 m for up to 50 percent of the building's façade; and
- a Heritage Alteration Permit amendment to integrate the greater front setback as well as several other design changes into the new building.

PREVIOUS COUNCIL DECISIONS

Date	Resolution
August 8, 2022	THAT Council refer the "Development Variance and Heritage Alteration Permit Amendment Applications, 2714 Dunsmuir Ave, for Referral" report to the Heritage Committee for comment.

December 13, 2021	THAT Council approve the heritage alteration permit (2021-02-HAP) for 2714 Dunsmuir Avenue, properties legally described as Lot 1, Block 6, District Lot 21, Nelson District, Plan 522 and The West1/2 of Lot 2, Block 6, District Lot 21, Nelson District, Plan 522; THAT Council approve development variance permit (2021-11-DV) to vary Zoning Bylaw No. 1027, 2014 to: • waive the special parking stall designation requirements for recreational vehicle or tour bus and for pregnant women or persons with young children; and • waive the requirement for two commercial loading stalls. • increase the maximum building height from 15 metres to 17 metres for the sloped roof portion of the building. • increase the maximum lot coverage from 75% to 78%; and THAT Council deny the request to vary Zoning Bylaw No. 1027, 2014 to: • reduce the regular parking stall requirement by 8 stalls; and • waive the special parking stall designation requirements for electric vehicles and for persons with a disability.
November 8, 2021	THAT Council refer the Heritage Alteration Permit and Development Variance Permit applications for 2714 Dunsmuir Avenue to staff to bring back both the heritage alternation permit and development variance permit as well as options for height variance as to pitch and awnings.
August 9, 2021	THAT Council refer the "Heritage Alteration Permit and Development Variance applications for 2714 Dunsmuir Avenue to the Heritage Committee, Advisory Planning Commission and Accessibility and Inclusion Committee for comment.

BACKGROUND

Existing Heritage Alteration Permit

The existing heritage alteration permit (HAP), issued December 2021, is for a four-storey mixed-use development with three medium sized commercial units on the ground floor and residential units on floors two to four. The building design included prominent corner massing on Dunsmuir Avenue on the front lot line, a recessed entrance for one of the commercial units off Dunsmuir, three separate entrances from Second Street (to the rear of the commercial units, residential units and elevator); a basement with bicycle storage, bike repair stations, bike wash station, and dog wash room; and a semi-automatic parking system for 14 vehicles accessible from the lane.

Colour Scheme and Siding Materials

The cladding on the front of the building was to be a mix of wood-look vertical siding and wood look shingles. The rear walls and the walls of the recessed balconies had a charred wood-look siding. The wall of the recessed commercial area was an amber-red fibre cement panel. The ground floor on Second Street was a grey-white textured cementitious panel.

The December 13, 2021 staff report and Attachment 1 – Heritage Alteration Permit Amendment: Comparison to Previous Design show the original design for the HAP issued.

Heritage Alteration Permit Amendment Application

The building has been redesigned with a greater setback of the southwest corner of the building from Dunsmuir Avenue to observe the BC Hydro requirement of a 3 m separation distance of the building to the overhead powerline. The greater setback necessitated a design change to the façade on Dunsmuir Avenue. The applicant is also proposing several other design changes to the development, described and illustrated in Attachment 1 and the drawings that form Schedule A to the HAP in Attachment 3.

At the August 8, 2022 Council meeting, Council inquired about the potential impact of blasting for the underground garage on adjacent heritage buildings. In response, the applicant provided a professional review of geotechnical considerations (Attachment 2 –Ryzuk Geotechnical Engineering Field Review). The field review from Ryzuk Geotechnical recommends controlled techniques to limit the impact on adjacent properties and infrastructure. In areas where rock removal volume is minor, lower impact removal methods are recommended. Further recommendations are that pre-blast surveys of neighbouring properties be completed and that a geotechnical engineer be on site to monitor vibrations during rock removal and blasting. These considerations will be addressed through the building permit process.

The Heritage Committee reviewed the application at their August 15, 2022 meeting and passed the following resolution:

> *That the Heritage Committee recommend to Council to request that the applicant provide the following alternate design options for Council's consideration:*
>
> - *Increase design consideration of the Second Street frontage to increase the animation of Second Street in general as this is also a street with storefront businesses. Examples could include a adding a plaza along Second Street, switching the interior plaza to that location, and/or moving the recycling and garbage bins to the underground parking garage to create room;*
> - *Create greater alignment and cohesion with the rest of Dunsmuir Ave and reduce massing through bringing the ground level floor forward into alignment with the rest of the street and add angled recessed storefront windows/doorways;*
> - *Consider more diverse colours, in particular for the portion of the building that has shingles and the recessed area on Dunsmuir Street. Current colour palate seems to be intending to 'match' Village corporate colours (also Museum and Cumberland Brewing Company). Homogeneity is not the form and character of Cumberland;*
> - *Install electric vehicle plug-ins at each parking stall.*

The Heritage Committee also requested that the applicant confirm how sustainable design parameters (management of heat) have been followed in the proposed black metal siding on the south and west facing apartment patios.

The draft minutes of the Heritage Committee are attached to today's meeting agenda package. The applicant made the following design changes in response to the discussions at the Heritage Committee meeting:

- Addition of a small plaza/seating area associated with commercial unit 3 and fronting Second Street;
- Creation of an area for residential garbage and recycling in the underground garage behind the elevator.
- Addition of columns to delineate the commercial areas below the parapet/overhang on Dunsmuir Avenue, but retention of the recessed area below to stay within the maximum permitted Floor Area Ratio / gross floor area for the building.
- Change in colour of the shingle portion of the building to an evening blue, change of the accent colour on the vertical recessed strip on Dunsmuir to a deep blue, and the same light colour for the recessed area on Dunsmuir Street as on the ground floor on Second Street.

The changes are illustrated in the streetscapes and the drawings in Attachment 1 - Heritage Alteration Permit Amendment: Comparison to Previous Design and Schedule A of the HAP, Attachment 3 - Heritage Alteration Permit.

Development Variance Permit

The revised design requires an amendment to the development variance permit to increase the 1.0 m maximum permitted front setback by 1.06 m for 47 percent of the building façade. This would permit a front setback of 2.06 m from the front property line. This variance is requested to be able to meet the BC Hydro requirement of a 3 m building setback from the overhead powerline on Dunsmuir Avenue and enable the building re-design discussed above. The attached draft Development Variance Permit shows a maximum front setback of 2.15 m for 50 percent of the building façade to accommodate possible small deviations during construction. The lot coverage increase, previously approved by Council, is no longer required and is removed from the permit.

The Heritage Committee supports the setback variance.

ANALYSIS

Heritage Alteration Permit Amendment

Building Massing

The greater setback of the southwest corner of the building at Dunsmuir Avenue and Second Street means that the building appears less dominant when walking up Dunsmuir Avenue. The visual mass of the building is also reduced by multiple breaks to the building's façade, including the change from the flat façade at the corner section to the recessed balconies on floors two to four as well as the recessed entrance of commercial unit 2 (CRU-2) fronting Dunsmuir Avenue (see the Visuals and Streetscapes in Schedule A in Attachment 3 –Heritage Alteration Permit).

Plazas

The amended design provides for more generous interior patio spaces and additional plantings surrounding those spaces. The small added plaza on the Second Street side helps animate that commercial street. The patio will be 3.0 metres in width, leaving the required 1.5 m statutory right-of-way adjacent to the lane unobstructed.

Windows

The applicant is proposing to use black vinyl window frames on the residential floors instead of the aluminum window frames identified in the previous application and required by the heritage

conservation area guidelines. Staff support this change because the window frames will not be recognizable as vinyl from street level and have energy efficiency, durability, and maintenance benefits over aluminum window frames. In addition, the muntins (cross design on the glass pane) are more easily accommodated within vinyl framing.

Bicycle storage

The private bicycle locker for each unit, accommodating two bikes, are more likely to meet the needs of the new residents than the previous common bike storage area. The development also provides sheltered bicycle parking for visitors and employees of the commercial units on the main floor.

Parking

The previous design did not provide one of the residential parking spaces and none of the commercial parking spaces on site, requiring the applicant to pay cash in lieu for six parking spaces and displacing the vehicles associated with those spaces onto the street. The revised design has six additional units but all units are served with a parking space on site. The previous 14-stall semi-automated multi-park system is replaced with a 22-stall underground parkade, providing one parking space for each unit. Four surface parking spaces are provided at the rear of the building for the commercial units, one of which will be for persons with a disability.

EV-charging

The underground garage provides eight plug-ins for level two charging of electric vehicles on the east wall of the parkade and plug-ins for level 1 charging on the west wall (see Basement Plan in Schedule A in Attachment 3 –Heritage Alteration Permit). In addition, one level 2 charging station will be provided at the ground level parking area.

Colours and Cladding

The change in colour of the shingle cladding portions of the building from a beige tone to an evening blue increases the vibrancy of the building and gives it its own unique character while complementing the colours of existing buildings on the street.

The recessed area below the parapet/overhang is now the same light colour as on the first floor on Second Street. This increases consistency across the building and lightens up the covered area.

The black corrugated metal siding is a potential concern for the micro-climate of the balconies. The architect team has stated that the majority of the area of the south and west facing black corrugated metal walls are in the shade during mid-summer when the sun is hottest and high in the sky.

Overall, the revised design complements the Dunsmuir Avenue streetscape and uses a number of design strategies to reduce the massing and visual impact of the four storey building against the lower neighbouring buildings.

Development Variance Permit Amendment

The additional variance is required to meet BC Hydro regulations for setbacks between buildings and overhead powerlines. The architects added design elements within the greater setback that enhance the corner of Dunsmuir Avenue and Second Street. The greater setback creates a more generous open space at that street corner and the planters planned along the building front contribute to a friendly street presence.

The variance is supported by the following Heritage Conservation Area guideline: "New buildings shall not be set back from the street or side property lines *unless* there are specific design reasons, such as the development of a garden for seating, built into the design."

PUBLIC NOTIFICATION AND CONSULATION

Pursuant to the Village's Development Procedures and Fees Bylaw No. 1073, 2018, the applicant installed a public notice sign of the heritage alteration permit amendment and development variance permit applications at the property. A public information meeting is not required for a heritage alteration permit amendment or development variance permit. The Village mailed a notification letter to residents living within a 75 m radius of the property and received one submission from a local resident (Attachment 5 – Public Comment).

Among other questions, the resident inquired about unit accessibility. The applicant has confirmed that unit D on the fourth floor is accessible accommodating a wheelchair turn-around radius in interior spaces. Accessibility of residential units is not a HAP or a Building Code requirement.

ALTERNATIVES

1. THAT Council request that the applicant of "Heritage Alteration Permit– 2714 Dunsmuir Ave Street (2022-01-HAP)" amend their application to comply with permit guideline(s) _____ by _____ (*please identify requested changes to meet the guidelines*) and provide revised drawings at an upcoming Council meeting.
2. THAT Council deny the requested development variance to the front setback for 2714 Dunsmuir Avenue.

STRATEGIC OBJECTIVE

- ☐ Quality Infrastructure Planning and Development
- ☐ Comprehensive Community Planning
- ☐ Healthy Community
- ☐ Economic Development

FINANCIAL IMPLICATIONS

None.

OPERATIONAL IMPLICATIONS

Processing of heritage alteration and development variance permits are part of the regular services provided by the Development Services Department.

CLIMATE CHANGE IMPLICATIONS

The proposed new building meets the objective of the Village to encourage new development that incorporates energy and water conservation principles as well as designs that work towards reducing greenhouse gas emissions. The underground garage provides eight level 2 electric vehicle plug-ins and 14 level 1 plug-ins. In addition, one level 2 charging station is planned to serve the ground level parking stalls. The building also includes solar ready wiring and secure bike storage.

The addition of six units on the site results in more compact growth within the downtown core. Many community amenities are within walking and bicycling distance from the new development, reducing trips by automobile.

ATTACHMENTS

1. Heritage Alteration Permit Amendment: Comparison to Previous Design
2. Ryzuk Geotechnical Engineering – Geotechnical Field Review
3. Heritage Alteration Permit and Schedules
4. Development Variance Permit and Schedule
5. Public Comment

CONCURRENCE

Courtney Simpson, Manager of Development Services ***CS***

Respectfully submitted,

K. Albert

_____
Karin Albert
Senior Planner

M. Mason

_____
Michelle Mason
Chief Administrative Officer

2714 DUNSMUIR, CUMBERLAND

HERITAGE ALTERATION PERMIT AMENDMENT
COMPARISON TO PREVIOUS DESIGN

2022.09.06

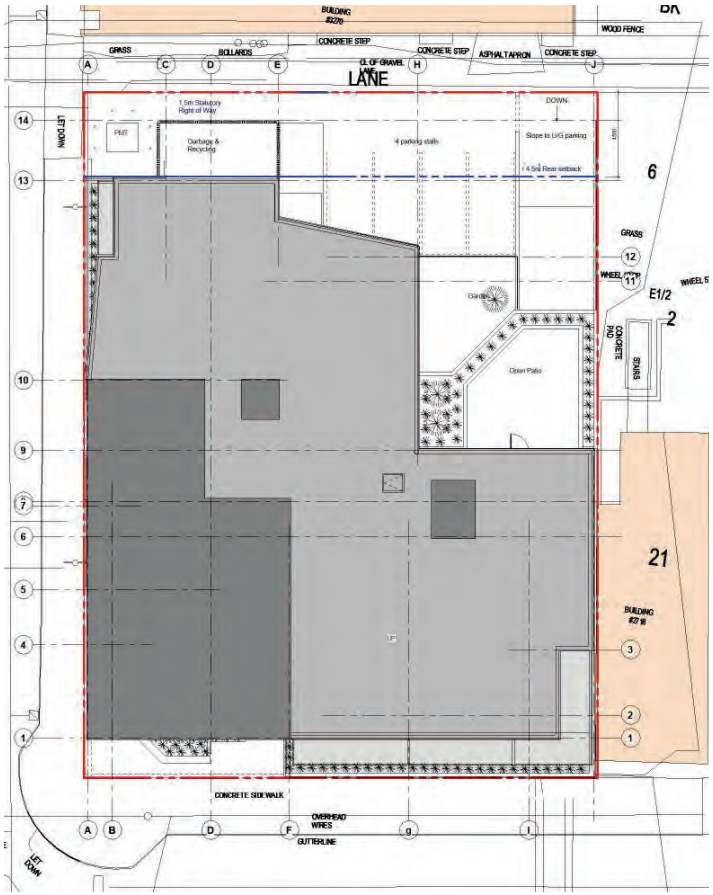
Client:
Postmark Group

Address:
942 Sherwood Ave
Coquitlam BC, V3K 1A8

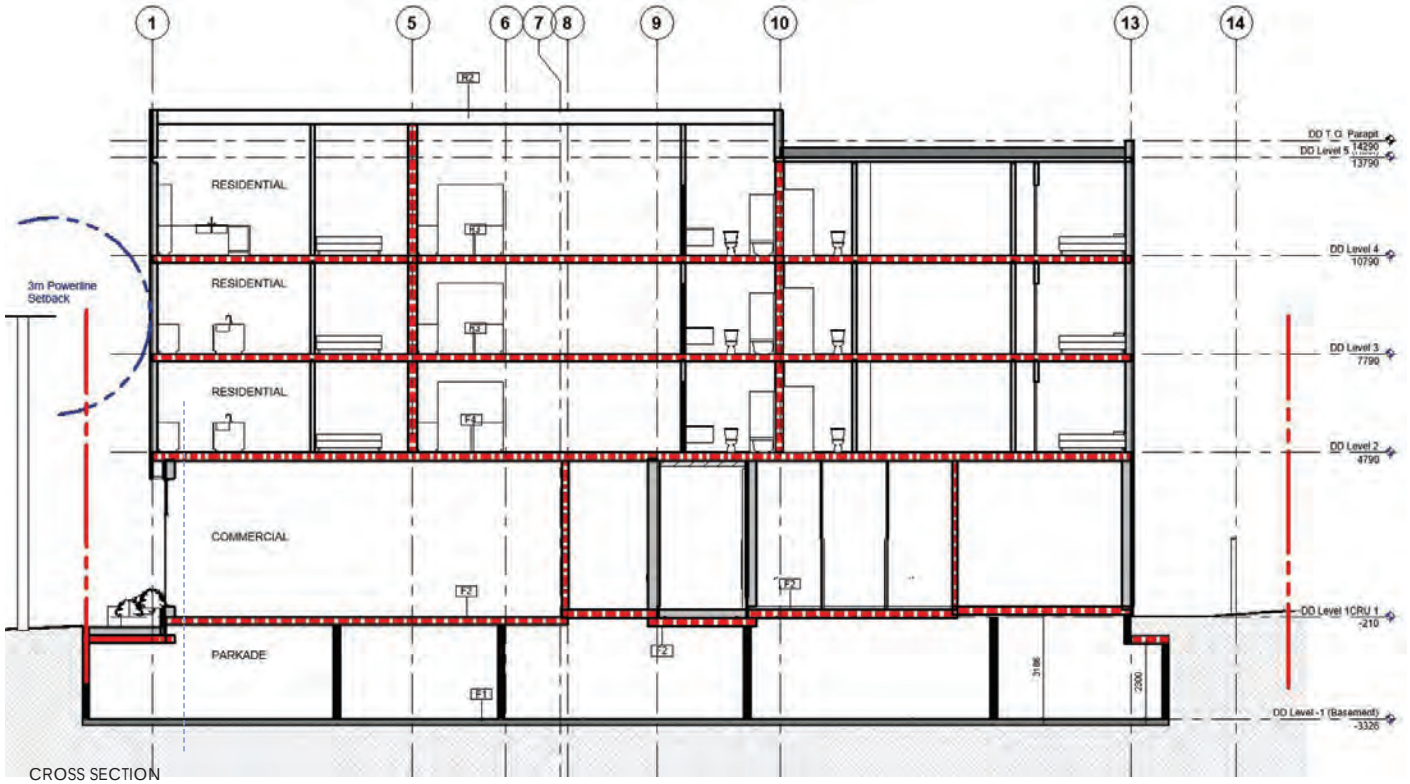
SITE SURVEY

SITE SURVEY

OVERLAY OF NEW BUILDING



WHY HAP AMENDMENT?



CROSS SECTION

SUMMARY OF CHANGES

1/ WITH RESPECT TO THE ORIGINAL DP DESIGN THE MASSING OF THE BUILDING HAS BEEN AMENDED DUE TO AN ELECTRICAL SETBACK (3M FROM POWER LINES)

2/ THE CORNER MASSING HAS BEEN RECESSED BY 2.06M

3/ THE LOT COVERAGE REMAIN IDENTICAL (68%) AND THE DENSITY HAS BEEN INCREASED TO FSR : 2.0

4/ THE RESIDENTIAL ENTRANCE HAS BEEN REDUCED IN SIZE AND CHANGED THE 2 STAIRS INTO A SCISSOR STAIR THAT REQUIRES LESS FLOOR AREA

5/ THE CLADDING MATERIALS HAVE BEEN CHANGED DUE TO A CODE REQUIREMENT TO HAVE A NON-COMBUSTIBLE CLADDING ON THE INTERIOR LOT LINE. THE EXISTING COMBUSTIBLE CHARRED-LOOK WOOD VERTICALLY INSTALLED SIDING HAS BEEN REPLACED BY A NON-COMBUSTIBLE BLACK CORRUGATED METAL PANEL, VERTICALLY INSTALLED.

6/ INCREASE THE UNIT COUNT TO MAKE THE PR OJECT VIABLE

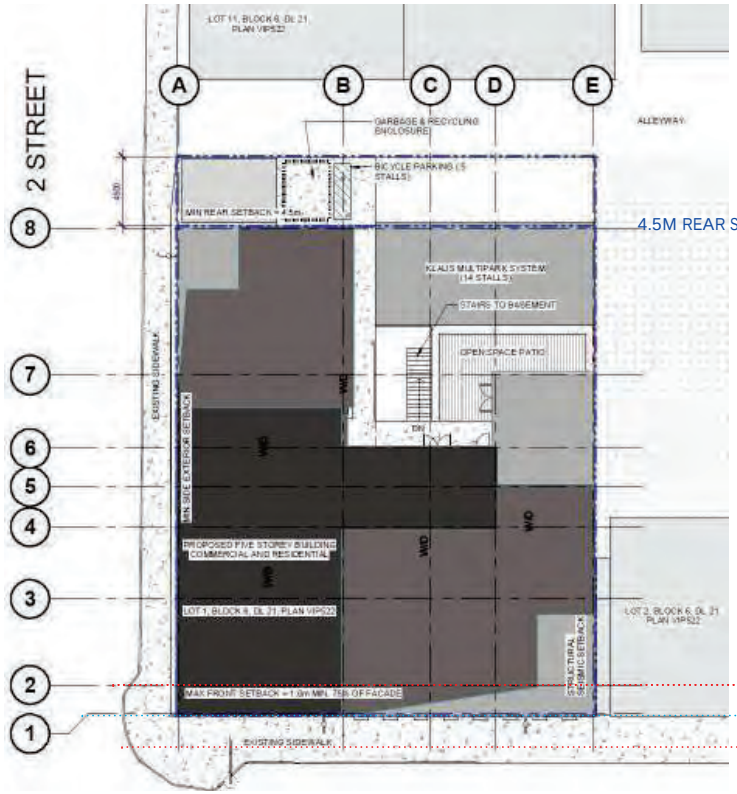
7/ CHANGE THE MULTI-PARKING SYSTEM INTO AN UNDERGROUND PARKADE.

8/ VARIANCE REQUESTED FOR THE FRONT SETBACK

9/ DEVELOPMENT VARIANCE REQUESTED TO PERMIT VINYL WINDOWS ON FLOOR 2-3-4

PROJECT SUMMARY

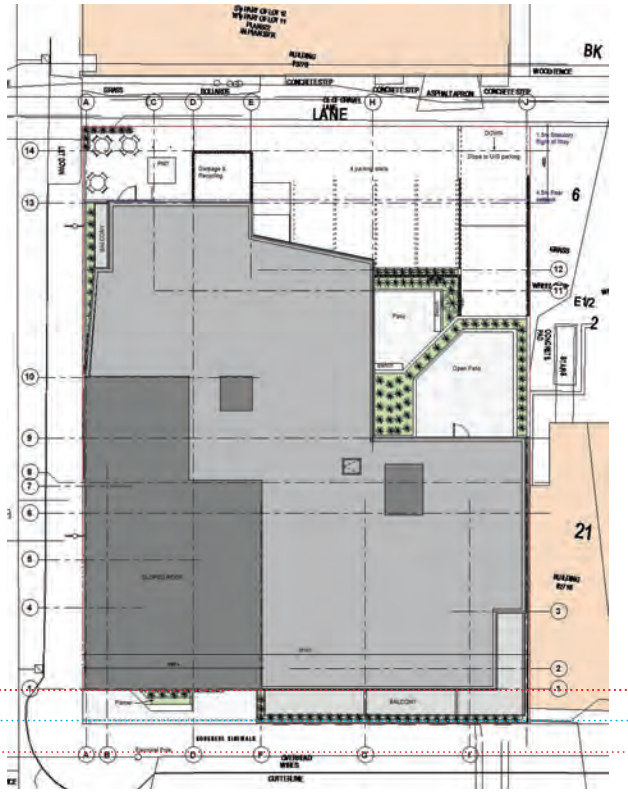
APPROVED HAP



TOTAL GROSS FLOOR AREA:	1,818M2
RESIDENTIAL UNITS:	15
PROPOSED PARKING STALLS:	14 *
BICYCLE STALLS : SECURED	40 (MIN 23)
UNSECURED	8 (MIN 8)
F.A.R.	1.8 (MAX 2)
LOT COVERAGE:	68% (MAX 75%)
HEIGHT TO T.O. LEVEL 4 PARAPET:	15.0M
HEIGHT TO T.O. ELEVATOR SHAFT:	16.4M
FRONT SETBACK	0M (MAX 1M)

* VARIANCE REQUIRED / APPROVED

HAP AMENDMENT



SITE AREA: 1,004 M2

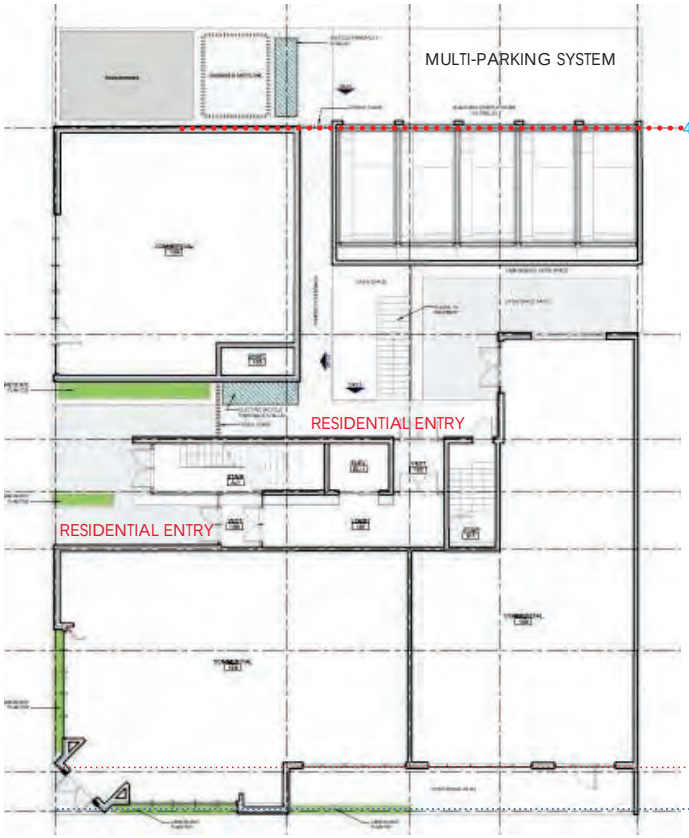
SITE COVERAGE AREA: 689 M2

TOTAL GROSS FLOOR AREA:	2,250M2
RESIDENTIAL UNITS:	21
PROPOSED PARKING STALLS:	22 UNDERGROUND + 4 ABOVE GROUND
BICYCLE STALLS : SECURED	42 (MIN 32)
UNSECURED	11 (MIN 11)
F.A.R.	2 (MAX 2)
LOT COVERAGE:	68% (MAX 75%)
HEIGHT TO T.O. LEVEL 4 PARAPET:	15.0M
HEIGHT TO T.O. ELEVATOR SHAFT:	16.4M
FRONT SETBACK	0-2.06M **

** VARIANCE REQUESTED

MAIN FLOOR PLAN

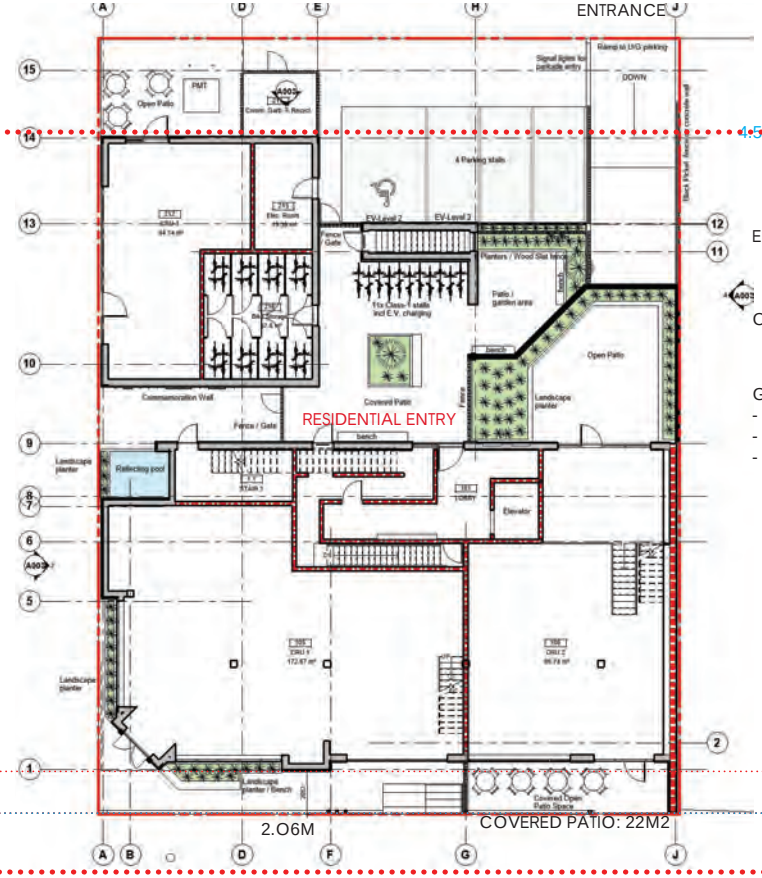
APPROVED HAP



FRONT SETBACK:
- REQUIRED: MIN. 0M
MAX 1.0M FOR A MIN OF 75 % OF THE BUILDING FACADE
-PROPOSED: 0M

HAP AMENDMENT

NEW: PARKADE ENTRANCE

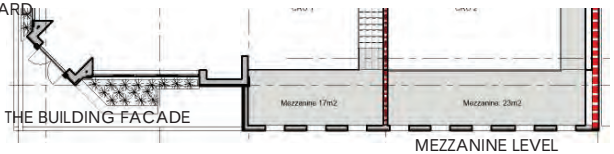


GROSS FLOOR AREA: 423M2
- CRU #1: 180 +16 M2(MEZZ)
- CRU #2: 135+23 M2 (MEZZ)
- CRU #3: 69 M2

SETBACK DUE TO HYDRO LINE
SINGLE RESIDENTIAL MAIN ENTRANCE IN COURTYARD

FRONT SETBACK:
- REQUIRED: MIN. 0M
MAX 1.0M FOR A MIN OF 75 % OF THE BUILDING FACADE
-PROPOSED: 0-2.06M **

** VARIANCE REQUESTED



MEZZANINE LEVEL

2ND FLOOR PLAN

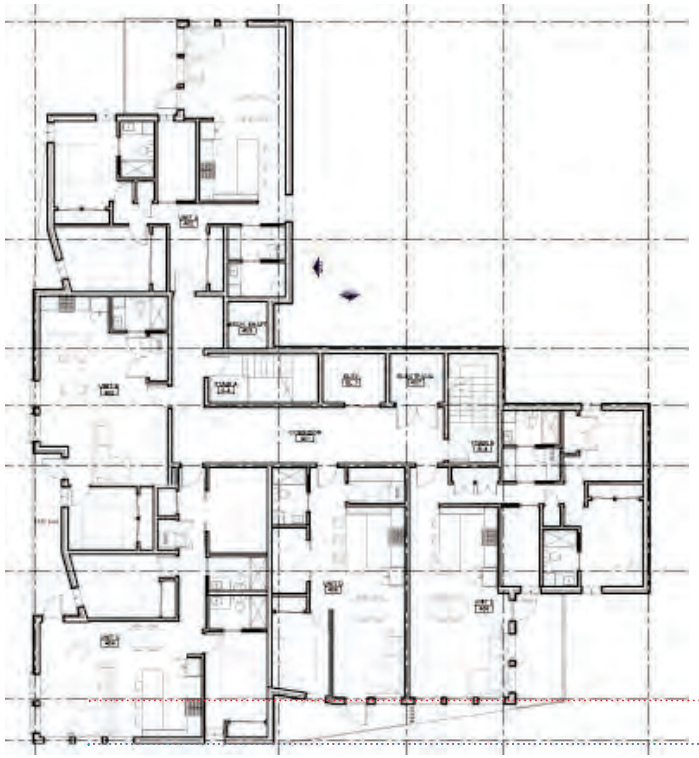
APPROVED HAP

HAP AMENDMENT

FOOTPRINT WAS BEEN INCREASED
2 EXTRA UNITS PER FLOOR

3TH FLOOR PLAN

APPROVED HAP



HAP AMENDMENT

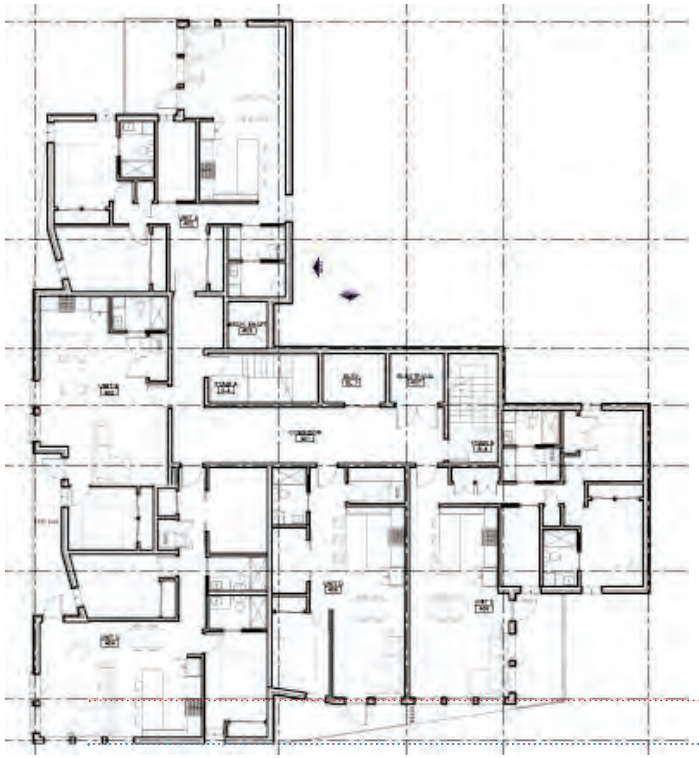
POWERLINE SETBACK

PROPERTY LINE

FOOT PRINT WAS BEEN INCREASED
2 EXTRA UNITS PER FLOOR

4TH FLOOR PLAN

APPROVED HAP



POWERLINE SETBACK

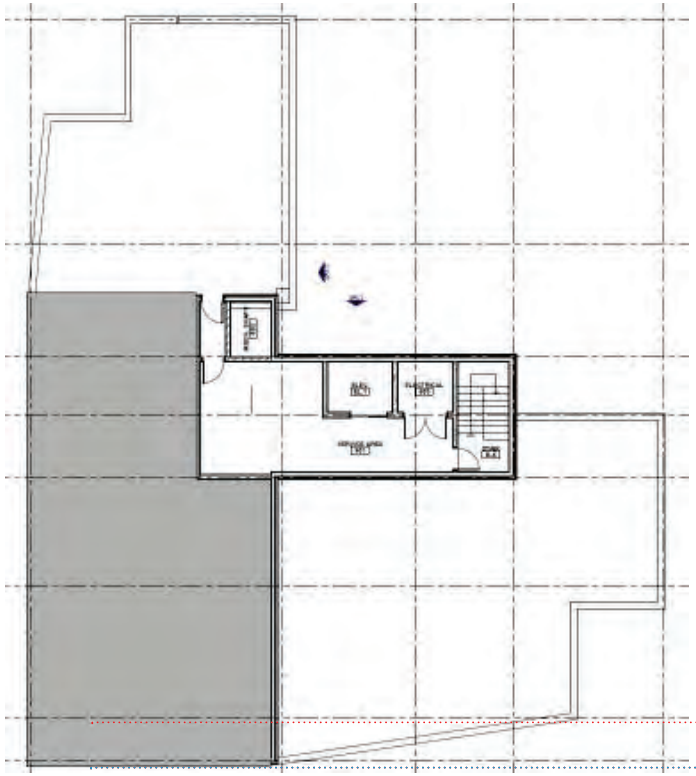
PROPERTY LINE

HAP AMENDMENT

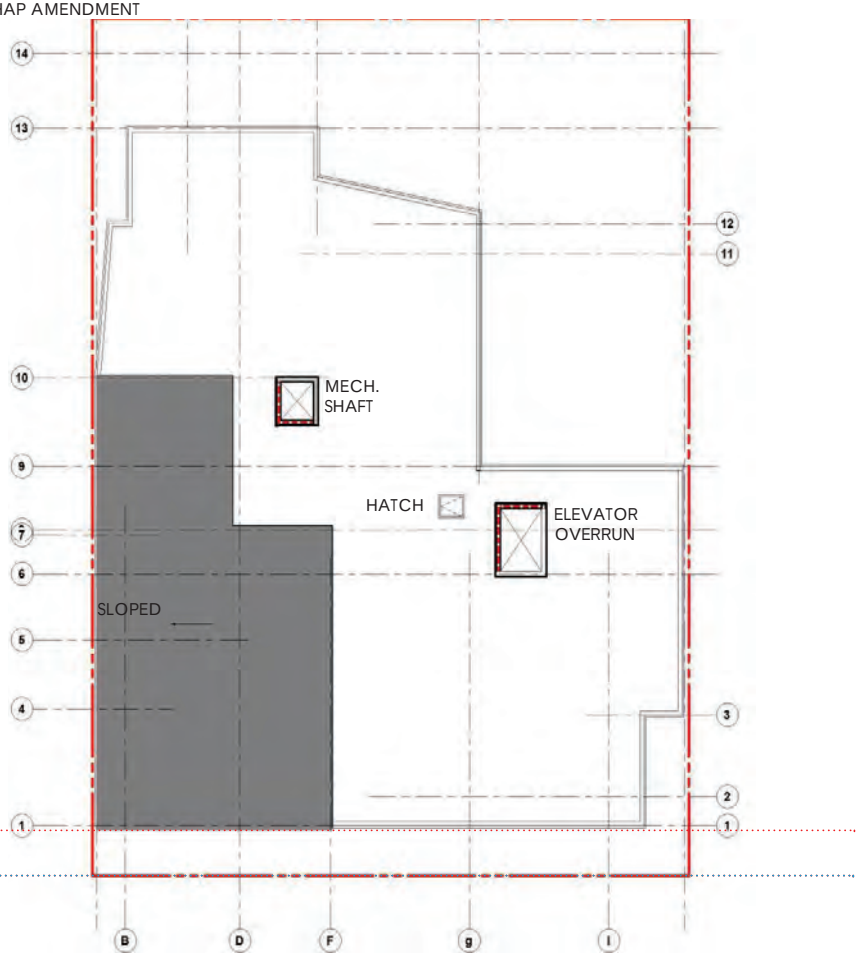
FOOT PRINT WAS BEEN INCREASED
2 EXTRA UNITS PER FLOOR

ROOF PLAN

APPROVED HAP



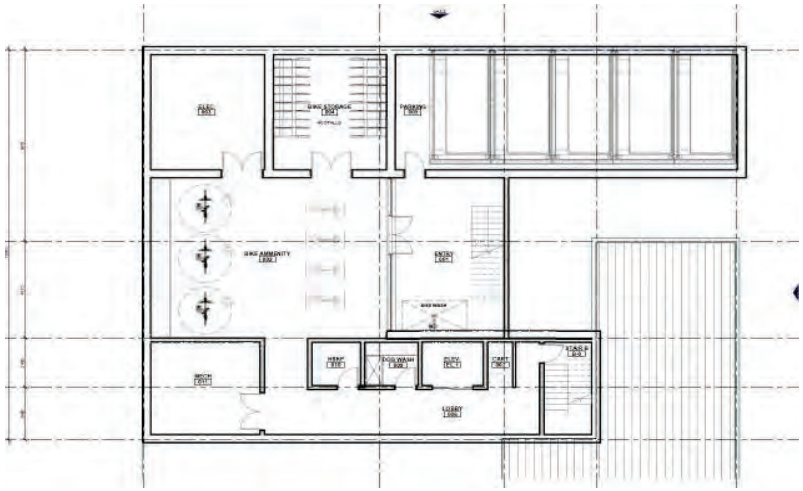
HAP AMENDMENT



FLOOR AREA AS BEEN REDUCED TO ONLY THE SLOPED ROOF, MECHANICAL SHAFT AND THE ELEVATOR OVERRUN. ROOF IS ACCESSIBLE BY LADDER WITH ROOF HATCH

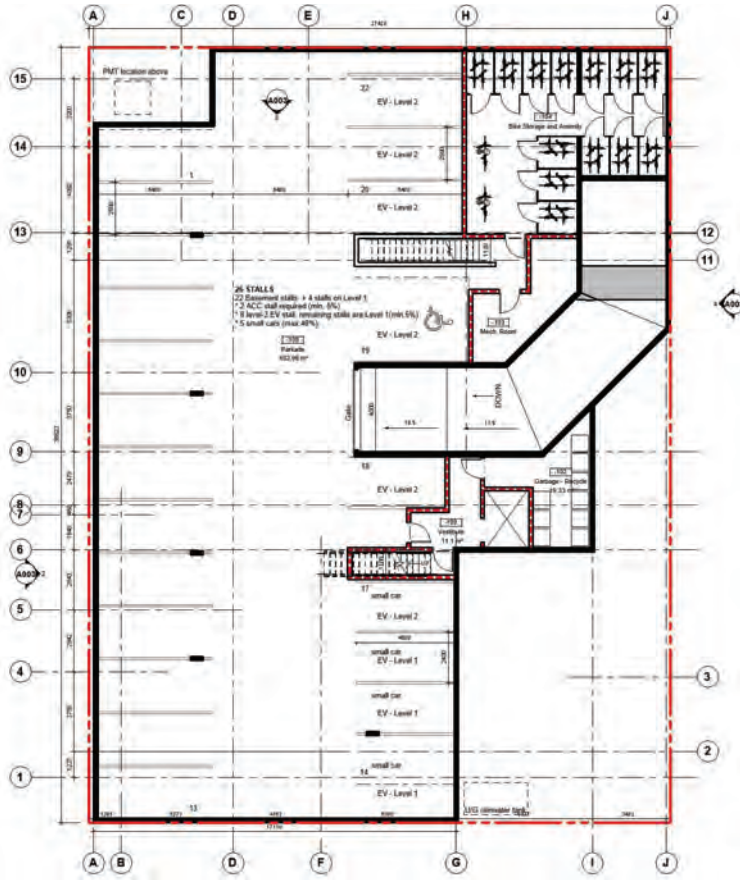
BASEMENT PLAN

APPROVED HAP



HAP AMENDMENT

PERSONAL BIKE STORAGE

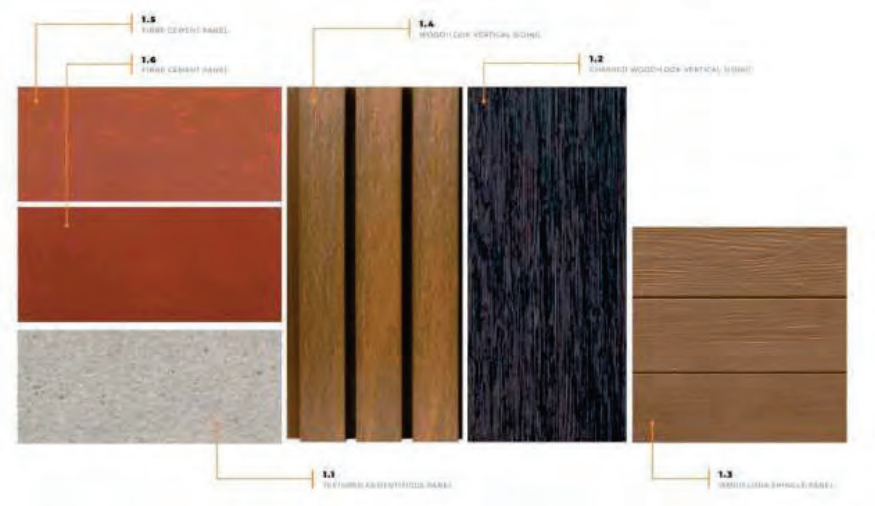


FULLY UNDERGROUND PARKADE WITH 22 CAR STALLS / MECHANICAL ROOM / BIKE STORAGE & AMENITY

- 1 ACCESSIBLE STALL
- 6 LEVEL-2 EV STALLS, ALL OTHER WILL BE LEVEL-1 EV STALLS
- 4 SMALL CARS

ELEVATION CLADDING

APPROVED HAP



HAP AMENDMENT

FIBRE CEMENT PANEL

TEXTURED CEMENTITIOUS PANEL

WOOD-LOOK
VERTICAL SIDING

BLACK CORRUGATED METAL
VERTICAL INSTALLED
NON-COMBUSTIBLE

WOOD LOOK SHINGLE PANEL

BLACK ANODIZED ALUMIUM FRAMES CHANGED TO
BLACK VINYL WINDOWS FOR THE RESIDENTIAL UNITS

CORTEN STEEL PANEL,
NON-COMBUSTIBLE

ELEVATIONS

APPROVED HAP

SOUTH ELEVATION

WEST ELEVATION

HAP AMENDMENT

CLADDING CHANGED TO SHINGLES INSTEAD OF VERTICAL SLATS

CHARED WOOD LOOK VERTICAL SIDING CHANGED TO BLACK CORRUGATED METAL, VERTICAL INSTALLED

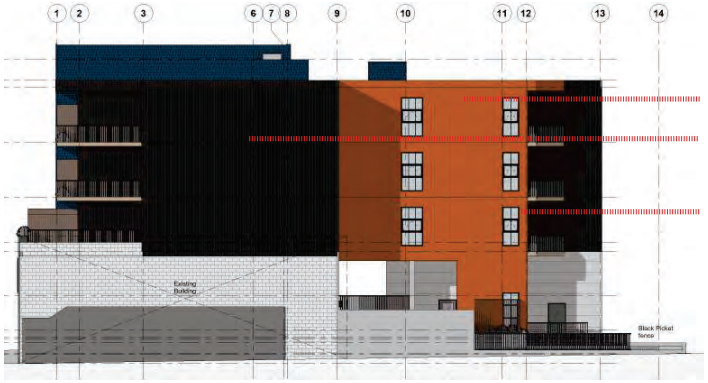
BLACK ANODIZED ALUMIUM FRAMES CHANGED TO BLACK VINYL WINDOWS FOR THE RESIDENTIAL UNITS

SOUTH ELEVATION

WEST ELEVATION

ELEVATIONS

EAST ELEVATION



CROSSED LAMINATED TIMBER CHANGED TO CORTEN STEEL METAL.

CHARRED WOOD LOOK VERTICAL SIDING CHANGED TO BLACK CORRUGATED METAL, VERTICAL INSTALLED

BLACK ANODIZED ALUMIUM FRAMES CHANGED TO BLACK VINYL WINDOWS FOR THE RESIDENTIAL UNITS

EAST ELEVATION

NORTH ELEVATION

ADDITIONAL WINDOWS

NORTH ELEVATION

VISUALS

APPROVED HAP

HAP AMENDMENT

VISUALS

APPROVED HAP

HAP AMENDMENT

VISUALS

VIEW FROM LANE

VIEW ON 2ND STREET BALCONY

VIEW TO COURTYARD

VIEW FROM LANE

VISUALS

VIEW FROM CORNER DUNSMUIR AND 2ND STREET

VIEW OF RESIDENTIAL ENTRANCE AND COVERED PATIO

VIEW TO COMMEMORATION WALL

VIEW OF MAIN ENTRANCE OTDOOR PATIO

VISUALS

VIEW FROM CORNER DUNSMUIR AND 2ND STREET

VIEW OF CRU 1 ON DUNSMUIR

VIEW OF CRU 2 ON DUNSMUIR

VIEW OF CRU 3 PATIO ON 2ND STREET

STREETSCAPE 1

STREETSCAPE 2

REQUESTED ALTERATIONS TO HERTIAGE ALTERATION PERMIT

1. MASSING OF THE BUILDING: THE CORNER MASSING HAS BEEN RECESSED DUE TO AN ELECTRICAL POWERLINE SETBACK ON DUNSMUIR. A 3M SETBACK IS REQUIRED FROM BC HYDRO.

2. TO ALLOW SIMILAR FLOOR AREAS AS THE APPROVED DP WE INCREASED THE SIZE OF THE BUILDING INTO THE INNER COURTYARD. THE LOT COVERAGE IS EXACT THE SAME AS THE APPROVED DP (68%)

3. INCREASE THE UNIT COUNT FROM 15 TO 21 RESIDENTIAL UNITS TO MAKE THE PROJECT VIABLE. 2 NEW UNITS PER FLOOR WERE CREATED.

4. INCREASE FSR TO 2.0 (MAX 2.0 ALLOWED)

5. CREATE AN UNDERGROUND PARKADE FOR 22 EV-STALLS INSTEAD OF A MULTI-PARKING FOR 14 STALLS

6. BIKE AMENITY: INSTEAD OF A COMMON BIKE ROOM, INDIVIDUAL BIKE STORAGE LOCKERS ARE PROPOSED TO BETTER ALIGN WITH THE LOCAL TREND FOR HIGH-VALUE BIKES, REQUIRING ADDITIONAL SECURITY. THE DESIGN STILL EXCEEDS THE MINIMUM BYLAW FOR THE REQUIRED STALLS.
    A. CLASS I: 11 ON THE MAIN FLOOR (MIN 11 REQUIRED)
    B. CLASS II: 42 ON MAIN AND BASEMENT LEVEL (MIN 32 REQUIRED)

7. THE ROOFTOP MECHANICAL SPACE ON LEVEL 5 HAS BEEN ELIMINATED, IN LIEU OF A ROOF ACCESS HATCH. NO IMPACT IN THE EXTERIOR BUILDING HEIGHT.

8. CLADDING MATERIAL CHANGED TO MEET THE FUNCTIONAL AND CODE REQUIREMENTS:
    A. VINYL CHARRED SIDING PANEL CHANGED TO A NON-COMBUSTIBLE BLACK CORRUGATED METAL CLADDING
    B. LAMINATED TIMBER SIDING IN THE COURTYARD CHANGED TO CORTEN STEEL METAL PANEL
    C. THE MATERIALS OF THE CORNER RESIDENTIAL VOLUME HAVE BEEN CHANGED TO BLUE SHINGLES. PREVIOUSLY APPROVED WITH A WOOD LOOK COMBINATION OF THE HORIZONTAL SIDING AND SHINGLES. WE FEEL LIKE HAVING 1 MATERIAL (SHINGLES) PROVIDES BETTER HARMONY AND SIMPLIFIES THE FAÇADE.

9. WINDOW MATERIAL CHANGE:
    A. BLACK VINYL WINDOWS ARE PROPOSED FOR THE RESIDENTIAL FLOORS 2-4 IN LIEU OF ALUMINUM. WITH SIMILAR APPEARANCE TO THE APPROVED DP. HIGH QUALITY VINYL WINDOWS ARE STANDARD PRACTICE IN HIGH-PERFORMANCE BUILDINGS WERE ENERGY PERFORMANCE AND AIRTIGHTNESS ARE A PRIORITY.
    B. ALUMINUM WINDOWS STILL TO BE USED IN LEVEL 1, COMMERCIAL SPACES, THAT INTERFACE WITH THE PUBLIC REALM.

10. FRONT PATIO OF CRU 2 HAS BEEN REDUCED IN SIZE DUE TO THE PARKADE STRUCTURE. A BIGGER PATIO WAS CREATED IN THE BACK.
CRU-3 HAS A OPEN PATIO ON THE CORNER OF 2ND STREET AND THE LANE

11. CREATED MORE LANDSCAPED AREAS ON THE MAIN FLOOR AND REDUCES THE LANDSCAPE PLANTERS IN THE UPPER FLOORS ON LEVEL 2. PLANTERS ON LEVEL 3 AND 4 ARE DIFFICULT TO MAINTAIN DUE THEIR LOCATIONS ARE NOT EASILY ACCESSIBLE FOR MAINTENANCE.

RYZUK GEOTECHNICAL
ENGINEERING & MATERIALS TESTING

Ryzuk Geotechnical
#6-40 Cadillac Ave.
Victoria, BC, Canada, V8Z 1T2
☎ 250-475-3131
✉ mail@ryzuk.com

GEOTECHNICAL FIELD REVIEW / SITE INSTRUCTION

Project No: 10753-2
Project: Proposed Muti-Family Residential Building
Project Address: 2714 Dunsmuir Ave – Cumberland, BC
Date: September 2, 2022

Client: Postmark Group Inc.
Contact: Becki Allen
Email: becki@coastwest.co

Distribution:
Studio 531 – Kevin Charpentier – kcharpentier@studio531.ca
Studio 531 – Jesse Garlick – jgarlick@studio531.ca

Blasting Considerations

As requested, we have reviewed the provided architectural drawings produced by Studio 531 Architects Inc. as such pertain to the proposed multi-family residential development. The following memorandum summarizes our comments and recommendations with respect to the blasting considerations and rock removal for the proposed development. This memorandum is to be considered an addendum to our previously provided geotechnical report dated March 10, 2022. Our work has been carried out in accordance with, and is subject to, our previously accepted Terms of Engagement.

Based on our review of the provided architectural drawings we understand the proposed building will have a one storey underground parkade which will extend approximately 3.3 m below the existing grade. The proposed building will be constructed directly against property line along the eastern and southern and western property line.

The results from our previously completed geotechnical subsurface investigation indicated the general subsurface soil stratigraphy of between 2.1 m to 4.3 m over overburden soils overlying intact bedrock. As such, localized areas of rock removal will be required in order to achieve the proposed grade of the parkade. We understand, surrounding the subject site are historical buildings/sensitive buildings where there is concern surrounding associated vibrations during rock removal.

We recommend the blasting, where required, is completed using controlled techniques to limit the impact on adjacent properties and infrastructure. However, where possible and if rock removal volumes are minor, bedrock removal should be completed using lower impact methods such as by rock breaking with a hydraulic hoe ram, or expansive grout. It will be necessary to monitor vibrations of the surrounding area during excavation/blasting work, especially along the eastern property line given the minimal offset to the neighbouring building. Vibration monitoring during rock removal should be undertaken to ensure the peak particle velocities (PPV) are kept below thresholds related to the surrounding structures and infrastructure. In terms of acceptable ground vibrations for rock removal/construction next to buildings, the Rock Slope Engineering Civil and Mining 4th Edition by Duncan C. Wyllie and Christopher W. Mah, suggests that a maximum peak particle velocity threshold of 10 mm/s be used when working nearby poorly constructed and historic buildings. The previously referenced literature also suggests a maximum peak particle velocity of 50 mm/s be utilized to limit the risk of damage to surrounding buildings/infrastructure to less than 5%.

Based on our experience working around neighbouring historic buildings within the Victoria region, it has been found that maintaining the PPV below 10 mm/s is difficult. Therefore, we recommend a threshold of 25 mm/s is used when working around neighbouring buildings to avoid damages. It should be noted that vibrations with a PPV value between 3 mm/s to 5 mm/s will be perceptible to humans, therefore, neighbouring residences should be made aware of the proposed works. We also recommend that industry standard pre-blast surveys of neighbouring properties are completed.

During the onset of the rock removal/blasting, Ryzuk Geotechnical, should be present on site to monitor vibrations surrounding the construction using highly sensitive Instantel Micromate vibration monitor (seismograph). We

proposed to place the seismograph(s) along neighbouring foundation elements and/or sensitive infrastructure. Based on our experience with vibration monitoring, the vibrations are significantly reduced as the horizontal offset increases. As such during our site attendance we will quantify that reduction in vibrations, and subsequently prepare a memorandum summarizing our results.

We trust the preceding is suitable for your purposes at present. If you require anything further at this time or have any questions with respect to the above, please contact us

Regards,
Ryzuk Geotechnical

Austin Baird, EIT.
Advanced Junior Engineer

Christian Flanagan, P.Eng.
Lead Engineer

PTPN: 1002996

The above does not constitute approval to proceed with the noted work if such is perceived to be an extra to a Contract, or if the work requires approvals/permits from approving authorities.

Corporation of the
Village of Cumberland

HERITAGE ALTERATION PERMIT

2022-01-HAP

TO: Postmark Group

OF: 942 Sherwood Ave, Coquitlam, BC, V3K 1A8

This Heritage Alteration Permit 2022-01-HAP is issued subject to compliance with all of the bylaws of the Village of Cumberland applicable thereto, except as supplemented by this Heritage Alteration Permit, for the purposes of constructing a four-storey mixed use building with commercial units on the ground floor and residential units above.

1. This Heritage Alteration Permit applies to and only to those lands within the Village of Cumberland described below, and any and all buildings, structures and other development thereon:

Legal Description:	Lot 1, Block 6, District Lot 21, Nelson District, Plan 522
PID:	002-422-239
Civic Address:	2714 Dunsmuir Avenue, Cumberland, BC

and

Legal Description:	The West ½ of Lot 2, Block 6, District Lot 21, Nelson District Plan 522
PID:	002-422-255
Civic Address:	2714 Dunsmuir Avenue, Cumberland, BC

2. The property be developed substantially in accordance with the following terms and conditions and provisions of this Permit:

   a. The siting and design of the buildings will be as per the site plan and drawings attached to this Permit as Schedule A – Drawings.

   b. The colours and materials of the buildings will be as per Schedule A – Drawings.

   c. Landscaping will be as per Schedule B – Landscape Plan.

   d. Stormwater management on the site will be as per Schedule C – Stormwater Management Report.

   Required before Building Permit is approved:

   e. Details on how the buildings will be made solar-ready.

   f. Lighting detail showing all lighting to be fully-shielded (full cut-off) and providing sufficient illumination for pedestrian and vehicle safety.

   g. Details of any commercial signage (if available at the time) including dimensions and any projection.

h. Registration of a 1.5metre wide Statutory-Right-of-Way (SRW) along the rear lane for the purposes of enabling the Village, in the future, to construct and maintain a lane of sufficient width to provide improved rear access, travel, and snow removal.

i. Payment of any cash-in-lieu of parking provisions as per the Zoning Bylaw requirements.

j. Payment of applicable Development Cost Charges.

3. Security

None.

4. **Expiry**

Subject to the terms of the Permit, if the Applicant of this Heritage Alteration Permit does not substantially start any construction with respect to which the Permit was issued within 2 years after the date it is issued, the Heritage Alteration Permit lapses.

5. **Timing and Sequencing of Development**

None.

6. **List of Reports or Plans attached as Schedules**

a) Schedule A – Drawings
b) Schedule B – Landscape Plan
c) Schedule C – Stormwater Management Report

7. Contaminated Sites Regulation *(choose one of the following as applicable)*

☒This Permit is issued pursuant to the requirements of the *Environmental Management Act,* whereby the Applicant has completed a "Site Declaration" for the subject property.

OR

☐This Permit is issued pursuant to the requirements of the *Environmental Management Act,* whereby the Regional Manager of the applicable Ministry has received a "Site Profile" for the subject property and has issued a clearance to proceed to the Village on (*insert date).*

8. This Permit is **not** a Building Permit.

CERTIFIED as the **HERITAGE ALTERATION PERMIT** approved for issuance by resolution of the Council of the Corporation of the Village of Cumberland on _____ 2022.

_____
Corporate Officer

Schedule A: Drawings

Schedule B: Landscape Plan

Schedule C: Stormwater Management Report

2714 DUNSMUIR, CUMBERLAND

HERITAGE ALTERATION PERMIT AMENDMENT

2022.09.06

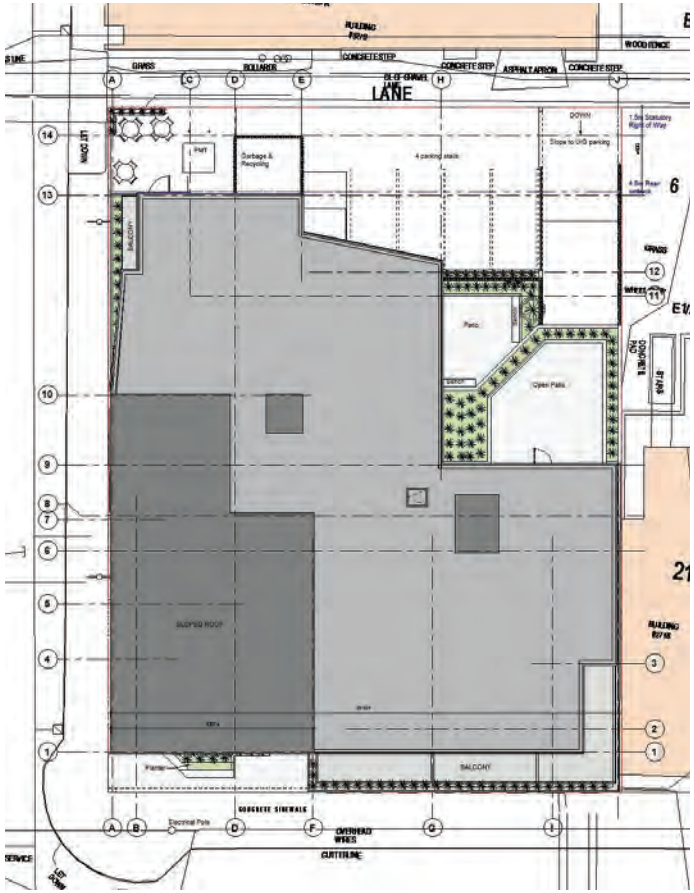
Client:
Postmark Group

Address:
942 Sherwood Ave
Coquitlam BC, V3K 1A8

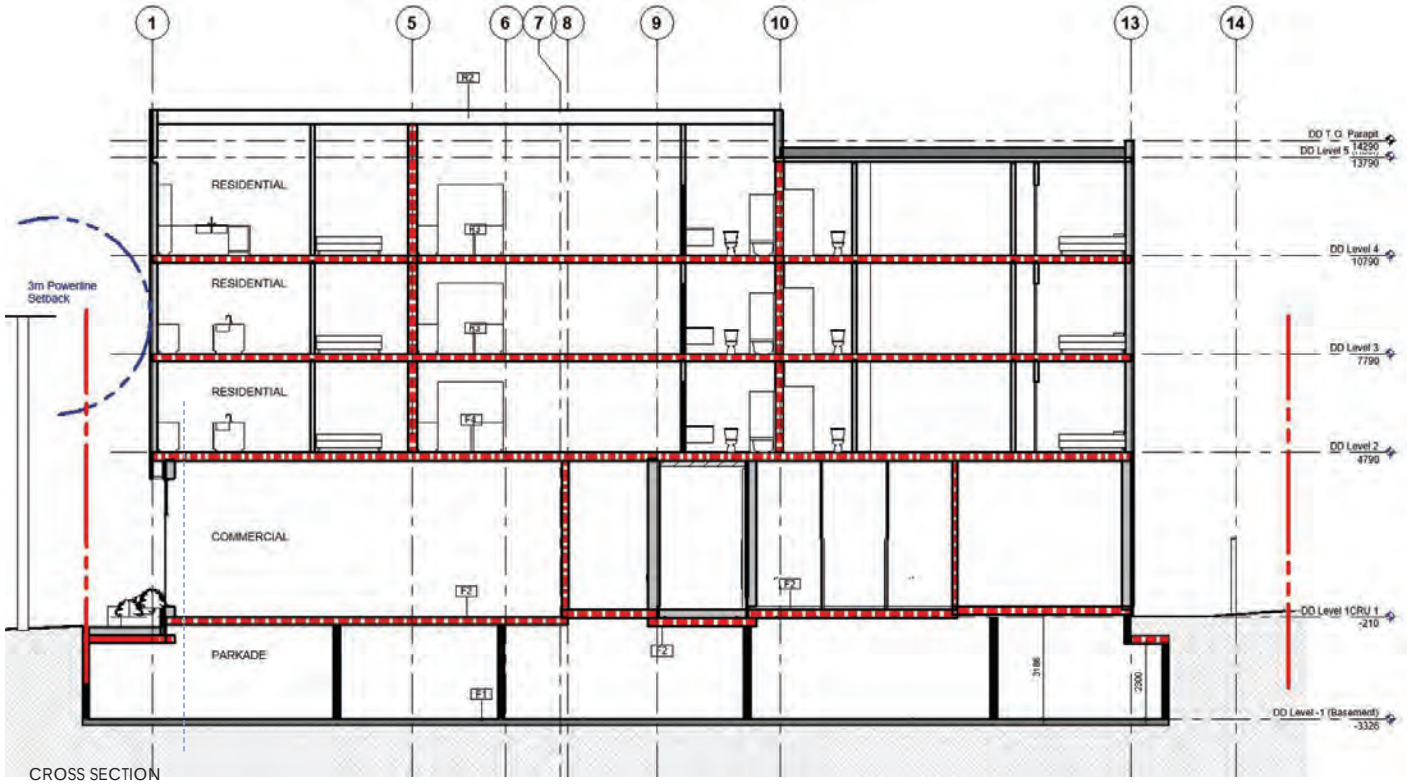
SITE SURVEY

SITE SURVEY

OVERLAY OF NEW BUILDING



WHY HAP AMENDMENT?



CROSS SECTION

SUMMARY OF CHANGES

1/ WITH RESPECT TO THE ORIGINAL DP DESIGN THE MASSING OF THE BUILDING HAS BEEN AMENDED DUE TO AN ELECTRICAL SETBACK (3M FROM POWER LINES)

2/ THE CORNER MASSING HAS BEEN RECESSED BY 2.06M

3/ THE LOT COVERAGE REMAIN IDENTICAL (68%) AND THE DENSITY HAS BEEN INCREASED TO FSR : 2.0

4/ THE RESIDENTIAL ENTRANCE HAS BEEN REDUCED IN SIZE AND CHANGED THE 2 STAIRS INTO A SCISSOR STAIR THAT REQUIRES LESS FLOOR AREA

5/ THE CLADDING MATERIALS HAVE BEEN CHANGED DUE TO A CODE REQUIREMENT TO HAVE A NON-COMBUSTIBLE CLADDING ON THE INTERIOR LOT LINE. THE EXISTING COMBUSTIBLE CHARRED-LOOK WOOD VERTICALLY INSTALLED SIDING HAS BEEN REPLACED BY A NON-COMBUSTIBLE BLACK CORRUGATED METAL PANEL, VERTICALLY INSTALLED.

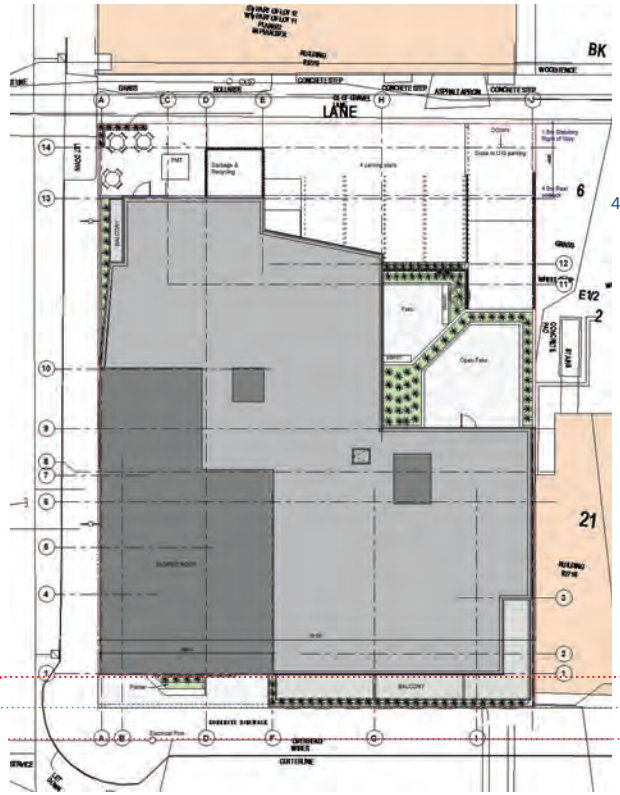
6/ INCREASE THE UNIT COUNT TO MAKE THE PR OJECT VIABLE

7/ CHANGE THE MULTI-PARKING SYSTEM INTO AN UNDERGROUND PARKADE.

8/ VARIANCE REQUESTED FOR THE FRONT SETBACK

9/ DEVELOPMENT VARIANCE REQUESTED TO PERMIT VINYL WINDOWS ON FLOOR 2-3-4

PROJECT SUMMARY



4.5M REAR SETBACK LINE

SITE AREA: 1,004 M2

SITE COVERAGE AREA: 689 M2

TOTAL GROSS FLOOR AREA:	2,250M2
RESIDENTIAL UNITS:	21
PROPOSED PARKING STALLS:	22 UNDERGROUND + 4 ABOVE GROUND
BICYCLE STALLS : SECURED	42 (MIN 32)
UNSECURED	11 (MIN 11)
F.A.R.	2 (MAX 2)
LOT COVERAGE:	68% (MAX 75%)
HEIGHT TO T.O. LEVEL 4 PARAPET:	15.0M
HEIGHT TO T.O. ELEVATOR SHAFT:	16.4M
FRONT SETBACK	0-2.06M **

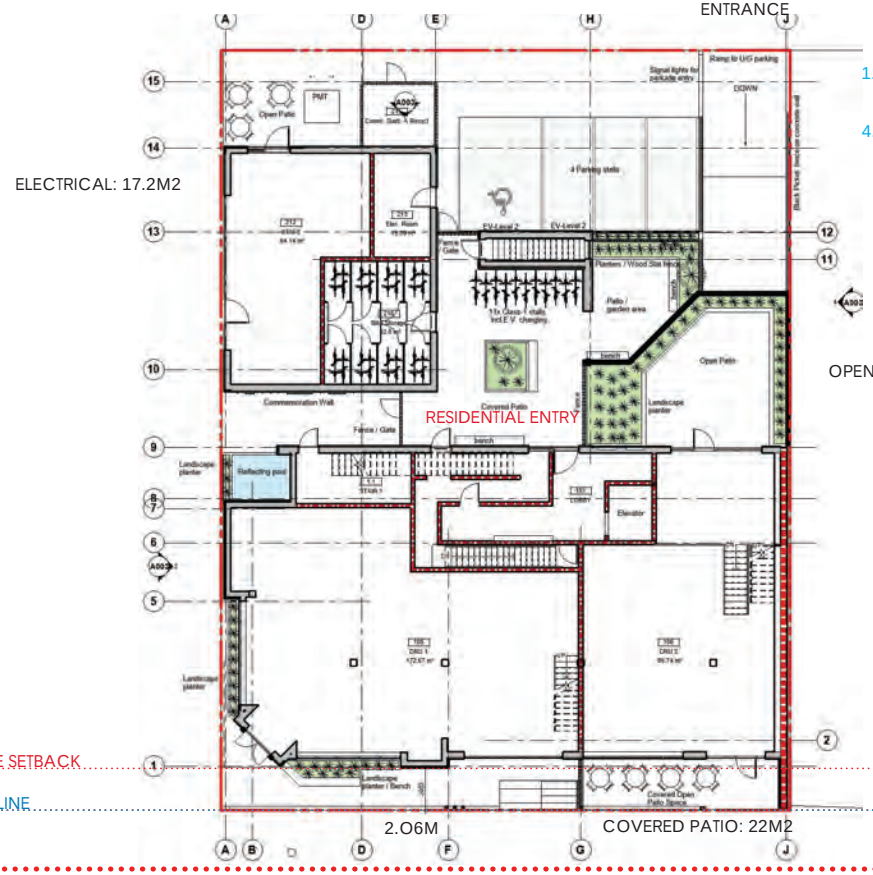
** VARIANCE REQUESTED

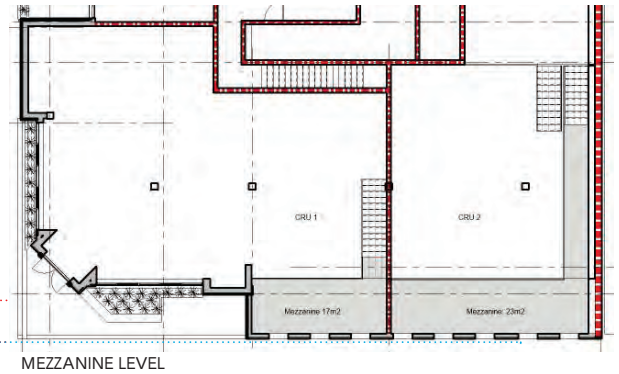
POWERLINE SETBACK

PROPERTY LINE

POWERLINE

MAIN FLOOR PLAN - MEZZANINE





MEZZANINE LEVEL

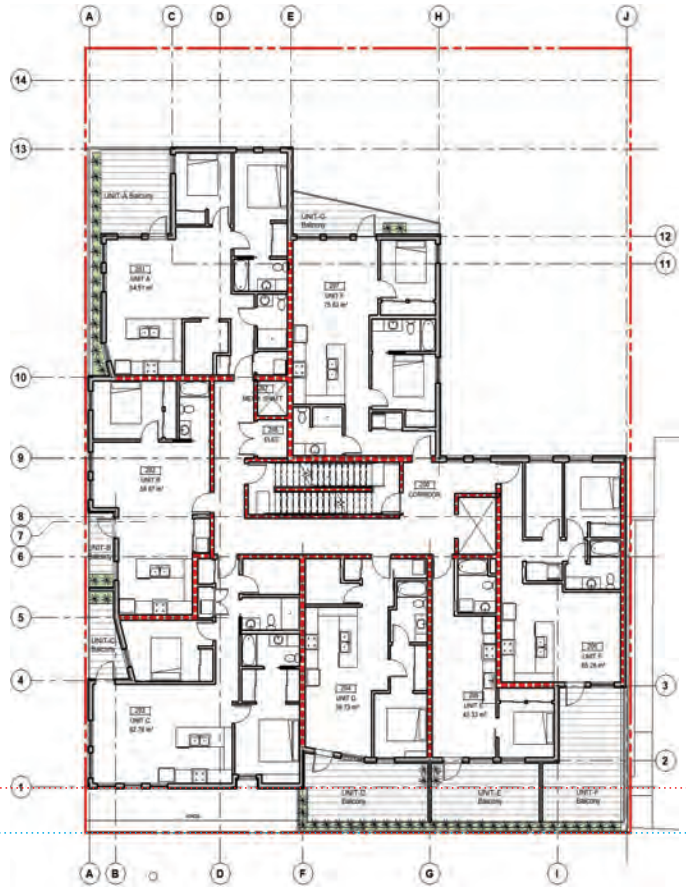
FRONT SETBACK:
- REQUIRED: MIN. 0M
MAX 1.0M FOR A MIN OF 75 % OF THE BUILDING FACADE
-PROPOSED: 0-2.06M **

** VARIANCE REQUESTED

GROSS FLOOR AREA: 423M2
- CRU #1: 180 +16 M2(MEZZ)
- CRU #2: 135+23 M2 (MEZZ)
- CRU #3: 69 M2

SETBACK DUE TO HYDRO LINE
SINGLE RESIDENTIAL MAIN ENTRANCE IN COURTYARD

2ND FLOOR PLAN



POWERLINE SETBACK

PROPERTY LINE

FOOTPRINT WAS BEEN INCREASED
2 EXTRA UNITS PER FLOOR

3TH FLOOR PLAN

POWERLINE SETBACK

PROPERTY LINE

FOOT PRINT WAS BEEN INCREASED
2 EXTRA UNITS PER FLOOR

4TH FLOOR PLAN

POWERLINE SETBACK

PROPERTY LINE

FOOT PRINT WAS BEEN INCREASED
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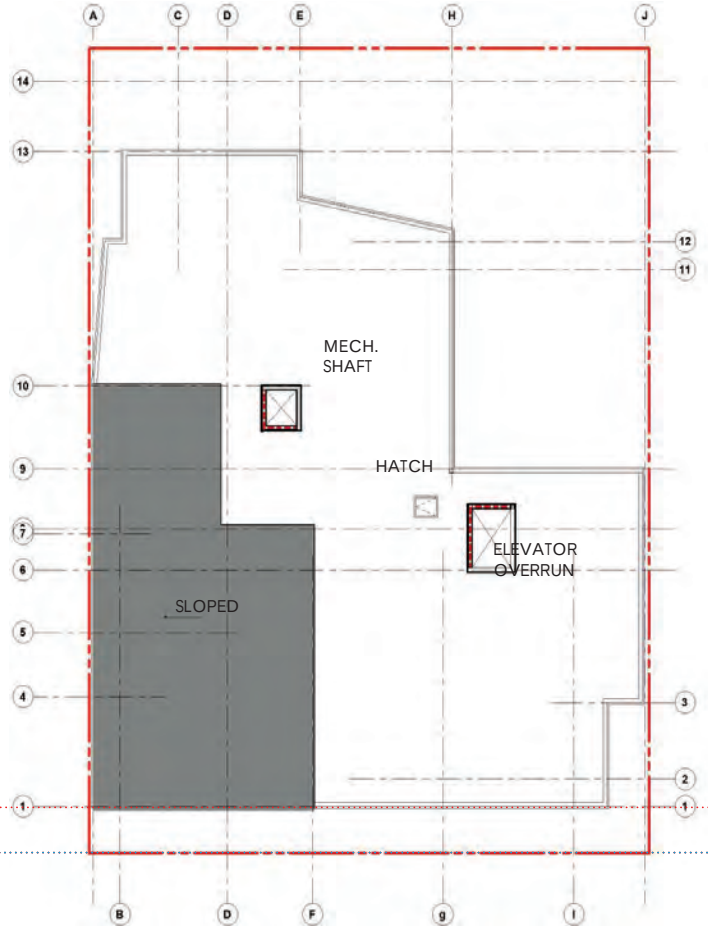
ROOF PLAN

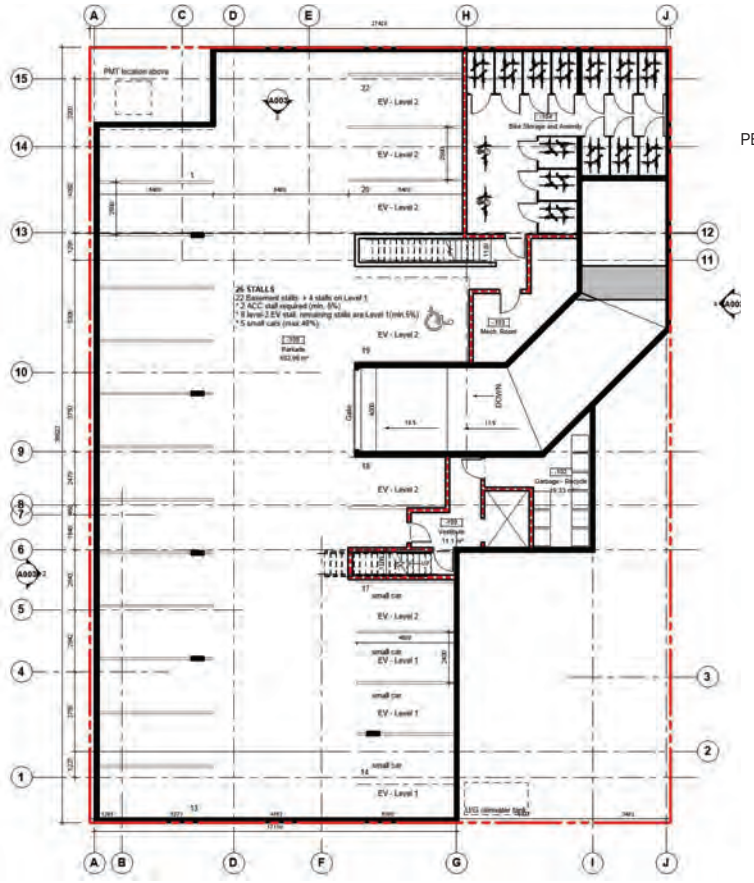


POWERLINE SETBACK

PROPERTY LINE

FLOOR AREA AS BEEN REDUCED TO ONLY THE SLOPED ROOF, MECHANICAL SHAFT AND THE ELEVATOR OVERRUN. ROOF IS ACCESSIBLE BY LADDER WITH ROOF HATCH

BASEMENT PLAN



PERSONAL BIKE STORAGE

FULLY UNDERGROUND PARKADE WITH 22 CAR STALLS / MECHANICAL ROOM / BIKE STORAGE & AMENITY

- 1 ACCESSIBLE STALL
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ELEVATION CLADDING

FIBRE CEMENT PANEL

TEXTURED CEMENTITIOUS PANEL

WOOD-LOOK
VERTICAL SIDING

BLACK CORRUGATED METAL
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NON-COMBUSTIBLE

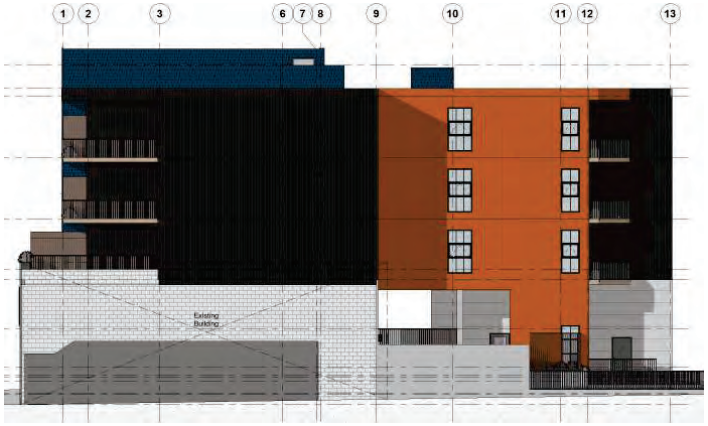
WOOD LOOK SHINGLE PANEL

BLACK ANODIZED ALUMIUM FRAMES CHANGED TO
BLACK VINYL WINDOWS FOR THE RESIDENTIAL UNITS

CORTEN STEEL PANEL,
NON-COMBUSTIBLE

ELEVATIONS

SOUTH ELEVATION



EAST ELEVATION

WEST ELEVATION

NORTH ELEVATION

VISUALS

VISUALS

VIEW FROM LANE

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VIEW TO CRU 2 OPEN COURTYARD

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VIEW FROM CORNER DUNSMUIR AND 2ND STREET

VIEW OF RESIDENTIAL ENTRANCE AND COVERED PATIO

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VIEW OF MAIN ENTRANCE OTDOOR PATIO

VISUALS

VIEW FROM CORNER DUNSMUIR AND 2ND STREET

VIEW OF CRU 1 ON DUNSMUIR

VIEW OF CRU 2 ON DUNSMUIR

VIEW OF CRU 3 AND PATIO ON 2ND STREET

STREETSCAPE 1

REQUESTED ALTERATIONS TO HERTIAGE ALTERATION PERMIT

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    A. CLASS I: 11 ON THE MAIN FLOOR (MIN 11 REQUIRED)
    B. CLASS II: 42 ON MAIN AND BASEMENT LEVEL (MIN 32 REQUIRED)

7. THE ROOFTOP MECHANICAL SPACE ON LEVEL 5 HAS BEEN ELIMINATED, IN LIEU OF A ROOF ACCESS HATCH. NO IMPACT IN THE EXTERIOR BUILDING HEIGHT.

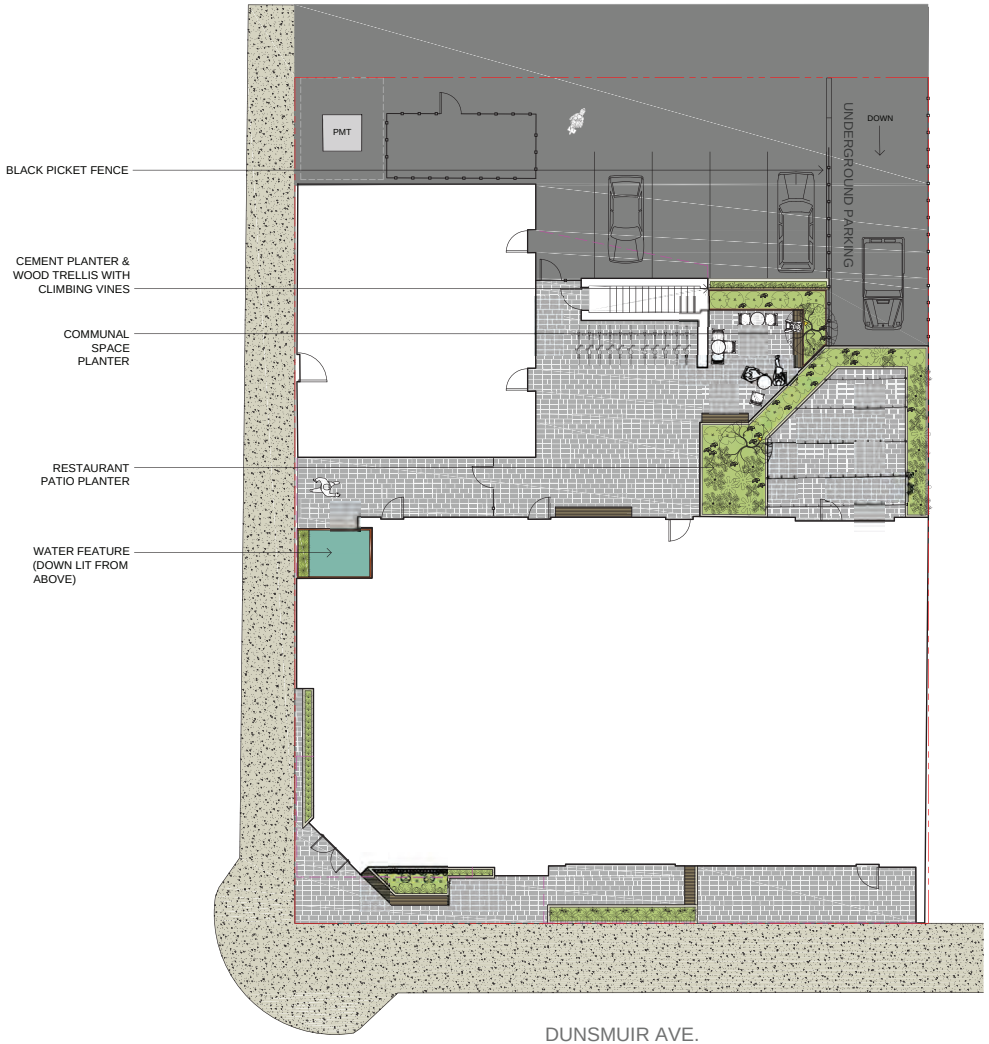
8. CLADDING MATERIAL CHANGED TO MEET THE FUNCTIONAL AND CODE REQUIREMENTS:
    A. VINYL CHARRED SIDING PANEL CHANGED TO A NON-COMBUSTIBLE BLACK CORRUGATED METAL CLADDING
    B. LAMINATED TIMBER SIDING IN THE COURTYARD CHANGED TO CORTEN STEEL METAL PANEL
    C. THE MATERIALS OF THE CORNER RESIDENTIAL VOLUME HAVE BEEN CHANGED TO BLUE SHINGLES. PREVIOUSLY APPROVED WITH A COMBINATION OF THE WOOD LOOK HORIZONTAL SIDING AND SHINGLES. WE FEEL LIKE HAVING 1 MATERIAL (SHINGLES) PROVIDES BETTER HARMONY AND SIMPLIFIES THE FAÇADE.

9. WINDOW MATERIAL CHANGE:
    A. BLACK VINYL WINDOWS ARE PROPOSED FOR THE RESIDENTIAL FLOORS 2-4 IN LIEU OF ALUMINUM. WITH SIMILAR APPEARANCE TO THE APPROVED DP. HIGH QUALITY VINYL WINDOWS ARE STANDARD PRACTICE IN HIGH-PERFORMANCE BUILDINGS WERE ENERGY PERFORMANCE AND AIRTIGHTNESS ARE A PRIORITY.
    B. ALUMINUM WINDOWS STILL TO BE USED IN LEVEL 1, COMMERCIAL SPACES, THAT INTERFACE WITH THE PUBLIC REALM.

10. FRONT PATIO OF CRU 2 HAS BEEN REDUCED IN SIZE DUE TO THE PARKADE STRUCTURE. A BIGGER PATIO WAS CREATED IN THE BACK.

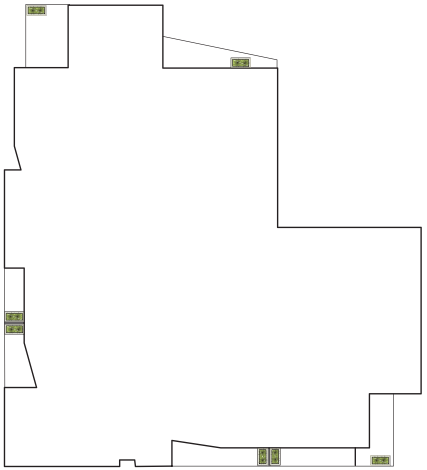
11. CREATED MORE LANDSCAPED AREAS ON THE MAIN FLOOR AND REDUCES THE LANDSCAPE PLANTERS IN THE UPPER FLOORS ON LEVEL 2. PLANTERS ON LEVEL 3 AND 4 ARE DIFFICULT TO MAINTAIN DUE THEIR LOCATIONS ARE NOT EASILY ACCESSIBLE FOR MAINTENANCE.

STREETSCAPE 2

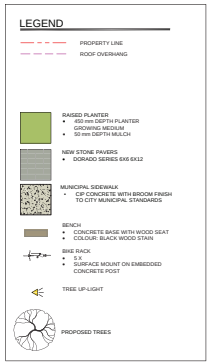


1ST FLOOR (1:100)

2ND FLOOR (1:150)



3RD & 4TH FLOORS (1:150)



NEW STONE PAVERS

WATER FEATURE

1608 Camosun Street, Victoria BC V8T 3E6
Info@biophiliacollective.ca 250 590 1156

OWNER/CLIENT:
POSTMARK GROUP

PROJECT NAME:
THE CUMBERLAND

PROJECT ADDRESS:
2714 DUNSMUIR
CUMBERLAND, BC
V0R 1S0

DESIGNED BY: BIANCA BODLEY
DRAWN BY: SS

#		
1	ISSUED REVIEW	2022-06-22
#	ISSUE	YY/MM/DD

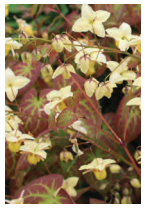
SEAL

NORTH ARROW

DRAWING TITLE:
LANDSCAPE SITE PLAN

DWG NO: L1

SCALE: 1:100



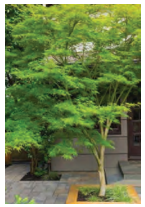
EPIMEDIUMS

DEER FERN

GOLDEN OATS

LIROPE

SEDGE

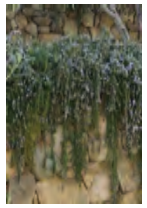


SEIRYU MAPLE

SHRUBBY VERONICA

SWEETBOX

SWORD FERN



WEEPING ROSEMARY

WILD GINGER

WOOLY THYME

PLANT SCHEDULE

Quantity	Symbol	Latin Name	Common Name	Container	Native	Pollinator	Remarks	Height at Maturity (m)	Spread at Maturity (m)
25		Asarum canadense	Wild ginger	#1	y		Part to Full Shade	0.1-0.15	0.15-0.3
16		Thymus pseudolanuginosus	Woolly thyme	flat			full sun/part shade	.3	.45
3		Hebe rakaiensis	Shrubby veronica				full sun/part shade	1.0	1.2
7		Epimedium versicolor	Epimediums	#1		y	dappled shade/part shade/full shade	0.3	0.9
25		Liriope muscari 'LIRF' Isabella	Isabella liriope	#1			ALL deer/drought/rabbit tolerant	0.3-0.6	0.3-0.6
20		Rosmarinus officinalis 'Prostratus Group'	Weeping rosemary			y	full sun	0.3-0.6	0.6-0.9
18		Sarcococca humilis	Himalayan sweet box			y	part/full shade	0.4-0.6m	0.7m
12		Blechnum spicant	Deer fern	#1	y		part/full shade	0.3-0.45	0.3-0.6
11		Polystichum munitum	Western sword fern	#1	y		part sun/shade	0.6-1.2	0.6-1.2
30		Carex oshimensis 'Evercolor Everillo'	Sedge 'Evercolor Everillo'				part shade/full shade	.45	.45
10		Stipa gigantea	Golden oats				full sun	1.52 - 2	.60 - .80

NOTES:
1. PLANTS IN PLANT LISTS ARE SPECIFIED ACCORDING TO THE CANADIAN NURSERY LANDSCAPE ASSOCIATION CANADIAN STANDARDS FOR NURSERY STOCK AND SECTION 12, CONTAINER GROWN PLANTS FROM THE BC LANDSCAPE STANDARD, CURRENT EDITION.

TREE SCHEDULE

Quantity	Symbol	Latin Name	Common Name	Container	Caliper	Size	Native	Remarks	Height at Maturity (m)	Spread at Maturity (m)
2		Acer palmatum var. dissectum 'Seiryu'	Seiryu maple	B&B			N	full sun/part shade	3-4.5	2.4-3.6

BIOPHILIA

1608 Camosun Street, Victoria BC V8T 3E6
Info@biophiliacollective.ca 250 590 1156

OWNER/CLIENT:
POSTMARK GROUP

PROJECT NAME:
THE CUMBERLAND

PROJECT ADDRESS:
2714 DUNSMUIR
CUMBERLAND, BC
V0R 1S0

DESIGNED BY: BIANCA BODLEY
DRAWN BY: SS

#	ISSUE	YY/MM/DD
1	ISSUED REVIEW	2022-06-22

SEAL

NORTH ARROW

DRAWING TITLE:
PLANTING PLAN

DWG NO:
L2

SCALE: 1:100

July 11, 2022 Our File: 2231-47902-01

STUDIO 531 Architects Inc.
546 Herald Street
Victoria, BC, V8W 1S6

Attention: Mr. Jesse Garlick, architect, AIBC, MRAIC

RE: THE EDDIE, 2714 DUNSMUIR AVE, CUMBERLAND, BC
STORMWATER MANAGEMENT REPORT V2

1. INTRODUCTION

McElhanney Ltd. (McE) was retained by the Postmark Group Inc., (Client) to prepare a stormwater management report for the proposed residential / commercial development located on Lot 1 and The West ½ of Lot 2, Block 6, District Lot 21, Nelson District, Plan 522, also know as 2714 Dunsmuir Avenue, Cumberland BC.

The design for this stormwater management report follows the Corporation of the Village of Cumberland Subdivision and Development Bylaw No. 948, 2012 and Municipal Stormwater System Regulation and Fees Bylaw No. 1024, 2015.

To address the design goals stated above, the management of stormwater will need site-specific Best Management Practices (BMPs) to limit the impact of the proposed development. To analyze the effects of the proposed works, detailed design calculations have been prepared in subsequent sections. These calculations cover scenarios for the existing and proposed catchments with respect to multiple design storm events. Included in this report is a summary of the stormwater analysis and stormwater recommendations.

1.1 Site Description

The proposed development is located at 2714 Dunsmuir Avenue on the northwest corner of the intersection of Second Street and Dunsmuir Avenue. The property was formally occupied by the Cumberland Hotel and Restaurant, which has recently been demolished.

The adjacent properties are fully developed with commercial businesses and the area is fully serviced with municipal services and overhead electrical. A site plan is shown in Figure 1 below.

In addition, in 2016 / 2017, the Village undertook significant upgrades on Dunsmuir Avenue, which included storm sewer, sanitary sewer, and water distribution infrastructure.

Suite 1, 1351 Estevan Road
Nanaimo, BC
V9S 3Y3
Tel 250 716 3336
Fax 250 716 3339
ww.McElhanney.com

Figure 1: Site Location

1.2 Government Publications

The following government publications are relevant to the development for stormwater management:

- The Corporation of the Village of Cumberland Subdivision and Development Bylaw No. 948, 2012.
- The Corporation of the Village of Cumberland Municipal Stormwater System Regulation and Fees Bylaw No. 1024, 2015.
- The Corporation of the Village of Cumberland Official Community Plan Bylaw No. 990, 2014.
- Master Municipal Construction Document (MMCD) Design Guidelines Manual (2014).
- Stormwater Planning: A Guidebook for British Columbia, 2002.

1.3 Design Objectives

To meet the intent of requirements of the Village of Cumberland Bylaws, the design objectives of storm water management for this site can generally summarized as follows:

- Review on-site post-development peak flows and the corresponding pre-development levels for varies return periods.
- Rainfall events should be evaluated with the goal that post-development flows rates mimic pre-development rates.
- The Village encourages infiltration galleries where feasible, when upgrading existing development sites.
- Oil and grit interceptors are required from parking areas, driveways for all multi-family, commercial, institutional, and industrial properties.

2. STORMWATER ANALYSIS

Analysis was completed in conformance with the Master Municipal Design Guidelines, 2014 edition Section 4.7. The rainfall-runoff relationship for this site for both pre- and post-development conditions was assessed. This process involves:

- Defining the drainage areas;
- Selecting design storm;
- Determining impervious areas for existing and post development conditions; and
- Using the Rational Method to estimate peak flow rates and runoff volumes.

For the design storm, the calculations covered existing and proposed development scenarios for the catchment area with respect to the 2, 5, 10, 25, 50 and 100-year design storm events. The goal of this analysis is to determine the post development runoff from the site (both peak flow rate and total runoff volume) and to compare to the pre-development targets. The goal of the design was to limit the effects on the downstream infrastructure and water courses while working with the limited area and project constraints.

2.1 Site Features

The site-specific stormwater management parameters for the entire development are summarized in Table 1. Under the pre-development condition, the imperviousness area is 95%. Under the post-development condition, impervious area will increase to 100% due the building size.

Table 1: Site-specific Stormwater Catchment Parameters

Parameter	Pre-Development	Post-Development
Total Catchment Area (ha)	0.10	0.10
Precent Impervious	95%	100%
Area Land Cover	Commercial Building and Parking	Commercial Building and Parking
Run-off Coefficient (Commercial)	0.85	0.90
Run-off Coefficient Adjustment Factor	N/A	N/A
Time of Concentration	5 min	5 min

2.2 Rainfall Intensity-Duration-Frequency (IDF) Data

Rainfall data is supplied by Environment Canada as “Short Duration Rainfall Intensity-Duration-Frequency Data” (IDF Data) and the IDF data referenced for this project is from Courtenay, BC (Puntledge).

2.3 Comparison of Pre-Development and Post-Development Stormwater Runoff

Based on the input of site information and rainfall data, the pre and post-development peak flows and runoff volumes for the proposed lot were estimated for 2, 5, 10, 25, 50 and 100-year design storm rainfall events. The results are summarized in Table 2.

Table 2: Comparison of Peak Runoff Flow Rates – 10min Storm Duration

Design Storm	Intensity (mm/hr)	Pre-Dev. Runoff (L/s)	Post-Dev. Runoff (L/s)	Increased Runoff (L/s)
2-Yr	21.97	5.19	5.50	0.31
5-Yr	39.33	9.29	9.84	0.55
10-Yr	51.48	12.16	12.88	0.72
25-Yr	66.75	15.77	16.70	0.93
50-Yr	78.44	18.54	19.63	1.09
100-Yr	90.29	21.34	22.59	1.25

The results indicate, that the development will increase the peak runoff rates if stormwater management features are not included (generally increased by 6% post development).

3. STORMWATER MANAGEMENT DESIGN

Performance targets have been developed based on the documents outlined in Section 1.2 above. In general, all documents are consistent with an integrated strategy of Rainfall Capture, Run-off Control and Flood Mitigation.

Given the commercial nature of the area and the proposed development, there are limited opportunities to promote infiltration or practically retain stormwater on-site. As such, the following criteria is proposed for the project:

- For New Developments & Re-Developments peak flows up to the 10-year return shall be controlled to 10- year pre-development level.
- For New Developments & Re-Developments all peak flows up to the 10-year return will not exceed a discharge rate greater than the 2-year pre-development level.

3.1 Volume Control

To achieve the above performance targets, run-off will be collected and stored using a combination of roof drains, onsite storm pipes and area drains which will be directed to an underground storage tank. The existing municipal storm sewers are higher than the proposed inverts necessary for the perimeter drains and a storage tank. Given that, the proposed tank will need to be pumped to the existing on-site storm service.

Based on the 10-year storm analysis, the 15-minute storm duration will generate the greatest volume of run-off for the site. Refer to Table 3 for required storage volume:

Table 3: Required Storage Volume

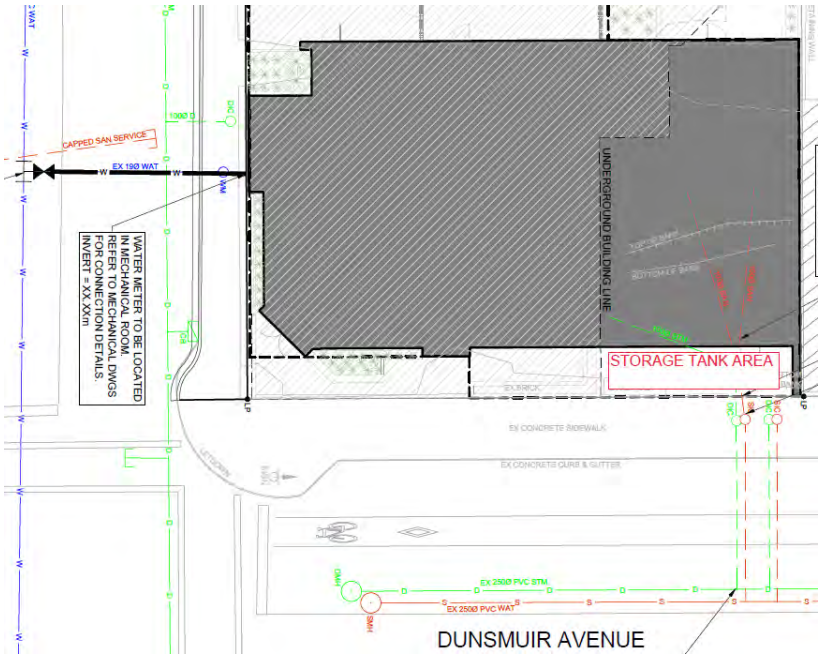
Design Storm	Storm Duration	Post-Dev. Runoff (L/s)	Pre-Dev. 2 YR Release Rate (L/s)	Storage Volume Req'd (L)	Storage Volume Req'd (m3)
10-Yr	15 min.	10.61	5.19	4881.11	4.88

Based on the above, it is proposed to use Langley Concrete Ltd Type III Oil Interceptor Tank. The tank will have an effective storage area of 5.44 cubic meters. In addition, the tank will provide oil / water separation for the surface parking lots. For reference we have attached Langley Concrete's tank details.

A pump will be installed in the storage tank with the pumping rate set at 5.19 L/s. An overflow will be included on the tank that will connect to the existing storm service. Details to be provided during detail design phase of the project.

Refer to Figure 2 for proposed tank location.

Figure 2: Storage Tank Location



3.2 Existing Storm Sewer

We have reviewed the existing storm sewer installed on Dunsmuir Avenue (2017) and can confirm the system was designed to accommodate commercial development for storm events up to the 10yr storm duration. As such, the proposed development will not generate any negative downstream impacts to the existing storm system.

As the area is fully developed, the 100yr storm overland routing remains unchanged and will continue south down Dunsmuir Avenue.

4. EROSION AND SEDIMENT CONTROL MEASURES

Erosion and sediment control plans deal with site specific conditions to avoid erosion and associated impacts. This site, which is moderately sloped, has the potential to carry sediment laden water into nearby storm systems.

Mitigation measures associated with the property are to ensure that water quality in the site runoff and the receiving waters are not adversely impacted during the construction period. Proposed mitigation measures in relation to regrading work include:

1. Source Erosion Control:

    - Limiting excavation and filling operations to dry-weather periods.
    - Stabilize slopes as required.
    - Minimize the extent of disturbed areas, protect their surfaces and divert adjacent runoff away from them;

2. Runoff Control:

    - Create slope breaks, terraces or diversions swales that collect sheet runoff and direct into a drain system that connects to dispersion swales before discharging into watercourses.
    - Install rock check dams or grass cover in swale or drain system to reduce channel erosion and capture sediment.
    - Provide groundwater control by applying a drainage blanket of course material to stabilize slopes and excavations.

3. Sediment Control:

    - Silt control measures are to be installed around material stockpiles and within existing water bodies that are connected to the peripheral swales.
    - Control silt movement if any, using collection swales, check dams and natural ponds.
    - Install and regularly maintain all infiltration and silt control facilities required to meet the above objectives.
    - Soil stockpiles should be covered with poly sheeting or contained within silt fencing.

During construction, the Contractor will be responsible for all erosion and sediment management plans and protection. The District will retain its own Environmental Monitor who will review erosion and sediment management plans and protection.

5. CONCLUSION

The intent of this storm water report was to review the on-site post-development peak flows and the corresponding pre-development levels for project and review effects of the increased peak flows on the downstream infrastructure.

The stormwater management design for the proposed development includes volume control to maintain pre-development flows up to the 2-year return period and provide volume control for the 10-year return period.

We trust the above information is sufficient for your present needs. Should you have any questions or require additional information, please do not hesitate to contact me.

Yours truly,

McElhanney Ltd.

_____

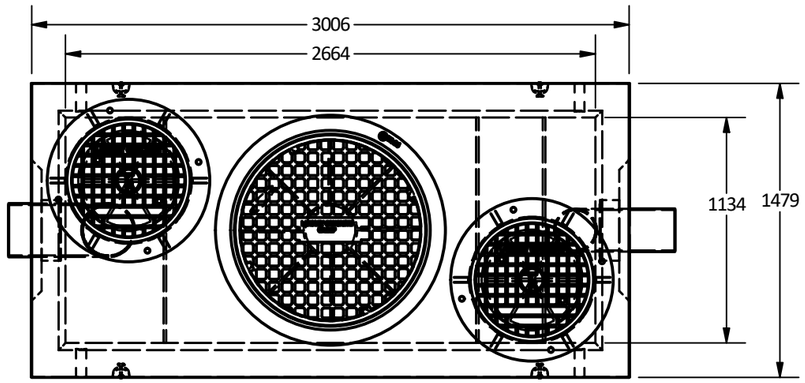
Chris Pogson, P. Eng.

Project Manager

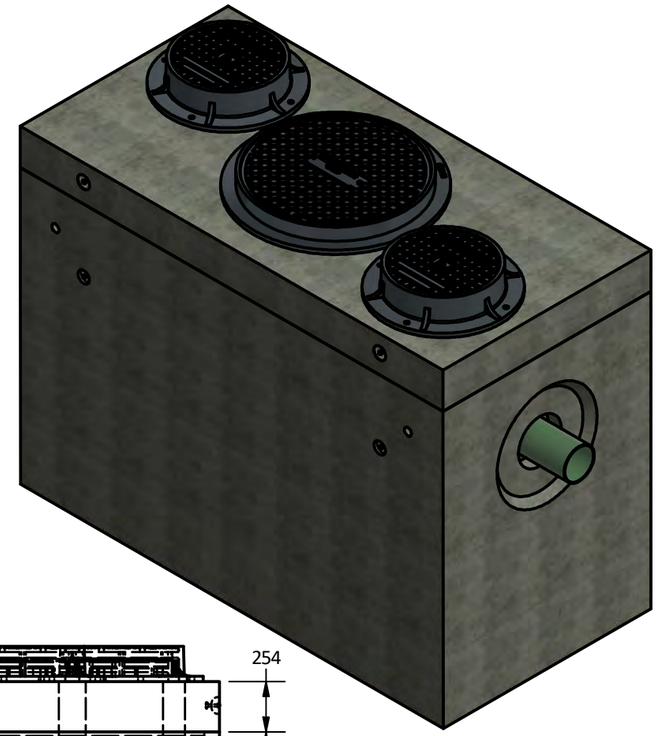
PERMIT TO PRACTICE
McElhanney Ltd.
PERMIT NUMBER: 1003299
Engineers and Geoscientists of BC

PART LIST			
ITEM	QTY	PART NUMBER	WEIGHT
1	1	Type III Vault	7,100 kg.
2	1	Type III Lid	2,730 kg.

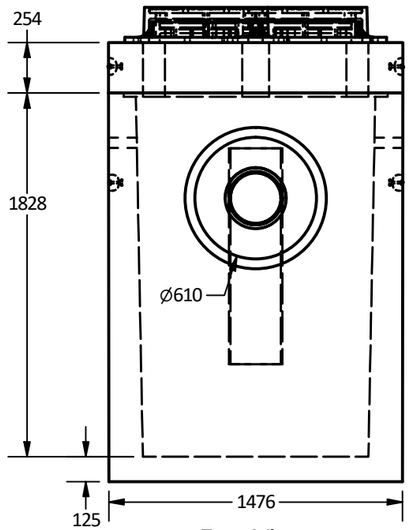
Notes:
1. Type III Oil interceptor manufactured to meet AASHTO HS20/BCL-625 live loading.
2. Lid designed to withstand AASHTO HS20 / BCL-625 live loading.
3. Concrete vault designed for the following earth covers:
   - Minimum: 0 m.
   - Maximum: 2.5 m.
4. Unit supplied with Ø610mm knockout cores for inlet/outlet as shown.
5. Unit supplied with lifting inserts as required.
6. Unit risers available in heights:
   305, 450 etc tp 1800mm maximum.
7. Design can be modified for specific sites, please contact LCG sales office.
8. Unit to have 4-Ø51 mm vent holes as shown.
9. Unit supplied with galvanized baffles as shown.
10. Unit has a maximum 3,000 liter [3.0 m³] capacity.
11. Minimum rebar yield strength: 414 MPa.
12. Minimum concrete strength: 35 MPa.
13. PVC T required by design, supplied and installed by others in field.
14. All dimensions are in millimeters.



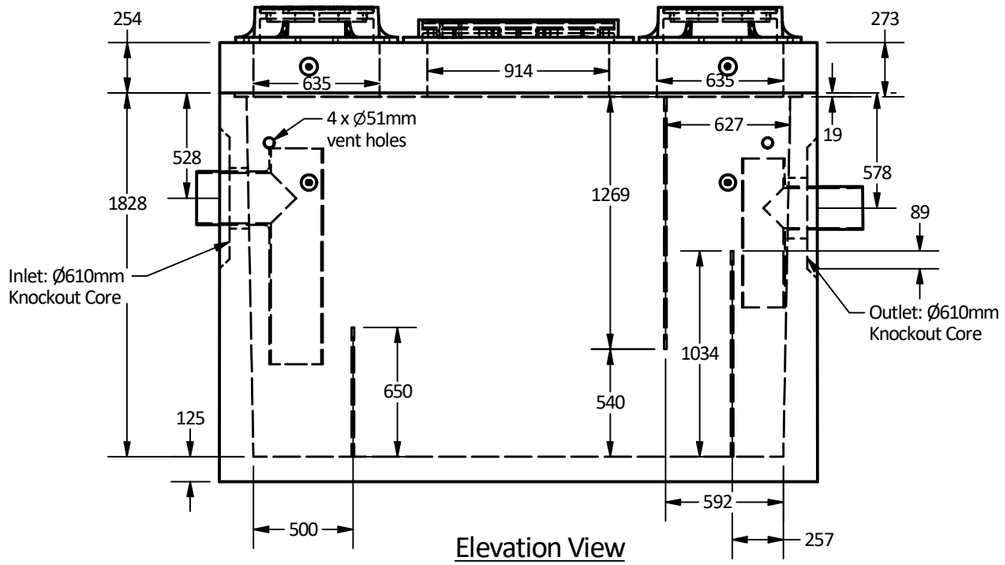
Plan View



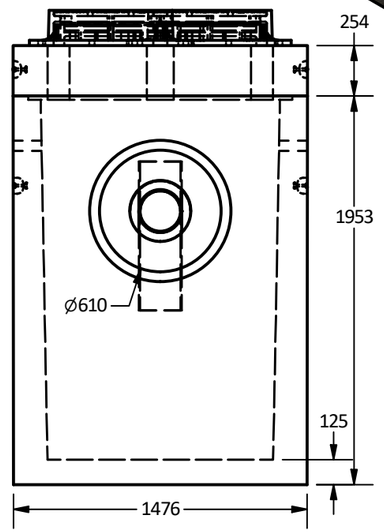
Isometric View



East View



Elevation View



West View

Langley Concrete Group is a certified Q-Cast Plant, an American Concrete Pipe Association Third Party Certificationfor the manufacture of Pipe, Manhole, Box Culvert & Precast Items.

ACPA CERTIFIED PLANT Q-CAST

Quality Assurance of products manufactured by The Langley Concrete Group has been verified by the following third party certification programs

All Dimensions are in Millimeters. Unless otherwise Stated

Projection Method: THIRD ANGLE

THE Langley CONCRETE GROUP
www.langleyconcretegroup.com
LANGLEY (604) 533-1656
VICTORIA (250) 478-9581
CHILLIWACK 1-800 667-9600

DESCRIPTION:

Type III Oil Interceptor
[API Style]

DRAWN BY: SR		JOB NO.
CHK BY: KS		DWG NO: TYPE III-API
DATE: Sep.26, 2018		
SCALE: 1:30		
SIZE 11 x 17	REV.	SHEET 1 OF 1

Corporation of the
Village of Cumberland

DEVELOPMENT VARIANCE PERMIT

2022-07 DV

TO: Postmark Group

OF: 942 Sherwood Ave, Coquitlam, BC, V3K 1A8

This Development Variance Permit (2022-07-DV) is issued subject to compliance with all of the bylaws of the Village of Cumberland applicable thereto, except as specifically varied or supplemented by this Permit.

1. This Development Variance Permit applies to and only to those lands within the Village of Cumberland described below, and the proposed four storey building thereon:

Legal Description:	Lot 1, Block 6, District Lot 21, Nelson District, Plan 522
PID:	002-422-239
Civic Address:	2714 Dunsmuir Avenue, Cumberland, BC
and	
Legal Description:	The West ½ of Lot 2, Block 6, District Lot 21, Nelson District Plan 522
PID:	002-422-255
Civic Address:	2714 Dunsmuir Avenue, Cumberland, BC

2. The land described herein shall be developed substantially in accordance with the following terms and conditions and provisions of this Permit. Zoning Bylaw No. 1027, 2016 is varied as follows:

Section 6.6	RV/Bus parking is not required.
Section 6.9	Courtesy parking for pregnant women and persons with young children is not required.
Section 6.13	The off-street loading stalls are not required.
Section 9.4	The maximum front setback is 2.15 m for 50 percent of the building façade as shown on Schedule A.
Section 9.4	The sloped roof portion of the buildings may have a maximum height of 17.0 metres as shown on Schedule A.

3. **Security**

None.

4. Expiry

Subject to the terms of the Permit, if the Applicant of this Development Variance Permit does not substantially start any construction with respect to which the Permit was issued within 2 years after the date it is issued, the Permit lapses.

5. Timing and Sequencing of Development

None.

6. List of Reports or Plans attached as Schedules

Schedule A: Drawings Issued for Development Variance Permit

7. Contaminated Sites Regulation *(choose one of the following as applicable)*

☒ This Permit is issued pursuant to the requirements of the *Environmental Management Act,* whereby the Applicant has completed a "Site Disclosure Statement" for the subject property.

OR

☐ This Permit is issued pursuant to the requirements of the *Environmental Management Act,* whereby the Regional Manager of the applicable Ministry has received a "Site Profile" for the subject property and has issued a clearance to proceed to the Village on (*insert date).*

8. This Permit is **not** a Building Permit.

CERTIFIED as the DEVELOPMENT VARIANCE PERMIT approved and issued by resolution of the Council of the Corporation of the Village of Cumberland on _____, 2022.

_____

Corporate Officer

Schedule A: Drawings

LIST OF ABBREVIATIONS

APC	ACOUSTIC PANEL CEILING
ACT	ACOUSTIC TILE
A/C	AIR CONDITIONING
ADD	ADDENDUM
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AGG	AGGREGATE
AHU	AIR HANDLING UNIT
ALUM / AL	ALUMINUM
APPROX	APPROXIMATE / APPROXIMATELY
AP	ACCESS PANEL
APV	ASPHALT PAVING
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AVG	AVERAGE
BBH	BASEBOARD HEATER
BIM	BUILDING INFORMATION MODEL
BCBC	BRITISH COLUMBIA BUILDING CODE
BD	BOARD
BF	BARRIER FREE
BLVD	BOULEVARD
BLDG	BUILDING
BP	BUILDING PERMIT
BPV	BRICK PAVING
BSMT	BASEMENT
BULKHD	BULKHEAD
C/C	CENTER TO CENTER
C/W	COMPLETE WITH
CAB.	CABINET(S)
CB	CATCH BASIN
CBD	CEMENT BOARD
CEM	CEMENT / CEMENTITIOUS
ft3	CUBIC FEET
CG	CORNER GUARD
CHBD	CHALK BOARD
CH	COAT HOOK
CIP	CAST IN PLACE
CJ	CONTROL JOINT
C.J.	CONSTRUCTION JOINT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CL	CENTRE LINE
CL.	CLEAR FINISH
CLG	CEILING
cm	CENTIMETRE(S)
CMU	CONCRETE MASONRY UNIT
CORR	CORRIDOR
CPT	CARPET
CPV	CONCRETE PAVER
CT	CERAMIC TILE
Cu	COPPER
CW	COLD WATER
CWALL	CURTAIN WALL
D.	DEPTH
DBL	DOUBLE
DBGL	DOUBLE GLAZED(ING)
DEG or °	DEGREES
##° ##' ##"	DEGREES, MINUTES, SECONDS
°F	DEGREES FAHRENHEIT
°C	DEGREES CELSIUS
DEMO	DEMOLITION
DET	DETAIL(S)
DF	DRINKING FOUNTAIN
DG	DOOR GRILLE
DIA or Ø	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
Dk.	DARK re:COLOUR SHADING
DN	DOWN
DW	DISHWASHER
DWG	DRAWING
EA	EACH
ETC	ETCETERA
EIFS	EXTERIOR INSULATION FINISH SYSTEM
ELEC	ELECTRICAL
ELEV	ELEVATION
EP	ELECTRICAL PANEL
EP JT	EXPANSION JOINT
EQ	EQUAL
EQMT	EQUIPMENT
E.S.	EACH SIDE
EXIST./ EX	EXISTING
EXT	EXTERIOR
EXP	EXPOSED / EXPOSED STRUCTURE
FAA	FIRE ALARM / ANNUNCIATOR PANEL
FF	FINISHED FLOOR
FFL	FINISHED FLOOR LEVEL
FG	FINISHED GRADE
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FHC	FIRE HOSE CABINET
FIN	FINISHED/FINISH
FL	FLOOR / FLOOR LEVEL
FP	FIREPROOFING
FP.	FIREPLACE
FR	REFRIGERATOR
FRP	FIBREGLASS REINFORCED PANEL
FRR	FIRE RESISTENCE RATING
FS	FIRESTOP(PING)
ft2	SQUARE FOOT / FEET
FTG	FOOTING
FURN	FURNITURE / FURNISHED
FUR.	FURRING
FXC	FIRE EXTINGUISHER CABINET
GALV	GALVANIZED
GALV	GAUGE
GB	GRAB BAR
GF/GFI	GROUND FAULT
GL	GLASS / GLAZING
GRID / GL	GRIDLINE
GWB	GYPSUM WALLBOARD
GWG	GEORGIAN WIRED GLASS
ha	HECTARES
HB	HOSE BIBB
HD	HAND DRYER
H/C	HANDICAPPED ACCESSIBLE
HC	HOLLOW CORE
HM	HOLLOW METAL
HORZ	HORIZONTAL
HR	HOUR
HSS	HOLLOW STRUCTURAL SECTION
HT. / H	HEIGHT
HVAC	HEATING VENTILATION AIR CONDITIONING
HW	HOT WATER
HWT	HOT WATER TANK
HWD	HARDWOOD
ICF	INSULATED CONCRETE FORMS(S)
ID	INSIDE DIAMETER
IHM	INSULATED HOLLOW METAL
IMP	IMPERIAL
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
IMP.	INVERT
KD	KILD DRIED
L	LENGTH
LAM	LAMINATE
LAV	LAVATORY
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LT.	LIGHT re: COLOUR SHADING
LTG	LIGHTING

m	METRE(S)
m2	METRES SQUARED
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBREBOARD
MECH	MECHANICAL
MEMB	MEMBRANE
MFR	MANUFACTURER
MIR	MIRROR(ED)
MIN	MINIMUM
MISC	MISCELLANEOUS
mm	MILLIMETRES
MTL	METAL
MW	MICROWAVE OVEN
MWK	MILLWORK
N/A	NOT APPLICABLE
ND	SANITARY NAPKIN DISPOSAL
NIC	NOT IN CONTRACT
No. or #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O.C. or O/C	ON CENTRE
OD	OUTSIDE DIAMETER
OFF	OFFICE
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
OWSJ	OPEN WEB STEEL JOIST
PC	PRECAST CONCRETE
PED	PEDESTRIAN
PL	PLASTER
PLAM	PLASTIC LAMINATE
PLY	PLYWOOD
PM	PERFORATED METAL
POLY	POLYETHYLENE SHEET
PMR	REFINISHED METAL ROOFING
PMC	PREFINISHED METAL CLADDING
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PREV	PREVIOUS
PT	PRESSURE TREATED
PSF	PRESSED STEEL FRAME
PTD	PAINT(ED)
PTN	PARTITION
PVC	POLY VINYL CHLORIDE
QT	QUARRY TILE
R	RADIUS
R#	RESISTANCE VALUE IMP ft2-°F-hr/Btu
R&S	ROD & SHELF, IN CLOSETS
RA	RETURN AIR (GRILLE)
RB	RESILIENT BASE
RD	ROOF DRAIN
Rd.	ROAD
REQ	REQUIRED
RF	RESILIENT FLOORING
RCP	REFLECTED CEILING PLAN
REF	REFERENCE
REIF.	REINFORCE(D)(MENT)
RES	RESIDENTIAL
RM	ROOM
R.O.	ROUGH OPENING
R/W	RIGHT OF WAY
RWL	RAINWATER LEADER
RWP	RAINWATER PIPE
RSI	RESISTANCE VALUE SI, m2-Kelvins/W
SA	SUPPLY AIR (GRILLE)
SAN	SANITARY
SAM	SELF-ADHERING MEMBRANE
SC	SOLID CORE
SCHED	SCHEDULE
SD	SOAP DISPENSER
SECT	SECTION
SF	SQUARE FOOR
SGL	SEALED GLAZING UNIT
SH	SHELF
SI	INTERNATIONAL SYSTEM OF UNITS - METRIC
SIM	SIMILAR
SND	SANITARY NAPKIN DISPENSER
SOG	SLAB ON GRADE
SPEC	SPECIFICATION(S)
S/S	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
ST	STREET
STC	SOUND TRANSMISSION CLASS (RATING)
STD	STANDARD
STL	STEEL
STN	STAIN
STRUCT	STRUCTURAL
T&B	TOP AND BOTTOM
T&G	TOUNGUE AND GROOVE
TB	TOWEL BAR
TBD	TACKBOARD
TD	TRENCH DRAIN
TEMP	TEMPORARY
TGL	TEMPERED GLASS
THK	THICK
THRU	THROUGH
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOP	TOP OF PARAPET
TOPO	TOPOGRAPHICAL
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TRZ	TERRAZZO
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
U/S	UNDERSIDE
VB	VAPOUR BARRIER
VCT	VINYL COMPOSITE TILE
VERT	VERTICAL
VWC	VINYL WALL COVERING
W	WIDTH
W/	WITH
W/O	WITHOUT
WBD	WHITEBOARD
WC	WATER CLOSET
WD	WOOD
WDB	WOOD BASE
WP	WATER PROOF(ING)
WPC	WALL PAPER COVERING
WS	WOOD SIDING
WVN	WOOD VENEER
WWM	WELDED WIRE MESH
YD	YARD(S)

GENERAL NOTES

1. THE WORK INDICATED IN THESE DOCUMENTS IS INTENDED TO BE A COMPLETE WORK IN EVERY RESPECT. THE *CONTRACTOR* SHALL ABIDE BY AND COMPLY WITH THE TRUE INTENT AND MEANING OF ALL THE *CONTRACT DOCUMENTS* TAKEN AS WHOLE. ANY WORK SHOWN ON THE *DRAWINGS* EVEN IF NOT PARTICULARLY DESCRIBED IN THE *SPECIFICATIONS*, OR VICE VERSA, IS TO BE DONE BY THE *CONTRACTOR* AS IF IT WERE BOTH SHOWN ON *DRAWINGS* AND SPECIFIED.
2. EXAMINE SITE. REVIEW ALL SITE CONDITIONS PERTINENT TO WORK OF THE CONTRACT. THE *CONSULTANT* DOES NOT GUARANTEE EXISTING SITE INFORMATION INDICATED IN THE *CONTRACT DOCUMENTS* AND THE *CONTRACTOR* MUST ANTICIPATE MINOR VARIANCES IN SUCH INFORMATION RELATIVE TO ACTUAL CONDITIONS PRIOR TO BID CLOSE. REPORT ANY MAJOR DISCREPANCIES TO THE CONSULTANT.
3. PERFORM WORK IN ACCORDANCE WITH B.C. BUILDING CODE (BCBC) LATEST EDITION AND ANY OTHER CODE OF PROVINCIAL OR LOCAL APPLICATION PROVIDED THAT IN ANY CASE OF CONFLICT OR DISCREPANCY, THE MORE STRINGENT REQUIREMENTS OR AUTHORITY HAVING JURISDICTION SHALL APPLY.
4. MEET OR EXCEED REQUIREMENTS OF *CONTRACT DOCUMENTS*, SPECIFIED STANDARDS AND CODES, AND REFERENCED DOCUMENTS.
5. CONFLICT IN TERMINOLOGY UTILIZED WITHIN THE *CONTRACT DOCUMENTS* WILL BE DECIDED AS THE MORE EXPENSIVE ALTERNATIVE.
6. WHERE SITE WORK INVOLVES BREAKING INTO OR CONNECTING TO EXISTING SERVICES, CARRY OUT WORK IN ACCORDANCE WITH MUNICIPAL AND OR UTILITY COMPANY REQUIREMENTS. COORDINATE SERVICE INTERRUPTIONS WITH *OWNER* AND AUTHORITY HAVING JURISDICTION.
7. FIT WORK AIRTIGHT TO PIPES, SLEEVES, DUCTS AND CONDUITS AND CONFORM TO FIRE STOPPING AND FIRE SEPARATION REQUIREMENTS. CONCEAL ALL PIPES, DUCTS, CONDUITS AND WIRING IN FLOOR, WALL AND ROOF AND CEILING CONSTRUCTION OF FINISHED AREAS.
8. RECORD EXACT LOCATIONS OF NEW, MAINTAINED, RE-ROUTED AND ABANDONED SERVICE LINES ON AS-BUILT DRAWINGS.
9. THE LOCATION OF EXISTING FEATURES, BOTH ABOVE GRADE AND UNDERGROUND, HAS BEEN DETERMINED FROM AVAILABLE RECORDS BUT IS NOT GUARANTEED. THE LOCATION OF ALL SUCH FEATURES SHALL BE VERIFIED IN THE FIELD BY THE *CONTRACTOR*. NOTIFY CONSULTANT OF DISCREPANCIES PRIOR TO START OF THE WORK.
10. DEMOLITION IN THE VICINITY OF EXISTING STRUCTURES AND UTILITIES SHALL BE CAREFULLY PERFORMED. THE *CONTRACTOR* SHALL BE HELD RESPONSIBLE FOR DAMAGE TO AND FOR PROTECTION OF, EXISTING STRUCTURES AND UTILITIES. DAMAGE TO EXISTING STRUCTURES AND UTILITIES IS TO BE MADE GOOD TO THE SATISFACTION OF THE CONSULTANT AT NO COST TO THE *OWNER*.
11. PORTIONS OF ASSEMBLIES THAT HAVE BEEN REMOVED OR DEMOLISHED FOR WORK REQUIRED WITHIN OR BEYOND THE ASSEMBLY SHALL BE PATCHED AND MADE GOOD TO MATCH THE EXISTING SURROUNDING. ALL PATCH WORK SHALL BE TIED INTO THE EXISTING SURROUNDING AS REQUIRED TO PROVIDE A FINISHED PRODUCT EQUAL TO OR BETTER THAN ORIGINAL.
12. ALL THE VARIOUS WORKS SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND OF THE BEST MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE *CONTRACT DOCUMENTS*. NONE BUT SKILLED, EXPERIENCED WORKMEN AND THEIR APPRENTICES SHALL BE EMPLOYED ON THE WORK.
13. ALL THE MATERIALS USED IN THE EXECUTION OF THE WORK OF THIS CONTRACT SHALL BE NEW AND/OR BEST QUALITY UNLESS OTHERWISE SHOWN.
14. READ ALL *DRAWINGS* IN CONJUNCTION WITH ALL PROJECT SPECIFICATION SECTIONS.
15. CONTAIN SITE WORK AREA TO LIMITS AS SHOWN ON SITE PLAN. DECONSTRUCTED AND WASTE MATERIALS TO BE REMOVED FROM SITE AND TRANSPORTED TO RECYCLING FACILITIES AUTHORIZED TO HANDLE AND DISPOSE OF THE MATERIALS.
16. CONTRACTORS STORAGE AND LAY-DOWN AREA IS TO BE CONTAINED WITHIN SITE WORK AREA LIMITS UNLESS OTHERWISE NOTED.
17. LIMIT SITE ACCESS TO ROUTES INDICATED ON THE SITE PLAN. COORDINATE ALL ACCESS WITH AUTHORITY HAVING JURISDICTION AND THE OWNER'S RESTRICTIONS PRIOR TO COMMENCEMENT OF WORK. ABIDE BY ALL MUNICIPAL REQUIREMENTS, OWNER RESTRICTIONS AND CONTRACT DOCUMENTS
18. SITE AND TOPOGRAPHICAL INFORMATION HAS BEEN OBTAINED FROM SURVEY DRAWINGS OBTAINED FROM THE *OWNER*. LOCATIONS OF ALL SITE COMPONENTS AND ELEVATION DATUMS PRIOR TO COMMENCEMENT OF THE WORK. NOTIFY CONSULTANT OF DISCREPANCIES PRIOR TO START OF THE WORK.
19. RE-GRADE ALL AREAS DISTURBED DURING CONSTRUCTION TO FINISHED GRADES AS INDICATED ON *DRAWINGS* AND BLEND INTO EXISTING NATURAL GRADE AS REQUIRED.
20. UNLESS OTHERWISE INDICATED EXTERIOR DIMENSIONS ARE TO FACE OF FOUNDATION WALL OR FACE OF EXTERIOR SHEATHING.
21. UNLESS OTHERWISE INDICATED INTERIOR DIMENSIONS ARE TO FACE OF WALL FINISH. REFER TO ARCHITECTURAL ASSEMBLY DRAWINGS FOR WALL AND PARTITION CONSTRUCTION. READ ALL DIMENSIONS ON ARCHITECTURAL IN CONJUNCTION WITH STRUCTURAL LAYOUT DRAWINGS. NOTIFY CONSULTANT OF DISCREPANCIES PRIOR TO START OF THE WORK.
22. ALL WALL PENETRATIONS TO BE SEALED USING APPROVED BUILDING ENVELOPE PRODUCTS AND METHODS.
23. NEW & EXISTING GRADES SHOWN IN ELEVATION ARE APPROXIMATE. *CONTRACTOR* TO FIELD VERIFY ALL DATUM POINTS WITH EXISTING SITE CONDITIONS AND MAKE NECESSARY ADJUSTMENT OF FOOTING HEIGHTS, COLUMN LENGTHS, STAIR TERMINATIONS AND FINAL FINISH CLADDING TERMINATIONS. MAKE ADJUSTMENTS TO MATERIAL LENGTHS AND QUANTITIES AS NECESSARY TO SUIT EXISTING & ADJUSTED GRADE CONDITIONS AS NECESSARY. REPORT ANY DISCREPANCIES TO CONSULTANT PRIOR TO START OF WORK.
24. ALL CABINETS, SHELVING AND WALL MOUNTED FIXTURES TO BE FASTENED TO SOLID WOOD BLOCKING AND ACHIEVE SEISMIC RESTRAINT.
25. ALL SHELVES TO BE ADJUSTABLE U.N.O.
26. CONFIRM CLEARANCES REQUIRED FOR ALL *OWNER* SUPPLIED EQUIPMENT PRIOR TO FABRICATION OF MILLWORK OR WORK TO BE BUILT IN.
27. PRIOR TO INSTALLATION COORDINATE PLACEMENT OF ALL SERVICES FIXTURES AND FITTING WITHIN CEILING SPACES TO AVOID CONFLICTS THAT RESULT IN DESIGN ELEVATION CHANGES TO CEILINGS. PREPARE COORDINATION DRAWING FOR REVIEW FOR COMPLEX CONDITIONS. *CONTRACTOR* TO INCORPORATE NECESSARY CHANGES IF CONSULTANT AGREES TO ADJUST DEISM LEVEL OF FINISHED CEILINGS.

FIRE SEPARATIONS

- 2-HOUR FIRE RATING
- 1-HOUR FIRE RATING
- 45 MINUTE FIRE RATING
- 0-HOUR FIRE RATING

ANNOTATION LEGEND

- PROJECT NORTH
- TRUE NORTH
- DRAWING #
- SHEET # REFERENCED FROM
- View Name — 1/8" = 1'-0" — SCALE OF DETAIL
- SHEET #
- 101 / Name — ROOM NUMBER / ROOM NAME
- 1'-0" / 1t — CEILING HT ABOVE FINISHED FLOOR CEILING MATERIAL
- MW01 — MILLWORK | CABINET NUMBER
- ELEVATION FINISHES TAG — Refer to Materials Legend on Sheet.
- KEYNOTE TAG — Refer to Keynote Legend on Sheet.
- REVISION TAG
- 1 / A101 SIM — DRAWING NUMBER / SHEET NUMBER
- DIRECTION OF VIEW / DRAWING NUMBER / EXTENT OF VIEW / SHEET NUMBER
- GL — GRID NUMBER | LETTER / GRID LINE
- SLOPE X — DIRECTION & SLOPE
- X / Y — ROOF SLOPE
- 0.00 DESCRIPTION — PROJECT ELEVATION / ELEVATION DESCRIPTION
- 0.00 / 0.00 — PROPOSED ELEVATION / EXISTING ELEVATION

ASSEMBLY TAGS

Cxx	EXTERIOR CLADDING ASSEMBLY
Exx	EXTERIOR WALL ASSEMBLY
Pxx	INTERIOR PARTITION ASSEMBLY
Xxx	FIRE RATED WALL ASSEMBLY
Fxx	FLOOR ASSEMBLY
Rxx	ROOF ASSEMBLY
FPx	FURRING PARTITION ASSEMBLY

WINDOW TAGS

Wxx	EXTERIOR WINDOW TYPE
CWxx	CURTAIN WALL TYPE
Gxx	INTERIOR WINDOW TYPE

DOORS & TAGS

101	NEW DOOR & NUMBER RATING (IF APPLICABLE)
	EXISTING DOOR TO REMAIN

DRAWING LIST

ARCHITECTURAL

DD 0.0	TITLE SHEET
DD 1.0	SITE PLAN
DD 2.00	MAIN FLOOR
DD 3.0	ELEVATIONS
DD 3.1	ELEVATIONS

A VARIANCE IS REQUESTED FOR THE FRONT LINE SETBACK DUE TO THE LOCATION OF A ELECTRICAL POLE ON THE CORNER OF DUNSMUIR AND 2ND STREET.
BY CODE, THE BUILDING NEEDS TO HAVE A 3M SETBACK FROM THE NEAREST POWERLINE.
A FRONT SETBACK OF 2.06M IS REQUIRED TO BE CODE COMPLIANT

PROJECT INFORMATION

PROJECT DESCRIPTION
- NEW 4 STOREY MIXED USE BUILDING.
- 3 COMMERCIAL SPACES ON THE MAIN FLOOR
- 3 FLOORS OF RESIDENTIAL SPACES WITH EACH 7 UNITS.
- FULL UNDERGROUND PARKADE WITH A SINGLE 4M WIDE RAMP FOR 22 STALLS
- 4 ABOVE GROUND STALLS
- BIKE STORAGE AND AMENITY ON THE MAIN FLOOR AND BASEMENT

BUILDING CODE 2018 EDITION OF THE BCBC INCLUDING ALL ADDENDA

Owner	Postmark Group Inc, 942 Sherwood Ave - Coquitlam, BC	
Municipal Address	- 2714 Dunsmuir Ave, Cumberland BC	
Legal Description	Lot 1, Block 6, DL21, PLAN VIP522	
Zoning	**Current** VCMU-1 (Village Commercial Mixed Use	**Proposed** UNCHANGED
Lot Area	**Current** 1004m2	**Proposed** UNCHANGED

PROJECT INFORMATION CONTINUED

Lot Coverage **Bylaw Section:**	**Permitted** 75%		**Proposed** 68.7%		
	(calcs)		690/1004= 0.687		
Building Setbacks **Bylaw Section:**		**Front (S)**	**Interior (E)**	**Rear (N)**	**Exterior Side (W)**
	Required	min0-max1m(for min 75% of facade)	min 0m	min 4.5m	min0-max1m(for min 75% of facade)
	Provided	2.06m (Variance Required)	0m	4.5m	0
Average Grade/Grade **Bylaw Section:**	**Proposed** 154.7				
	(155.5+153.8)/2= 154.7				
Building Height **Bylaw Section:**	**Permitted** 15m		**Proposed** 15m to parapet 16.94 m top of sloped roof		
	(calcs)				
Gross Floor Area **Bylaw Section:**	1994.47m²				
	Main Floor & Mezzanine : 404.3		3rd Floor: 516.77		
	2nd Floor: 516.77		4th Floor: 516.77		
Floor Area Ratio **Bylaw Section:**	**Permitted** 2		**Proposed** 2		
	SEE DRAWING AND SCHEDULE				
Vehicle Parking **Bylaw Section:**	**Type**	**Required/Permitted**	**Proposed**		
	Total Spaces:	**21**	**22 Underground 4 Above Ground**		
Charging Stations Required: Y/N	Min. vehicular 0.9/dwelling Min. visitor 0.1/dwelling	19 2			
Loading Parking	**Required** 0		**Provided** 0		
Bicycle Parking **Bylaw Section:**	**Type**	**Required**	**Proposed**		
	Total Spaces	**43**	**53**		
	Secured/Controlled	1.5/DU= 31.5	42		
	Unsecured / Uncontrolled	0.5/DU= 10.5	11		

Issued for Development Permit Variance - R1

September 06, 2022

OWNER:

Postmark Group Inc.
942 Sherwood Ave,
Coquitlam BC, V3K 1A8
t. 604 | 209.9053

contact: becki Allen
e: becki@coastwest.co

ARCHITECT:

STUDIO 531 ARCHITECTS INC.
546 Herald St.,
Victoria, BC V8W 1S6
t. 250 | 384.2131

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Victoria, BC V9A 6X5
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CIVIL ENGINEER:

MCELHANNEY ENGINEERING
1351 estevan Rd #1,
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e: cpogson@mcelhanney.com

ELECTRICAL ENGINEER:

e2
549 Herald St,
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t. 778 | 433 9391

contact: Patrick Lourdu
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BUILDING ENVELOPE CONSULTANT:

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contact: Robin Breuer
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LANDSCAPE ARCHITECT:

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INTERIOR ARCHITECT:

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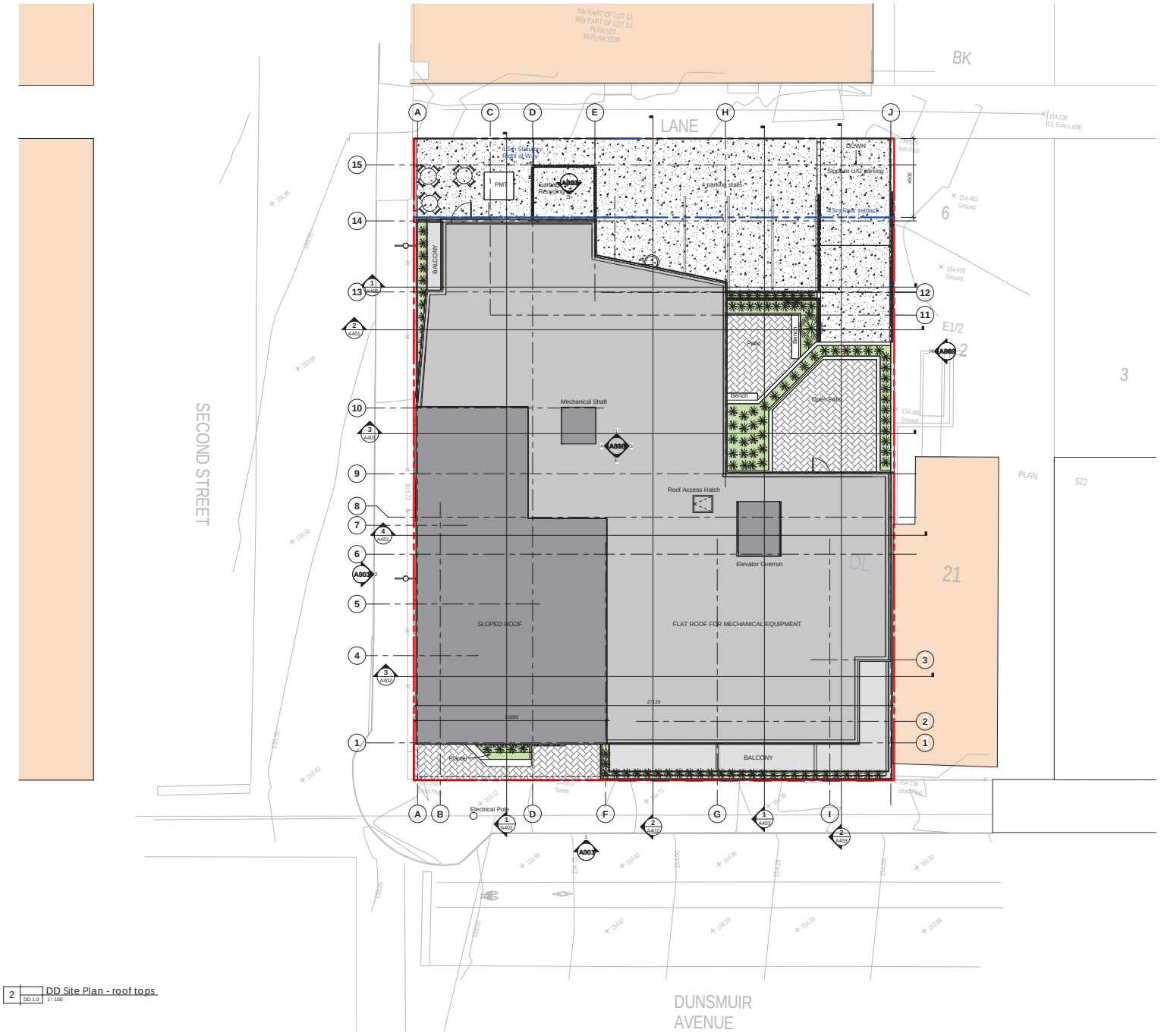
STUDIO531 architects inc

2022 Sep 08

File Path: BIM 360://22-294 2714 Dunsmuir Cumberland/22-294 2714 Dunsmuir Cumberland 2.1.rvt
Plot Date: 2022-09-07 4:00:24 PM



SITE PLAN LEGEND

- Soft Landscape Surface — Refer also to Landscape Documents
- Permeable Hard Surface — Refer also to Landscape Documents
- Non-Permeable Hard Surface — Refer also to Landscape Documents
- Balcony
- Flat Roof
- Sloped Roof
- Neigbour buildings

2 DD Site Plan - roof tops
DD 1.0 1 : 100

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NOTES
NOT FOR CONSTRUCTION

ISSUE
01 ISSUED FOR DEVELOPMENT VARIANCE PERMIT

CLIENT
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STAKEHOLDERS

PROFESSIONAL SEAL

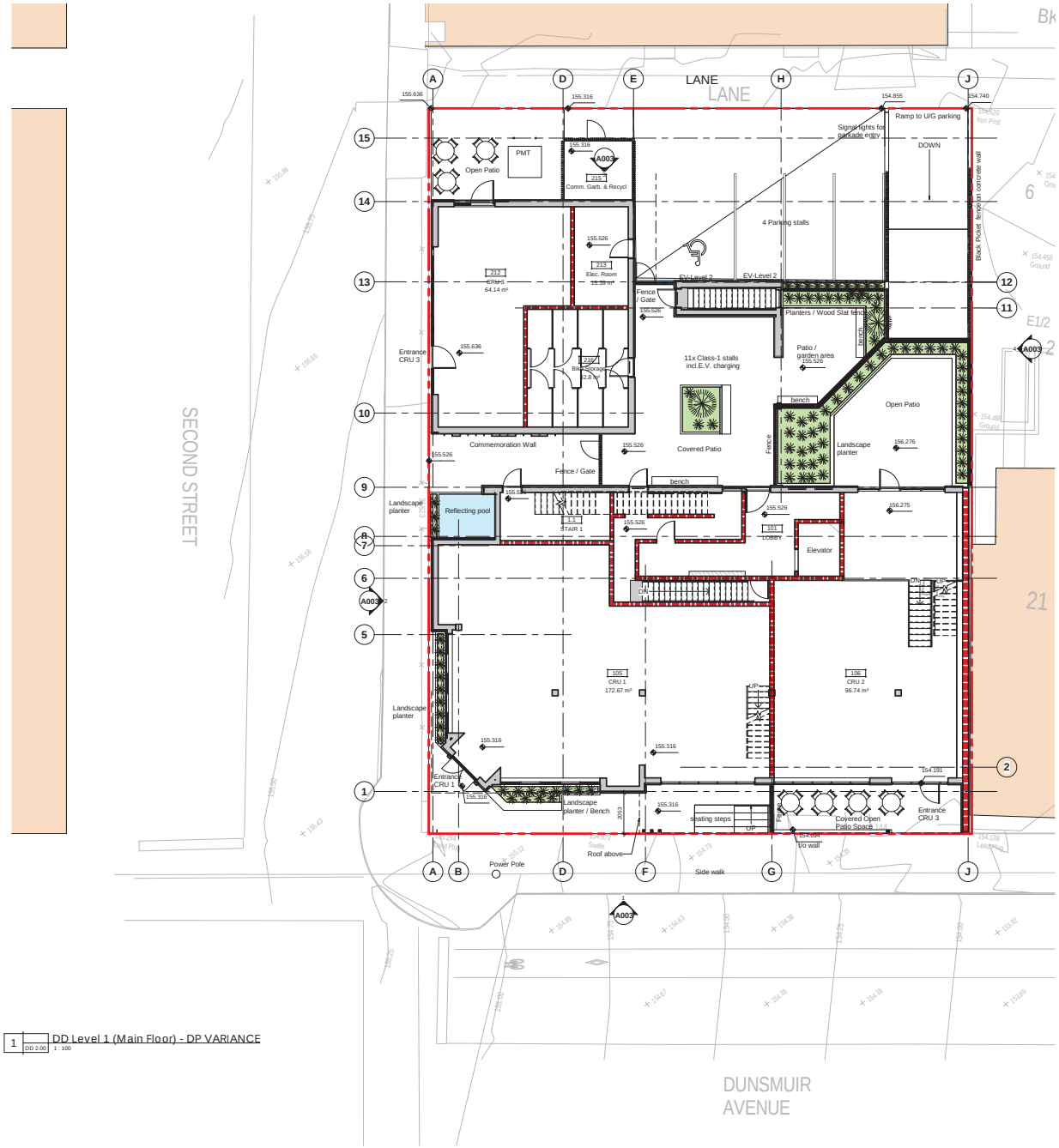
REGISTERED ARCHITECT — ROBERT SAMPSON — BRITISH COLUMBIA
2022 Sep 08

PROJECT
The Eddie
2714 Dunsmuir Ave, Cumberland, BC.
V0R 1S0

DRAWING TITLE
SITE PLAN

DRAWN BY	SS31	CHECKED BY	XX
SCALE	1 : 100	DATE	Issue Date

PROJECT NO. 22-294
SHEET NO. DD 1.0



1 DD Level 1 (Main Floor) - DP VARIANCE
DD 2.00 1 : 100

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STAKEHOLDERS

PROFESSIONAL SEAL
2022 Sep 08

PROJECT
The Eddie
2714 Dunsmuir Ave, Cumberland, BC.
V0R 1S0

DRAWING TITLE
MAIN FLOOR

DRAWN BY	SS31	CHECKED BY	XX
SCALE	1 : 100	DATE	Issue Date

PROJECT NO. 22-294
SHEET NO. DD 2.00

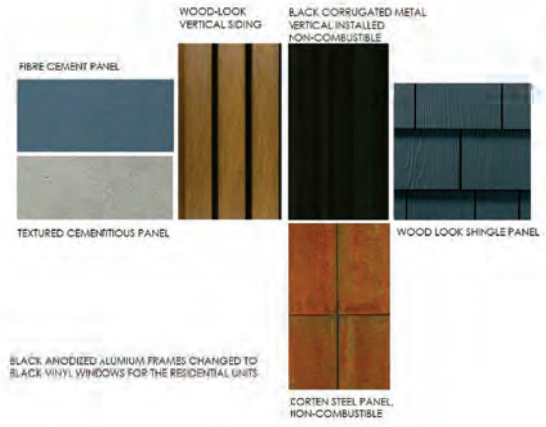
2 DD WEST ELEVATION
DD 3.0 1 : 100

1 DD SOUTH ELEVATION
DD 3.0 1 : 100

3 South-West view
DD 3.0

ELEVATION LEGEND

1. CEMENTITIOUS SHINGLE PANELS - EVENING BLUE
2. TEXTURED CEMENTITIOUS PANEL - CONCRETE
3. METAL CLADDING PANEL - WEATHERED STEEL
4. CORRUGATED METAL CLADDING (VERT) - BLACK
5. SIMULATED WOOD SLAT CLADDING - LIGHT BROWN
6. FIBRE CEMENT PANEL - BLUE AZURITE 7040
7. CONCRETE MASONRY BLOCK, SMOOTH FINISH
8. WOOD SLAT SCREEN, STAINED DARK BROWN
9. LOW-E GLAZING IN ALUMINUM FRAMES - BLACK ANODIZED
10. LOW-E GLAZING IN VINYL FRAMES - BLACK
11. TIMBER STRUCTURE - NATURAL STAIN FINISH
12. TRANSLUCENT PANELS - KALWALL
13. SBS ROOF MEMBRANE - LIGHT GREY
14. ALUMINUM GUARDRAIL - BLACK
15. CONCRETE FACED INSULATION PANELS
16. EXPOSED CONCRETE - SMOOTH
17. EXPOSED CONCRETE PLANTER



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NOTES
NOT FOR CONSTRUCTION

ISSUE
01 ISSUED FOR DEVELOPMENT VARIANCE PERMIT

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STAKEHOLDERS

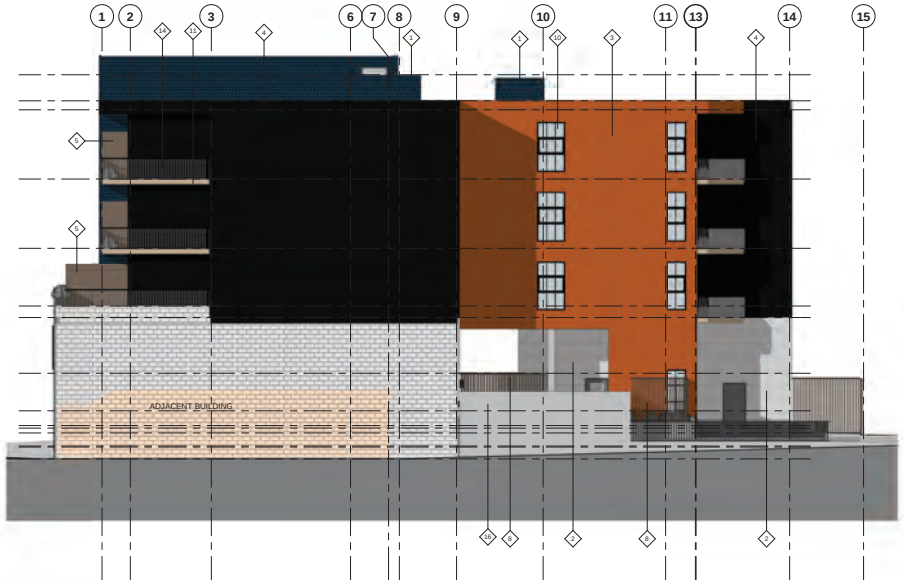
PROFESSIONAL SEAL
REGISTERED ARCHITECT
2022 Sep 08
PROVINCE OF BRITISH COLUMBIA

PROJECT
The Eddie
2714 Dunsmuir Ave, Cumberland, BC.
V0R 1S0

DRAWING TITLE
ELEVATIONS

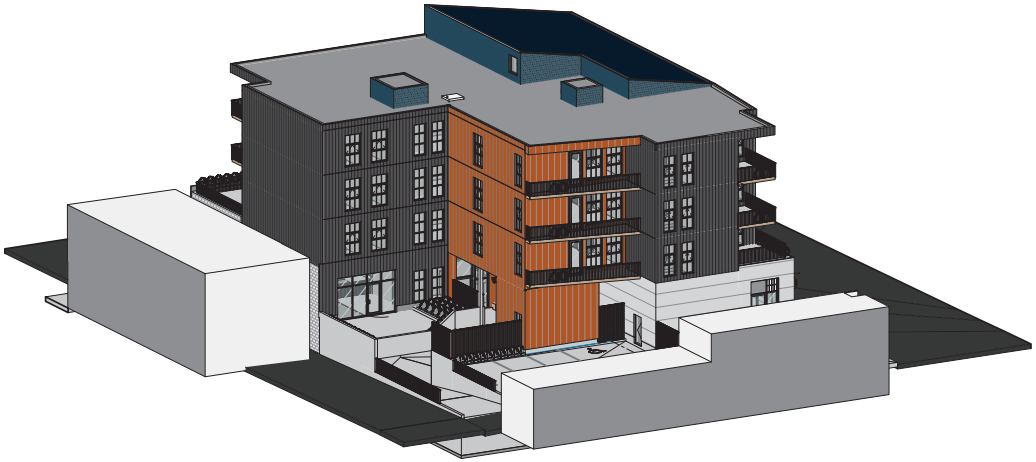
DRAWN BY	SS31	CHECKED BY	XX
SCALE	As indicated	DATE	Issue Date

PROJECT NO.	SHEET NO.
22-294	DD 3.0



1 DD 3.1 DD EAST ELEVATION
1 : 100

2 DD 3.1 DD NORTH ELEVATION
1 : 100



3 DD 3.1 North East view

ELEVATION LEGEND

1. CEMENTITIOUS SHINGLE PANELS - EVENING BLUE
2. TEXTURED CEMENTITIOUS PANEL - CONCRETE
3. METAL CLADDING PANEL - WEATHERED STEEL
4. CORRUGATED METAL CLADDING (VERT) - BLACK
5. SIMULATED WOOD SLAT CLADDING - LIGHT BROWN
6. FIBRE CEMENT PANEL - BLUE AZURITE 7040
7. CONCRETE MASONRY BLOCK, SMOOTH FINISH
8. WOOD SLAT SCREEN, STAINED DARK BROWN
9. LOW-E GLAZING IN ALUMINUM FRAMES - BLACK ANODIZED
10. LOW-E GLAZING IN VINYL FRAMES - BLACK
11. TIMBER STRUCTURE - NATURAL STAIN FINISH
12. TRANSLUCENT PANELS - KALWALL
13. SBS ROOF MEMBRANE - LIGHT GREY
14. ALUMINUM GUARDRAIL - BLACK
15. CONCRETE FACED INSULATION PANELS
16. EXPOSED CONCRETE - SMOOTH
17. EXPOSED CONCRETE PLANTER

STUDIO531 architects inc

Studio 531 architects inc.
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STAKEHOLDERS

PROFESSIONAL SEAL

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The Eddie
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PROJECT NO. 22-294

SHEET NO. DD 3.1

To Council

Re: 2714 Dunsmuir Ave

The black corrugated metal does not fit the design guidelines for the HCA. Heritage buildings in the downtown core were not metal. At the very least keep a wood look. Furthermore, the black becomes a dark looming building and shows dirt much more quickly.

The mass of the entrance has no place in our Village core. I understand that they are trying to replicate a mine building but it is not appropriate to Dunsmuir Avenue at this location.

The OCP states that the core heritage character of buildings and streetscapes has remained mostly uniform along Dunsmuir Ave. This is a significant asset and opportunity for the Village. The Eddie detracts and does not add an asset to the Village. It is time for Council to show their true colours when it comes to heritage in the downtown core and having input from citizens. At the least require the developers to hold neighbourhood meetings prior to final decisions.

The OCP states creating a Heritage Conservation Area for the Historic Commercial Core is a critical foundation towards achieving appropriate, consistent and sensitive revitalization of this designated area. Is this statement actually believed and bought into by the Council or not.

This building is not appropriate nor sensitive to the foundation of what is Dunsmuir Ave.

Objectives:

1.1.2(b) development or redevelopment within the HCA respects the history and enhances the heritage character and heritage value of the HVCC

How does this building enhance the character and value of the Village Core. This question has been asked last year and no one on Council has given a response. Not staff but Council needs to let the people know how you feel this enhances the character and value of the Village Core.

The OCP goes on in (i) for greater certainty…to ensure that new buildings constructed within this HCA are designed and maintained so as not to detract from the overall effect and character of the surrounding structures. All construction on vacant properties located within the boundaries of the Heritage Conservation Area MUST be consistent with the Guidelines.

This building is NOT to be the main focal point of the street but part of the community blending in to the streetscape.

As set out in the Guidelines the form, character and sense of place of the Historic Village Commercial core is reliant on the existence stock of buildings, structures and landscape elements and it is essential that all components work together to provide an integrated and harmonious fashion.

f) The Village requires that new construction conforms to the design and objectives of the HCA.

Sustainable Building

- Building design should include passive heating, lighting and cooling design features. The Units will be extremely hot in the summer as the sun beats down. Where is the external shade? Also wonder where the snow will go from the inside courtyard – will the restaurant have to cart it out to the street?

The balconies are very small and doors open out on to the balcony. The windows don't open wide. There will not be much relief from heat when the temperatures rise and the people in these units will be demanding the Village provide cooling stations. Why isn't the developer required to do this as construction starts?

Also, the building doesn't seem to be very accessible for a person in a wheelchair or walker. I couldn't see any unit that would work for someone that requires wheelchair or walker.

Will here be a room inside the garage for garbage, recycling and organiics?

Parking and amenity Areas

I do not see a loading zone for the commercial or disability parking spot or guest parking let alone required parking for the commercial enterprises both for their employees and the public. To state that the development complies with therequired parking spots including commercial is interesting as no one knows what will be located in the commercial units. A restaurant would need more than four parking spots. I would think that the developer needs to still pay for lieu in parking for the commercial spots that they are not providing.

Where is the green aspect of this building? Council adopted a green strategy that seems to only apply to being a concept rather than reality when opportunity presents itself

I don't see benches for sitting and watching the street go by or acdtual landscaping I only see private patios for the restaurant.

I hope that Postmark will keep their original statement of wanting to do what the people want and to actually meet with the people of the Village to end up with a development that works for all. This one still doesn't cut the mustard to provide a green heritage oriented building.

Respectfully submitted

[redacted]

[redacted]

Subject: FW: Re comments on new proposed building in Cumberland

-----Original Message-----
From: [redacted]
Sent: September 15, 2022 3:52 PM
To: Village of Cumberland <info@cumberland.ca>
Subject: Re comments on new proposed building in Cumberland

I really hope the Mayor and Council members are reading and 'listening' to the public outcry on the Cumberland Community Bulletin over the appalling design of the new proposed building at the site of the Cumberland Hotel. Cumberland is a beautiful historic town rich in history .. ultra modern buildings have no place here! Follow guidelines of communities like Winthrop, WA where all new construction has to maintain the historic facades of the town's history. When can the public attend meetings concerning this because I'm sure there will be a very large group of us concerned citizens.
Regards
[redacted]

Sent from my iPad

[redacted]

Subject: FW: Development on the corner of 2nd / Dunsmuir

From: [redacted]
Sent: September 13, 2022 2:23 PM
To: Planning <Planning@cumberland.ca>
Subject: Development on the corner of 2nd / Dunsmuir

This proposal does not fit in with the look and feel of the community. Please consider keeping the town unique and not just slapping up new buildings like the one across of the Taco shop.

Thanks,

[redacted]

[redacted]

COUNCIL REPORT

REPORT DATE: 9/13/2022
MEETING DATE: 9/19/2022

TO: Mayor and Councillors

FROM: Kevin McPhedran, Interim Deputy Chief Administrative Officer

SUBJECT: Fire Service Review Report

RECOMMENDATION

i. THAT Council receive the *Fire Service Review Report*.
ii. THAT Council direct staff to consider the recommendations of the Fire Service Review report in the 2023-2027 financial planning process.

PURPOSE

To present to Council the attached *Fire Service Review* report for information and to inform future priority actions, decisions, and resource allocation in support of the Village's Fire and Rescue Department and related services.

PREVIOUS COUNCIL DIRECTION

Date	Resolution
September 6 2022 [Closed Session]	THAT the Committee receive the Fire Service Review Report dated August 22, 2022 and presentation from Dave Mitchell, lead report author, of Dave Mitchell and Associates. THAT the Committee release the Fire Service Review report to the public through a staff report at the September 19, 2022 Council meeting. THAT the Committee recommend that Council direct staff to consider the recommendations of the Fire Service Review report in the 2023-2027 financial planning process.
January 24 2022	THAT Council direct staff to engage a consultant to review options Fire Department service structure; and THAT Council approve the expenditure of up to $32,000, to be funded through the general financial stabilization reserve COVID funds, for the Fire and Emergency Services review as well as increasing the Deputy position by one day per week; and THAT Council direct staff to bring forward an amendment to the adopted 2022-2026 Financial Plan Bylaw to reflect this expenditure.

BACKGROUND

In early 2022, the Village obtained the consulting services of Dave Mitchell and Associates to complete a comprehensive review of the Village's Fire Service considering the current (and changing) regulatory requirements, growth in the Village, and to provide a "strategic roadmap" for fire service work planning, resource allocation and overall management direction. The attached report is the culmination of this work.

In recognition of the need for confidentiality in discussion of certain sections of the report in regards to labour/employee relations, and service negotiations and related discussions that are in their preliminary stages and that could harm the interest of Village if held in public, the report was previously presented to and received by Council at a Closed meeting. However, at that time, in recognition of the value and benefit of the report to the public, including its comprehensive review and explanation of complex service delivery considerations, Council resolved at that time to bring forward the report for receipt and consideration in a public meeting.

Overall, the review's findings confirm many of the positive improvements and investments Council has made in the service in recent years, in addition to identifying several opportunities and recommendations for further advancement of the service.

A summary of the recommendations includes:

- Priority focus on ensuring the Department complies with the regulatory requirements for "Full Service Operations", including securing additional administrative capacity. Specific areas of focus include improvements and updates to:
    - Training documentation and record keeping;
    - Operational guidelines;
    - Fire inspection and pre-incident planning processes; and
    - Occupational Health and Safety Program
- Continued investment in capital infrastructure, including training props, and vehicles, equipment and other apparatus.
- Amendments to Bylaw no. 988, 2014 (Fire Protection Services and Regulation Bylaw).
- Updates and revisions to the CVRD Fire Service Agreement for "Rural Cumberland", regional Mutual Aid Agreement and Department of National Defence Agreement.
- Review the Village's Emergency Program, including consideration of joining a fully integrated CVRD Emergency Program Service as a service participant.
- Review department staffing, including compensation structure and roles and responsibilities for the purpose of recruitment and retention.

As a next step, staff propose to now move toward implementation of report recommendations; specifically, this includes using the report to inform future Council strategic planning, policy and budgetary decisions, as well as to inform operational workplan priorities and actions.

ALTERNATIVES

The attached report provides an overview of recommendations from a third party consultant with expertise in the delivery of fire services in British Columbia; accordingly, staff do not recommend that Council consider any changes to the report and its contents. However, Council may wish to provide staff with specific direction on next steps in implementing the recommendations of the report.

STRATEGIC OBJECTIVE

- ☐ Healthy Community
- ☐ Quality Infrastructure Planning and Development
- ☐ Comprehensive Community Planning
- ☐ Economic Development
- ☐ Reconciliation

FINANCIAL IMPLICATIONS

There are no financial implications of receiving the report. However, the implementation of many of the report recommendations will require allocation of financial resources above and beyond the current Village fire and emergency program services budget. Staff propose to bring forward these budget requests on a prioritized basis during Council's 2023-2027 Financial Planning process expected to take place at a series of Committee of the Whole meetings in January 2023, at which time these financial decisions can be made in the context of all other Village budget decisions.

OPERATIONAL IMPLICATIONS

The report provides an analysis of the service based on current Council policy of providing a "full service operations" fire and rescue department, including a series of recommendations on what actions need to be taken to ensure that the Village is in regulatory compliance in order to meet this designation. Some of the recommendations have already begun to be implemented such as improved training and OHS record management; meanwhile, other recommendations will be considered in future processes with existing staff resources (e.g. at time of renewal/renegotiation of CVRD and Mutual aid agreements). Lastly, other recommendations will require additional financial resources (e.g. capital budget for equipment, apparatus and training props; additional staff resources for administrative tasks).

The report also highlights the importance of collaboration between Fire Service personnel and staff/process in other departments including Development Services, Legislative Services, Finance, Human Resources and Operations.

ATTACHMENTS

Cumberland Fire Rescue Fire Service Review, August 2022

CONCURRENCE

Rachel Parker, Corporate Officer RP

Respectfully submitted,

K. McPhedran

_____

Kevin McPhedran
Interim Deputy Chief Financial Officer

M. Mason

_____
Michelle Mason
Chief Administrative Officer

Cumberland Fire Rescue

Fire Services Review

Dave Mitchell & Associates Ltd.

22 August 2022

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Table of Contents

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1.0 Executive Summary

The Cumberland Fire Rescue Department ("CFRD" or the "Department") provides fire, rescue and medical response within the Village of Cumberland ("Cumberland" or the "Village") and to adjacent areas under the terms of service or mutual aid agreements. The Department responds to an average of 300 incidents per year from a single fire hall on Cumberland Road. The fire hall is newly built, replacing the previous fire hall on Dunsmuir Avenue which dated from 1923. The Department's responses are primarily within Cumberland (77%) but include responses to Courtenay, Fanny Bay, Royston and a rural fire protection area.

The Department operates with a full time Fire Chief and Deputy Chief/Training Officer, supported by a complement of paid-on-call volunteers. The number of personnel has fluctuated over time and at present there are 29 members (in addition to the two chief officers) at various stages of training. The BC Fire Service *Structure Firefighters Competency and Training Playbook* service level for the Department is defined as "Full Service Operations" by Council policy. Training for the members is conducted at the fire hall with some training procedures such as live fire being provided by the Comox Fire Department. Other training is provided online.

This review of the Department was initiated by the Village to provide guidance on the further evolution of its fire service in light of the current regulatory requirements, as well as in the context of the ongoing development of Cumberland. Dave Mitchell & Associates Ltd. ("DMA" or the "Consultants") was contracted for the review and met several times with the chief officers as well as with members of the Department and Village senior staff members. DMA reviewed a wide range of relevant background documentation, conducted an in-depth site review, and provided an initial client review draft which was discussed with the Department and the Village.

The issues facing the Department, like all fire departments in the province, are complex. Provision of a fire service in British Columbia is optional, but where it is provided is subject to a series of regulatory requirements including the mandatory provincial training requirements established by the BC Fire Commissioner[1] as well as those of WorkSafe BC. Fire services in this province are also required to comply with the *Fire Services Act,* which is expected to be superseded by the *Fire Safety Act*. The latter statute passed third reading in the Legislature in 2016, but has yet been proclaimed in force. When the *Fire Safety Act* comes into effect, it will require local governments to provide fire safety inspections somewhat differently than at present, and may extend that requirement to regional districts as well. The *Fire Safety Act* will introduce the concept of risk-based inspections, will implement minimum training requirements for fire inspectors and fire investigators, and will eliminate the position of local assistant to the fire commissioner. Additional statutory revisions that will impact local fire services include the pending changes to the *Emergency Program Act*, which are anticipated in 2023 and which

[1] *British Columbia Fire Service Minimum Training Standards: Structure Firefighters – Competency and Training Playbook* (September 2014; second edition – May 2015) (the "Playbook").

include formal adoption of the Sendai Model for risk assessment, reduction, mitigation and response.

The provision of fire services is also guided by the Fire Underwriters, an organization that provides an assessment and grading of fire departments which can determine the cost of fire insurance for single- and multi-family residences as well as commercial and industrial structures. Fire Underwriters' requirements include a maximum age for apparatus to be ratable, pumping capacity requirements, water supply requirements and staffing/training requirements.

The Department has operated for more than 100 years and has evolved in response to the changing regulatory environment as well as development in the Village, which includes a 70% increase in population over the past 20 years and a plan to further double the existing population within certain neighborhoods.[2]

This report contains 59 recommendations, with the highest priority being to ensure the Department fully complies with its regulatory requirements. These issues are discussed in detail in the report, including the need for individualized members' training records that fully address Playbook and *Workers Compensation Act* requirements; updating of operational guidelines; reviewing fire inspection and pre-incident planning processes; and updating of the Department's occupational health and safety processes. Achieving compliance with these obligations will require additional administrative support in addition to appropriate software systems to ensure that complete and accurate records can be created and maintained.

The recently completed fire hall has excellent facilities within the building for member training and the next step for the Department will be to install additional training props at the back of the property, including compressed gas for simulated fires, to support its training requirements. As a Full-Service department, the CFRD is required to meet National Fire Protection Association requirements for training of its firefighters and officers – an obligation that carries with it a need to significantly invest in both initial and on-going maintenance training of its members. The Department's apparatus will require replacement of a legacy Engine within the next few years and the capital planning for this should contemplate the replacement by a single-axle Quint apparatus which has been discussed with the Fire Chief.

The report recommends a number of changes to the Village bylaws to ensure, among other things, that they properly reflect the scope of services being provided and current regulatory requirements, as well as the division of the Village into three distinct fire protection zones. The principal service agreement with the Comox Valley Regional District (the "CVRD") should be reviewed and updated, in particular to clarify what level of service is being provided in the service area. The mutual aid agreements with the CVRD, the other local governments in the area and the Department of National Defence, should also be reviewed and updated to ensure that they reflect contemporary requirements, including a clear grant of operational authority to responding departments, improved processes for dispute resolution, and express language

[2] Official Community Plan, at page 30.

directing the area fire chiefs to undertake joint training and develop common operational guidelines involving mutual aid responses.

As part of the review the Consultants met with the members of the Department on one of their practice nights to discuss the range of issues facing them as well as how the pace of change in the fire service is being addressed. Without exception, the members of the Department who attended that evening expressed their enthusiastic commitment to providing fire and other emergency responses in Cumberland and adjacent jurisdictions. At the same time, they commented on their desire to see the level of training continue to increase to ensure the safest possible operation at emergency scenes for the public and for themselves. As well, they noted that keeping the training interesting and engaging would contribute to improved retention of firefighters which is often an issue for the volunteer fire service.

In summary the Department is, in our view, well led and operating from a modern and well-equipped fire hall. The fleet of equipment is appropriate for the response required and should continue to be updated and replaced to meet the regulatory requirements as well as those of the Fire Underwriters. The response issues facing the Department include a rising call volume driven in part by an increase in the population; as well responses by the Department will need to address the further development of the industrial area, principally in the north-west portion of Cumberland. This latter area is only partially built-out at the present time but, as it is further developed, it will place additional pressures on the Department by increasing the number and complexity of responses.

2.0 Summary of Recommendations

The following section extracts the recommendations contained within the report. The more expansive discussion in the report contains details regarding each of these recommendations. For convenience, the relevant main headings are included as a guide to the section from which the particular recommendation is extracted.

3.0 Community Profile and Planning

#3-1: That the Department participate with the Development Services Department to review all new development applications to ensure BC Fire Code and Department operational requirements are identified.

4.0 Regulatory Matters

Bylaw No. 988

#4-1: When Bylaw No. 988 is updated, the division of the Village into three separate fire protection zones should be reviewed and tightened up, including:

- adding a definition of "Village Centre";
- revising the definition of "extraordinary fire", to the provision of fire protection and suppression services beyond the level specified for the particular Service Area;
- clarifying that the fire protection service area can change if the zoning for the property is converted to those covered by the Service Area B designation.

#4-2: When Bylaw No. 988 is updated, the following matters should be considered for inclusion and/or addressed:

- expressly addressing Provincial training standards requirements under the Playbook, including the service level declaration;
- expressly authorizing the Department to pass over or through, or to station on, properties that are proximate to an incident, as required to mitigate that incident;
- specifying the basis on which non-emergency entry onto property or into premises made be made under the *Fire Services Act* and its regulations or under section 16 of the *Community Charter*;
- setting out jurisdictional limits for the Department and circumstances in which it can operate outside of the Village limits;
- including a reference in this bylaw to the power to issue tickets under the Village's *Municipal Ticket Information Bylaw No. 1053, 2017*.

Occupational Health and Safety

#4-3: The Village and the Department should review and update the OH&S program to ensure it is fully particularized to the Department itself and to the Village, and to remove references to positions which do not exist. At the same time, the program should be

reviewed to ensure it is fully up to date based on the latest version of the WCA and OH&S Regulation.

#4-4: The Department's respiratory program and any associated operational guidelines should be updated to reflect the acquisition of the new Scott airpacks.

#4-5: The Department and the Village should review the materials establishing the joint committee, and update those materials to particularize the document to the Department, and to ensure it is fully up to date based on the current requirements of the WCA and OH&S Regulation.

#4-6: The Department needs to ensure that it maintains the required joint committee meeting and other review processes required by the WCA and OH&S Regulation, including the posting of joint committee minutes, selection of joint committee members, regular reviews of the fire hall, apparatus and equipment, and the required annual review of the joint committee operations. Appropriate records of these processes need to be developed and maintained.

5.0 Service and Aid Agreements

Service Agreement

#5-1: The Service Agreement should expressly note that the Department draws its operational powers from CVRD Bylaw No. 258, when operating in the CVRD Service Area.

#5-2: The parties should review whether the Fire Chief has the authority to restrict water use in the CVRD Service Area, which is included in the Service Agreement but is a power which is not expressly addressed in CVRD Bylaw No. 258.

#5-3: If the *Fire Services Act* is still in force when the Service Agreement is renewed, the appointment of the Village's Fire Chief as the LAFC for the CVRD Service Area under s. 3(a)(iii) should be revised to involve an application to the Fire Commissioner.

#5-4: Section 6(e), which describes the "net cost" as the "full and final amount to be paid by the CVRD" for the services, should be revised to read: "except as provided for in Article 7".

#5-5: The parties should review and clarify the level at which services are being provided in the CVRD service area. In particular, they should tie the definition of fire protection services to one of the three fire protection zones in the Village (e.g., "equivalent to the coverage provided by the Fire Department in Zone C under Bylaw No. 988"), and clarify the concept of what constitutes an "Extraordinary Fire" accordingly.

#5-6: Consider addressing the other issues identified in this section of the report, including:

- reviewing the liability exculpation in ss. 2(d) and (f), and potentially including these matters in the indemnity provisions;
- revising the "entire agreement clause", which is split between ss. 9(b) and 10(a); and

- making some minor drafting changes as noted in this section of the report.

Aid Agreement

#5-7: A provision should be added that addresses the operational powers of responding departments, when operating in the requesting department's service area.

#5-8: The incident command provisions should be expanded to address issues such as when unified command should be established and dealing with situations where a responding department may actually arrive on scene before a requesting department.

#5-9: A provision should be added specifying the minimum training levels for personnel from the responding department, and a common system for readily identifying each member's training and qualifications during an incident (e.g., colour-coded helmets, or flashes).

#5-10: A provision should be added establishing any response limitations for each participating department based on its Playbook Service Level, but confirming that each department can operate at its chosen service level.

#5-11: Provisions should be added addressing:

- a common personnel accountability system;
- specifying how workers' compensation claims will be managed;
- the establishment of common operational guidelines and common communications protocols;
- periodic joint training, including tabletop exercises; and
- setting out a process for regularly reviewing combined operations.

DND Agreement

#5-12: The definition of "Senior Fire Officer" should be reviewed and tightened up.

#5-13: The DND Agreement should expand on the manner in which incident command will be managed and, in particular, when unified command structures will be established.

#5-14: The indemnity provisions should be reviewed. At present, they cover the period from when a call is received until when a departments units return to their base. In our experience, it is more common to exclude the mustering of personnel and the travel to and from an incident.

#5-15: The DND Agreement should expressly address the grant of operational powers necessary for a responding department to operate at an incident.

#5-16: The recommendations made regarding the CVRD-wide Aid Agreement in connection with the training levels of personnel, development of common operational guidelines, reviews of mutual aid responses, etc., also should be considered for inclusion in the DND Agreement.

#5-17: We expect that the DND has aid agreements with other fire departments in the CVRD. We would suggest that the DND be included in any joint meetings of CVRD fire chiefs to review mutual aid issues, and include this in the DND Agreement itself.

6.0 Financial Review

#6-1: The Department implement appropriate capital planning to ensure that it is able to replace its apparatus, as such apparatus reaches its age limit. In general, this planning should be based on a 20-year replacement cycle, based on the Fire Underwriters' requirements. (In relation to the Department's existing apparatus, see Recommendation #8-1.)

#6-2: The Department ensure that its budgeting includes the costs associated with meeting its regulatory requirements, including an improved training records system, and the administrative costs associated with such work (see also Recommendation #7-2).

#6-3: The Department budget for the acquisition and installation of appropriate training props at the fire hall, to enable it to meet both recruit training and maintenance training.

7.0 Organizational Structure and Staffing

#7-1: That the Village and the Department consider the ways in which the Duty Officer function could be filled by additional members of the Department, including the provision of a second vehicle and reassessing the rate of remuneration.

#7-2: That the Department's budget be increased to provide an administrative support/data entry function to ensure all training records are complete and will satisfy the requirements of the current Provincial Training Standards.

#7-3: That the Department continue to expand its training ground capabilities at the fire hall to ensure the highest level of training within Cumberland, reducing the need to travel further from the Village for required training.

#7-4: That the Village review the compensation package for the Chief Officers and the paid-on-call volunteers.

8.0 Fire Hall and Apparatus

#8-1: The Department should plan for a replacement for Engine 3, which is now 23 years old, and consider replacing with a single axle Quint as the preferred option.

9.0 Fire Prevention

#9-1: Develop a new operational guideline to address the fire prevention program structure including identification of the roles and responsibilities of the positions throughout the Department.

#9-2: Develop a new operational guideline to identify the process used to determine and set the frequency of fire inspections.

#9-3: The Department identify a minimum standard of training for fire inspectors.

#9-4: The Department consider use of an electronic fire inspection report using a tablet that can upload data into the Fire Pro system without manual data entry.

#9-5: The Department develop a comprehensive operational guideline to outline the overall process, responsibilities and templates for the management of the preplan program.

#9-6: Identify staff time and administrative support required to create and update preplans. Acquire additional tablets for frontline apparatus access to preplans.

#9-7: Develop an operational guideline to address the responsibilities and processes related to fire investigation and reporting to the OFC and to identify a fire investigator training standard.

#9-8: Consider development of an operational guideline to identify an overall public education program, its priorities and guidance for activities.

10.0 Operating Guidelines

#10-1: A review of the OGs should be undertaken to address the issues identified in this report and the detailed OG feedback document.

#10-2: Provide electronic access to OGs for all firefighters and incorporate links to any external documents that are referenced in the OGs. Referenced documents should include information to link to the specific sections of the reference document that are relevant to the OG subject matter.

#10-3: Consider adding an OG to identify and provide guidance around the provision of specialized rescue services, including the identification of training requirements.

#10-4: Identify municipal policies that impact Department personnel and provide (or amend existing) OGs to incorporate them (e.g. Violence in the Workplace, Bullying and Harassment).

#10-5: The Department review, validate and update all OGs to ensure their currency and accuracy. In addition, the Department should establish a process for regularly reviewing and updating the OGs. The reviews should be documented and recorded, along with any updates.

11.0 Training and Qualifications

#11-1: The Village should specify that the NFPA standards form the basis of all training for the operational functions undertaken and emergency services provided by the Department.

#11-2: The Department review the training OGs to ensure that all operational requirements and the associated training processes are addressed.

#11-3: The Department review and revise its maintenance training report that is used for weekly and periodic training to ensure:

- it captures the date, times and nature of the training session;
- it identifies any lesson plan or JPRs that were followed;
- copies of evaluation forms (when used) are attached to the training reports and the evaluations of individual members is consistently recorded;
- it identifies the skills that were practiced by each member and time spent on each skill area;
- a copy of any scenario(s) used is attached to the training report;
- it contains a brief narrative description of the practice session; and
- the report is in electronic format and utilizes tools to minimize the time required to complete the report form.

#11-4: The Department review the evaluation forms currently in use to update or amend them to ensure their suitability as assessment tools under the current NFPA standards.

12.0 Response Analysis

#12-1: The Department review the response data with its dispatch provider to clarify the accuracy of unit tracking for all units.

13.0 Fire Underwriters

[No recommendations]

14.0 Emergency Program

#14-1: The Village, in consultation with the CVRD and other municipal service participants, should review whether a fully-integrated regional service to provide emergency planning and operations, one meeting the EPA requirements for all participants, should be created to replace the current hybrid structure.

#14-2: The Village needs to clarify (and formally identify) its emergency plan or emergency plans for the purposes of section 6(2) of the EPA. If the Regional Plan is intended to be the Village's plan (or part thereof) it should be formally adopted. If a further standalone plan is required to supplement the Regional Plan, then it should be completed and also formally adopted.

#14-3: If the hybrid emergency planning structure is retained, the CVRD EP Agreement should be reviewed and potentially updated to address the issues noted in this section of the report, including the following:

- a single agreement with all of the participants should be created;

- the extent, if any, of the CVRD's operational responsibilities (as opposed to administrative responsibilities) under the agreement should be clearly specified;
- the integration between this agreement and the EP Aid Agreement should be expressly noted; and
- the various drafting and other issues identified in this section of the report should be addressed.

#14-4: The EP Aid Agreement should be reviewed and the issues identified in this section of the report considered or addressed in any updated version, including the following:

- the nature of a party's responsibility to respond to and fulfill an aid request should be clarified;
- the obligations of a Requesting Party to repair or replace damaged or destroyed Resources should be clarified;
- how the costs of operating a Regional EOC are to be shared should be specified; and
- express provision should be made for situations where powers need to be delegated by the municipalities (or the CVRD) to the Regional EOC; and
- the integration between this agreement and the CVRD EP Agreement should be expressly noted.

#14-5: Consider adding an OG to describe the emergency plan and the role or actions required by the Department during an activation.

#14-6: Update key EOC positions and the corresponding municipal staff positions that are expected to fill the roles and update the chart in the Village's section of the Regional Plan.

#14-7: Update the EOC contact list and organization chart contained in the Village's section of the Regional Plan.

#14-8: Update the contact information contained in the Evacuation Plan.

#14-9: Request a refresh of the Hazard, Risk and Vulnerability Analysis by the CVRD.

3.0 Community Profile and Planning

Cumberland's Official Community Plan is enacted by Bylaw No. 990 dated August 2014.[3] The Village is considering a review of the OCP to commence in 2023 with the aim of updating the bylaw in 2024. The area covered by the OCP is located in the traditional territory of the K'ómoks First Nation.

The OCP notes that the Village's population is growing and that it is attracting a younger generation. More than 55% of the population growth since 2016 was under the age of 40. The population as measured in the 2021 Census was 4,447, while in 2016 it was 3,753, an increase of 18.5%.[4] The Village has seen significant growth since 2001: from 2,618 in 2001, to 2,726 in 2006 and 3,398 in 2011, representing a nearly 70% increase in population over 20 years. When compared to the rest of BC, Cumberland's employment rate is 64% versus 60% for the province as a whole.[5]

The OCP notes the Regional Growth Strategy[6] recognizes Cumberland as "…having the greatest amount of [its] designated lands to accommodate new residential and employment growth. It is also noted as containing the largest supply of vacant designated industrial land in the Comox Valley".[7] The focus on growth, as described in the OCP, is "*…to double the existing population within low-density neighbourhoods in close proximity to the Village core*".[8] This approach has led to additional residential construction and the Village has received development applications including one that encompasses 64 single family and 143 multi-family/seniors' units. Other residential project applications include a 54 unit manufactured home development, a plan for approximately 29 multi-family units, and another for 16 single family homes. There are 28 multi-family units under construction. As such, over the next five years, based on active or recent development approval, a total of approximately 80 single family homes, 54 manufactured homes, and 200 multi-family units are anticipated. When considering the population impact for new residential units, the Village uses 3.1 persons per unit so these additional 322 units being considered could increase the population by just under 1,000.

The current maximum permitted building height is four storeys, though there is currently approval for a single five-storey building which will be four occupied floors plus a fifth floor for elevator shaft/mechanical room. The growing number of new developments will require the

[3] *Village of Cumberland Official Community Plan, Bylaw No. 990, 2014* (the "OCP").

[4] Source: https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=cumberland&DGUIDlist=2021A00055926014&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0, accessed 24 May 2022.

[5] Source: https://communityinformationtool.gov.bc.ca/cit-dashboard/public/search-communities, accessed 27 May 2022.

[6] *Comox Valley Regional Growth Strategy Bylaw No. 120, 2010*.

[7] OCP, at p. 19.

[8] OCP, at p. 30.

Department to work more closely with the Village's Development Services Department from the initial permitting through development processes.

The plan for future land use is set out in Appendix B of the OCP, as shown below in Figure 1, which illustrates the residential growth around the Village core and the significant land set aside for industrial development in the north-west along Bevan Road.

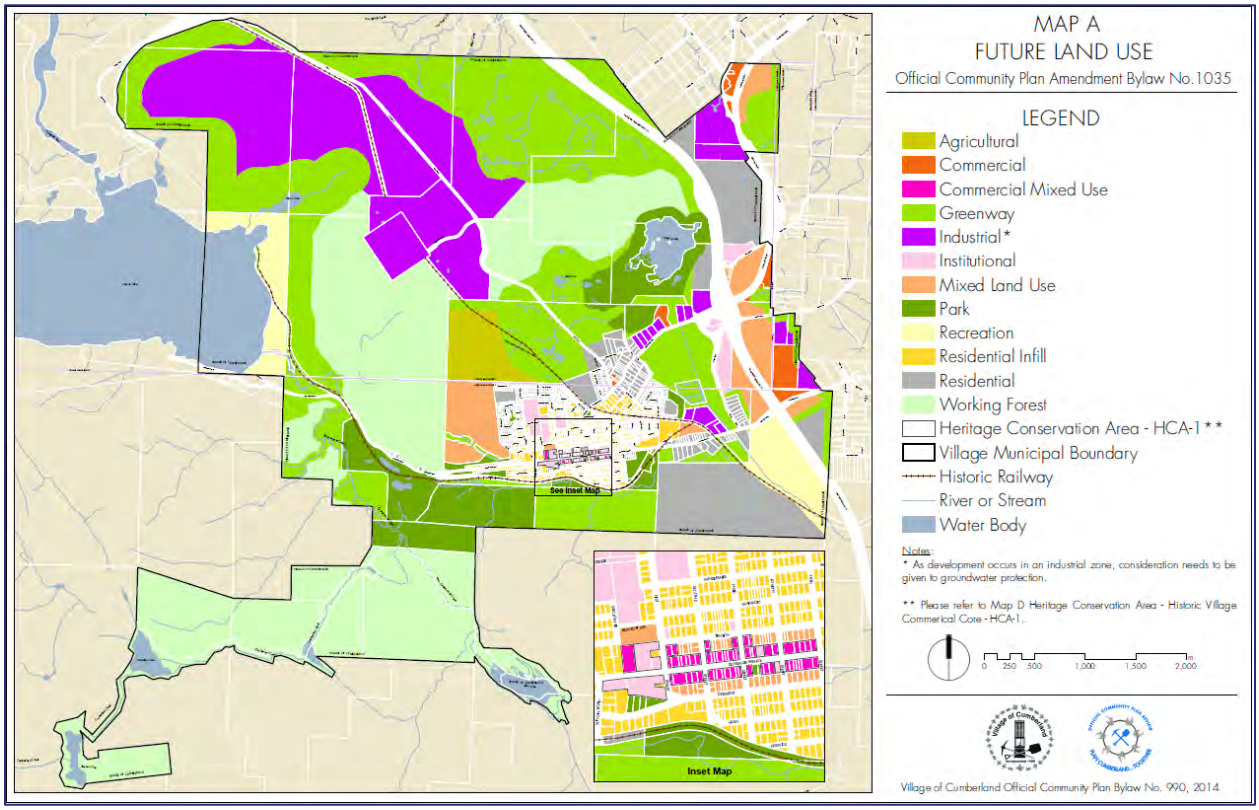

Figure 1: Cumberland OCP Map A: Future Land Use

In summary, the Village has experienced population growth of nearly 70% in twenty years, is attracting a younger demographic and plans for a significant future residential growth around the Village core. As well, the Village has identified significant land for industrial and commercial development in addition to a focus on its urban forest and recreational property.

3.1 Recommendations

#3-1: That the Department participate with the Development Services Department to review all new development applications to ensure BC Fire Code and Department operational requirements are identified.

4.0 Regulatory Matters

As a starting point, it needs to be recognized that, for local governments, fire protection is an optional service. Unlike police and ambulance, which are established under and/or operate pursuant to provincial statutes and have a uniform range of powers across the province, a fire department only has the power and authority granted to it under the local bylaw which creates and defines its operations. Outside of its operating jurisdiction – which, in the case of a service established by a municipality, is the municipal boundaries – a fire department has no specific authority to act at or to respond to an incident. Care must be taken, therefore, to ensure that the Department has the full range of powers needed to respond effectively to incidents within its jurisdiction. Where it is responding outside of its ordinary jurisdiction, express consideration should be given to the source of the Department's powers to respond to and operate at an incident – whether under a fire service contract, under a mutual or automatic aid agreement, or in support of another emergency response agency.

Similarly, there is no standard range of services defined for a fire department. A fire department is authorized to provide only those services which are stipulated in its service establishment and operational bylaws. Given that fire departments are the only "all hazards" response agency directly controlled by local government, we recommend that both the grant of powers and authorization to respond to incidents be very broadly cast, but that their exercise be made subject to training and the availability of necessary personnel and equipment.

This section reviews the existing bylaw structure governing the Department's establishment, administration and operations. It also reviews the *Fire Safety Act*, which will potentially impact the Department and the Village. This statute passed third reading in 2016 but still has not been proclaimed. The Village's emergency measures bylaw is reviewed in the emergency program section of this report.

Nothing in this report should be construed as legal advice. The Village and the Department should review any recommendations or issues identified in this report through the Village's ordinary legal review processes.

4.1 Bylaw No. 988

The *Fire Protection Services and Regulation Bylaw No. 988, 2014* ("Bylaw No. 988") is the principal bylaw governing the Department's continuation, organization, operations, and powers. It also addresses various fire prevention matters, including open burning and *Fire Services Act* inspections.

Bylaw No. 988 adopts the "substantive regulations" of the British Columbia Fire Code; it also adopts all of the National Fire Protection Association ("NFPA") standards.[9] With respect to the latter, we recommend that the Village review its approach. There is a very large number of prescriptive (and, in some cases, unnecessary) standards issued by the NFPA, ranging from

[9] Bylaw No. 988, ss. 4 and 5.

training, staffing, response times and apparatus, to electrical safety, occupational health and safety processes, emergency planning, community risk assessments and similar matters. Most of these standards impose obligation both on the fire department and the "Authority Having Jurisdiction" (which would be the Village Council). While certain NFPA standards are highly relevant to the Department's operations, others are not. It is almost a certainty that the Village is technically in breach of this section of its bylaw, for having failed to implement the standards that it has conceptually adopted. We recommend a much more selective approach – indeed, to the extent that NFPA standards are being adopted, it generally should be done through policy rather than by bylaw.

Under Bylaw No. 988:

- the fire chief is officially designated as the "Manager of Protective Services," given authority to administer Bylaw No. 988 and appointed as the manager of the Department;[10]
- the fire chief may appoint assistant chiefs and members of the Department;[11]
- various powers are granted to the fire chief, including entering property to inspect for fire risks, taking measures to prevent and suppress fires, taking immediate steps to remove risks that give rise to a fire hazard or potential explosion; effecting local evacuations; taking steps to remedy conditions affecting hotels or public buildings that might seriously endanger life or property in the event of a fire; and establishing boundaries or limits around an incident;[12]
- the fire chief is empowered to manage risks of wildfire, including controlling or limiting access to both public and private forested areas;[13]
- the fire chief is granted the power to issue orders requiring compliance with matters addressed by Bylaw No. 988;[14]
- a regular system of inspections of hotels and public buildings, as required by sections 26 and 36 of the *Fire Services Act*, is established under sections 27 – 29 of Bylaw No. 988, with an inspection frequency prescribed in Schedule B;

[10] Bylaw No. 988, s. 1 (definitions of "manager of protective services") and s. 7.

[11] Bylaw No. 988, s. 1 (definition of "member") and s. 8.

[12] Bylaw No. 988, ss. 9, 10, 11 and 15.

[13] Bylaw No. 988, ss. 12 and 13.

[14] Bylaw No. 988, ss. 9(c) and 14.

- fire safety plan reviews by the Department are addressed.[15] The Village should consider making provision to charge for such review (a practice that is common in other jurisdictions);

- various offences or restrictions are specified (e.g., driving over fire hoses, entering an area around an incident to which the Department has restricted access, etc.);[16]

- security requirements around vacant buildings and fire damaged buildings are prescribed;[17]

- fees for file searches and false alarms are set;[18] and

- open burning, including permit requirements and financial responsibility for Department suppression activities necessitated by an open-air fire, is regulated.[19]

One of Bylaw No. 988's unique features is that it creates three distinct levels of fire protection within the Village. Section 17 stipulates that the limited equipment, financial and human resources of the Village constitute the policy basis for taking this approach. The three service levels provided are: "initial attack fire protection"; "industrial fire protection"; and "standard fire protection," which are respectively defined as follows:

- initial attack fire protection relates to Service Area A (as designated in Schedule A to the bylaw), which appears to be a largely forested lands with limited road access. Properties in these areas receive up to four hours of fire suppression services, after which it appears the fire is classified as one requiring "extraordinary fire protection" and the services provided are subject to charge in accordance with the fees and charges set out in Schedule C;[20]

- industrial fire protection applies to properties which fall within certain BC Building Code occupancy classifications (essentially, all properties classified as industrial occupancies, including the Comox Valley Waste Management Centre). While Bylaw No. 988 describes these properties as "Service Area B", it is based on a parcel determination, not a location as with Service Area A (so, if a property's use and designation changed it would move into a different classification for fire protection services). These properties receive up to six hours of fire suppression services, after which it appears the fire is

[15] Bylaw No. 988, s. 42.

[16] Bylaw No. 988, ss. 30 – 41.

[17] Bylaw No. 988, ss. 43 – 44.

[18] Bylaw No. 988, ss. 68 and 69.

[19] Bylaw No. 988, Part 3, ss. 50 – 67.

[20] Bylaw No. 988, s. 16 (definition of "initial attack fire protection") and ss. 21 and 22.

classified as one requiring "extraordinary fire protection" and the services provided are subject to charge in accordance with the fees and charges set out in Schedule C;[21] and

- standard fire protection applies to all properties not covered by Service Area A and Service Area B, which are defined as "Service Area C". The level of fire suppression services provided in Service Area C are not precisely defined: "firefighting and suppression services for a fire that is within what is typically required to respond to a fire on property … used for residential or commercial purposes."[22]

Section 18 further notes that:

> The fire protection priority of the fire department is to provide fire suppression services to the Village Centre residential and commercial core and to defend this area from wildfire.

Unfortunately, the capitalized term "Village Centre" is not defined – we would recommend that this concept be added to the defined terms either in section 2 or section 16 of Bylaw No. 988.

The purpose of designating these three zones appears to be to limit the Village's liability to provide fire protection to areas of the Village that is beyond the available resources of the Village, and to enable the Village to charge for extraordinary fire protection services. When Bylaw No. 988 is updated, we would recommend that the definition of the term "extraordinary fire protection" be reviewed and revised. As currently drafted, it is defined as follows:[23]

> "…fire protection and suppression for an incident that is beyond the financial, equipment, and human resources of the Village of Cumberland and that is subject to fire protection service fees imposed by this bylaw".

On the face of it, if the Department is responding to and putting out the fire, then the fire would not fall within the definition. We would suggest that the Village tie this definition to the provision of fire protection and suppression services beyond the level specified for the particular Service Area. That approach would be consistent with the policy set out in section 17, and seems to be the intention behind the creation of the different service levels. At the same time, the Village may want to establish more certainty around the level of fire protection services provided in Service Area C (and the point at which such services would constitute "extraordinary fire protection").

One other issue worth considering is the potential overlap (at least conceptually) between Service Area A and B. As noted, Service Area A is designated as covering a certain portion of the Village lands, while Service Area B is parcel-specific based on use. If a parcel within Service Area A is used for industrial purposes, it should be clarified that its designation falls

[21] Bylaw No. 988, s. 16 (definition of "industrial fire protection") and ss. 23 and 24.

[22] Bylaw No. 988, s. 16 (definition of "standard fire protection") and ss. 25 and 26. The quoted language comes from s. 25.

[23] Bylaw No. 988, s. 16.

within Service Area B, notwithstanding that it may be located within lands designated as being in Service Area A.[24]

In connection with updating Bylaw No. 988, in addition to the issues identified above, we would recommend the Village consider the following:

- The bylaw was passed prior to the issuance of the first edition of the Playbook. As such, it does not address the process for declaring the Department's service level. We would suggest that bylaw should provide that the service level declaration will be effected by Council policy.

- In the enunciation of the Department's operational powers, it is usual to provide that, in connection with an incident, the Department's members may enter, cross over or station on property where the incident has occurred, or other properties as required to gain access to, or to mitigate the incident.

- It also is common to specifically address the basis on which entry onto property can be made in non-emergency situations (i.e., under the *Fire Services Act* and its regulations, or under section 16 of the *Community Charter*).

- As the Department has been declared as a "full service" operations department under the Playbook,[25] it should be conducting pre-incident planning of major risks in its service area. It would be useful to include this as a power, including obtaining the information necessary to complete such plans (in a format determined by the Department), from the owner or occupier of the building. This power becomes essential should the Department's service level drop to "Interior Operations," since at that level, entry cannot be made into structures more complex than an ordinary residential building unless that structure has been pre-planned.

- It is standard to include a jurisdiction clause in a fire department's operational bylaw. These clauses will define the ordinary jurisdiction of the Department (which should be the boundaries of the Village), and provide that the resources of the Department are not to be used outside of that jurisdiction unless:

    - there is a service agreement or aid agreement in place covering such response;

    - in connection with a response for which an Emergency Management BC ("EMBC") task number has been issued (e.g., road rescue), or under an agreement with BC Emergency Health Service ("BCEHS");

[24] In practice, this may not be an issue, as there may be no industrial-designated properties within Service Area A. However, conceptually at least, the use of a property that is within Service Area A may change at some point in the future.

[25] Cumberland: Council Police No. 14.1, "Fire Services Operations Level" (27 June 2016).

- in connection with, and as authorized under, a declared state of emergency under the *Emergency Program Act*;
- in connection with an incident on the periphery of the Department's ordinary jurisdiction (or the periphery of any area to which it provides services under contract), which, if left untended, may endanger its service area;
- in connection with authorization granted by BC Wildfire Service under the current arrangements for requesting structural fire department responses to wildfires;[26] or
- if appropriately authorized by its authority having jurisdiction – this authorization is often reserved to the CAO and/or the Mayor.

- Consideration should be given to expressly referencing the power to issue tickets under the Village's *Municipal Ticket Information Bylaw No. 1053, 2017*. The latter bylaw includes the manager of protective services and references Bylaw No. 988; Bylaw No. 988 should likely reference this power in its enforcement provisions (e.g., Part 5).
- There are some minor drafting issues that also should be addressed:
  - in relation to open-air fires, the bylaw alternates between using the term "burning permit" (ss. 50, 51, 52, 53) and "burn permit (heading before section 54; ss. 54, 55, 56 and 57). In some cases, it simply refers to a "permit" (e.g., ss. 56, 65). It would be better to use a single, consistent term throughout;
  - the Province has changed the name of the BC Wildfire Management Branch to BC Wildfire Service (ss. 20 and 57(b)); and
  - in the definition of "manager of protective services (s. 1), it should read "an assistant chief designated in writing," not "designed in writing".

4.2 Fire Safety Act

The *Fire Services Act*, which grants certain powers and authority and imposes certain obligations on municipalities, is slated to be replaced. The *Fire Safety Act* received third reading back in May 2016, but still has not come into force. The Office of the Fire Commissioner (the "OFC") is in the process of completing the regulations and policies which are needed before the statute can come into effect. It is unclear when these processes will be finalized. More significantly, in a 2018 letter from the Minister of Public Safety and Solicitor

[26] These policies have evolved over time. Prior to 2003, there often would be individual service agreements between the Wildfire Service (then, the Wildfire Management Branch), and relevant local governments. Between about 2003 and 2017, such call-outs were managed in accordance with Wildfire Service's Standard Operating Guideline #1.06.01, "Wildfire Suppression with Local Governments" ("OG 1.06.01") In 2017, OG 1.06.01 was formally replaced by the Inter-Agency Operational Procedures and Reimbursement Rates (which had co-existed with OG 1.06.01 since about 2004). This document is updated annually.

General to the Union of BC Municipalities, the Province announced that it was going to amend this new statute in a way that would materially impact the obligations of regional districts.[27] These potential amendments, and on-going discussions between the Province and regional districts regarding their implications, have delayed the statute from coming into effect. Our understanding is that the new statute is unlikely to come into effect until late 2022 at the earliest.

However, once the new act comes into force, it will materially affect the Village's obligations with respect to fire inspections and fire investigations. It may also impact the services it provides to the CVRD under contract (as the CVRD may be required to ensure that provision of fire inspection services). As such, it is useful to understand what these new obligations will be, and to build them into the Department's medium-term planning. At a high level, this new statute impacts the following principal matters relevant to the Village and the Department:

- the fire inspection regime applicable to public buildings;
- fire investigations; and
- the powers exercised by fire chiefs and local governments.

Fire Inspections

Under the new *Fire Safety Act*, the existing obligation to operate a regular system of inspections is replaced by the obligation to establish a risk-based compliance monitoring system for public buildings which encompasses:

- fire safety inspections; and
- fire safety assessments.[28]

Following a transition period, "fire inspectors" will need to meet the training and proficiency requirements prescribed by the Fire Commissioner.[29] Those requirements, which are expected to be similar in format to the Playbook, have not yet been issued. However, these new training requirements will potentially impact the training of Department officers and members, who will have to meet the new standards if they are to be made responsible for fire safety inspections.

The new provisions mean that the Department will need to conduct risk assessments of public buildings within its service area. Those assessments will need to comply with the (yet to be issued) regulations under the *Fire Safety Act*.[30] An inspection regime will then need to be developed based on the risk assessments that are conducted. Conceptually, the *Fire Safety Act* moves away from the existing "regular" inspection requirements, where, in practice most jurisdictions seek to inspect all properties annually, and heads towards a more flexible regime, where inspection frequency is based principally on risk. Under this approach, higher hazard or

[27] Letter, Farnworth (Minister of Public Safety and Solicitor General) to Booth (President, Union of BC Municipalities), 30 July 2018.

[28] *Fire Safety Act*, s. 20. The term "public buildings" is defined in s. 1.

[29] *Fire Safety Act,* s. 8(2). The transition period is provided for in s. 53.

[30] *Fire Safety Act*, s. 20(1)(b).

non-compliant properties should be subject to more frequent inspections, while lower risk, compliant properties can be inspected less frequently (perhaps coupled with intervening self-assessments by the owners during the non-inspection years).

The new *Fire Safety Act* also introduces the concept of a "fire safety assessment," which is the self-inspection of a property by the owner. Under the existing *Fire Services Act*, there is some uncertainty about whether self-inspection systems comply with the statutory requirements.[31] That issue is now laid to rest. However, it will be up to the Village to determine which public buildings are to be permitted or required to conduct self-assessments, presumably as part of the overall risk analysis that must be conducted. The new self-assessment by owners will have to be conducted "in the form and manner required by the Fire Commissioner" under the new statute.[32] It is expected that the Fire Commissioner will issue policy or forms covering fire safety assessments, though these have not yet been released.

Section 10 of the *Fire Safety Act* grants various powers to fire inspectors to enter premises,[33] conduct their inspection (including testing and taking of samples, etc.), and to require the production of records related to the premises by the owner or occupier. Section 11 empowers a fire inspector to issue orders requiring an owner bring the property into compliance with the *Fire Safety Act* and regulations (which regulations will include the *Fire Code*).

The Department will need to incorporate the risk assessment obligation into its future workplans and budgeting. It may be that the OFC will permit generalized assessments, based on property type, to form the basis of such risk determination. However, it would be useful to conduct more detailed assessments where location, age, condition, use and site-specific features (e.g., exposures, or access issues for a Department response), would suggest that the building or premises present a higher risk than otherwise would be expected from the building classification alone.

Under ss. 20(2) and (3) of the *Fire Safety Act*, the Village may, by bylaw, charge "a reasonable fee" for conducting a fire safety inspection required by the new Act. Subsection 20(4) specifies the criteria which are to be applied when setting such fee. The Village does not currently charge for an initial fire inspection, though it may charge for a re-inspection of a property.[34] It

[31] For opposing views, see the Fire Inspection and Prevention LAFC Inspection Working Group Sub-Group, *BC Fire Services Act: Regular System of Inspections – Considerations for Development* (January 2015) at p. 8 (suggesting such a system, on its own, is not compliant with the *Fire Services Act*); versus: L.C. Staples, Q.C., "Opinion letter to Fire Chiefs' Association of British Columbia," dated 30 Aug. 2012, which holds that such a system of self-inspections can be implemented in compliance with the existing *Fire Services Act* requirements

[32] *Fire Safety Act*, s. 21(1).

[33] The power is specifically limited in s. 10(2) to exclude private dwellings unless a warrant has been obtained.

[34] Though s. 29(b) suggests that regular inspections may be charged for, s. 3 of Schedule C indicates that only re-inspections attract such a fee.

may continue this practice under the *Fire Safety Act*, or may move to charging for initial inspections, as it determines is appropriate.

Fire Investigations

While an argument can be made that Local Assistants to the Fire Commissioner ("LAFCs") (and not local governments *per* se) are currently responsible for fire investigations and reporting,[35] the new *Fire Safety Act* makes it clear that the obligation will now fall directly on the "local authority" (which includes a municipality). The requirements relating to fire investigations are set out in Part 7 of the *Fire Safety Act* (ss. 22 – 27). As with fire inspectors, a local authority:[36]

> must designate in writing persons or a class of persons as fire investigators to conduct fire investigations.

Following a transition period, fire investigators must meet the training standards which are to be specified by the Fire Commissioner.[37] Those standards have not yet been promulgated. These new training requirements will likely impact the Department's officers and fire prevention members, who are most likely to be charged with investigating fires.

Under section 25, each local authority is required to commence a fire investigation within five days of learning of a fire that has destroyed or damaged property or resulted in death or injury. The investigation must examine the "cause, origin and circumstances" of the fire. The facts ascertained about the cause, origins and circumstances of the fire must then be submitted to the OFC within 30 days after such fire.[38]

Fire investigators are granted broad powers of entry onto property or premises for the purposes of conducting a fire investigation, and to remove a record or thing, conduct testing, take samples and make such records, as required.[39]

Powers and Authority

Under the *Fire Services Act*, powers and authority were granted principally through the mechanism of appointing fire chiefs (and others) as LAFCs.[40] The role of local assistant,

[35] As noted on the Province's website, when fulfilling the role of an LAFC, a fire chief, or other appointed fire department member, is accessing "provincial authority of the fire legislation and is accountable to the fire commissioner, not the local government." See: www2.gov.bc.ca/gov/content/safety/emergency-management/fire-safety/lafc (accessed 25 May 2022).

[36] *Fire Safety Act*, s. 23(1).

[37] *Fire Safety Act* s. 23(2); the transition period is provided for in s. 53.

[38] It is unclear in the statute whether the report must be submitted 30 days after the date of the fire, or 30 days after completion of the investigation of the fire.

[39] *Fire Safety Act*, s. 27.

[40] *Fire Services Act,* s. 6.

however, is being abolished.[41] In place of the powers granted to local assistants, the new statute:

- grants a fire chief (or designate) the power to order a tactical evacuation where he or she "believes that there is an immediate threat to life due to a fire or explosion";[42] and
- deems "fire chiefs", fire investigators and fire inspectors to be peace officers for the purposes of the new act.

In addition, as noted above, broad powers are granted to fire investigators conducting investigations, and to fire inspectors conducting inspections. Additionally, local authorities are granted the power to order a "preventive evacuation" where the local authority "believes that conditions exist on or in the premises that fire on or in the premises would endanger life."[43] Each of these new powers should be contemplated in any updated bylaw.

When the *Fire Safety Act* comes into force, it will be necessary to update Bylaw No. 988 (or any replacement bylaw), to address the new requirements and authorities.

4.3 Council Policy 14.2

In 2019, the Village passed Council Policy 14.2, "Fire Rescue Services in Outside Areas" ("Policy 14.2"). This policy addresses the question of certain extra-jurisdictional operations by the Department in connection with "life safety rescue" and "initial attack of wildfire and interface fire." In many respects, this policy addresses the gap in Bylaw No. 988, which does not deal with extra-jurisdictional operations. As drafted, the policy permits the Department to respond to life safety rescue incidents and interface/wildfires, at the discretion of the Fire Chief or officer in charge.

We would recommend replacing this policy with appropriate authorization language in a revised version of the Department's Bylaw No. 988. We also would recommend that the Department ensure that, in connection with any extra-jurisdictional response, it has determined its source of authority to act at the scene of the incident – whether pursuant to its consent and indemnity agreement with BCEHS, a task number issued by EMBC, or the current authorization processes from BC Wildfire Services under the most recent Inter-Agency Operational Procedures and Reimbursement Rates agreement.

4.4 Occupational Health and Safety

The statutory basis for occupational health and safety ("OH&S") programs is found in the *Workers Compensation Act* [RSBC 2019], ch. 1 (the "WCA"), and the *Occupational Health and*

[41] Under s. 55 of the *Fire Safety Act*, local assistants are required to return their badges within three months of the new statute coming into force.

[42] *Fire Safety Act*, s. 13.

[43] On fire inspectors' powers, see ss. 10 and 11; on fire investigators' powers, see s. 26. The power of a "local authority" to order a preventive evacuation is set out in s. 14 of the *Fire Safety Act*.

Safety Regulation, B.C. Reg. 296/97 (the "OH&S Regulation"), as well as in other regulations and the policies of WorkSafe BC. The requirements are complex and prescriptive. The WCA was recently comprehensively updated and revised: although the changes made were not substantive, virtually all of the divisions and sections were renumbered.[44]

The Department members are employees of the Village for workers' compensation purposes. As such, it is the Village's responsibility to ensure that the various obligations under the WCA and OH&S Regulation are being met.

The WCA mandates that the relevant local government's occupational health and safety program is supposed to apply to its fire departments.[45] Many local governments, however, develop a compliant, standalone program for their fire departments, given the special circumstances and risks that they face. The Department has a standalone program set out in its operational guidelines ("OGs"), which is then implemented through the OGs themselves. As the OGs were derived from those in use at another department, and have not been materially updated since they were introduced, a number of the references in the Department's OH&S program are out of date. Indeed, the Department has indicated that it was in the process of revising its OH&S program. As such, we have outlined WorkSafe requirements below and separately provided a template form of program which it can use as it undertakes this examination.

Under section 31.3 of Part 31 of the OH&S Regulation, where an employer is required to maintain a joint committee, its fire department is required to operate a separate joint committee.[46] The Department has a separately constituted joint committee. We were provided with a collection of joint committee meeting minutes dating mid-2020 back to 2012. Dating from about 2016, the Department moved to a fairly detailed meeting template which is examined further below. The biggest issue that appears to beset the committee is complying with the monthly meeting requirements and ensuring that at least half of the committee members present are "workers" (i.e., Department members not exercising managerial functions). We have outlined the formal requirements for a joint committee in section 4.4.2.

4.4.1 Formal OH&S Program Requirements

The following section sets out a general overview of the requirements for an OH&S program.

The starting point for any consideration of OH&S is section 21 of part 2 of the WCA, which makes employers responsible, among other things, for:

[44] The WCA was updated under the *Statute Revision Act*, with the revised statute brought into force with effect as of 6 April 2020, pursuant to OIC 103, 20 March 2020, and OIC 153, 30 March 2020. Under the *Statute Revision Act*, the updating can clarify and reorganize the statute in question, but not make substantive changes to it.

[45] The language in section 3.1(1.1) of Part 3 of the OH&S Regulation notes that the employer's OH&S program must cover the "whole of the employer's operations".

[46] The need for a separate joint committee (or worker representative) for fire departments is set out in s. 31.3 of Part 31 of the OH&S Regulation.

- ensuring the “health and safety of all workers working for that employer”;
- providing the information, instruction, training and supervision necessary to ensure the health and safety of workers in carrying out their work;
- complying with the WCA and related regulations and orders, and
- establishing OH&S policies and programs in accordance with the OH&S Regulation.

Section 3.3(1) of Part 3 of the OH&S Regulation requires an employer to initiate and maintain an OH&S program when it has a workforce of 20 or more workers and a workplace that is determined to create a “moderate or high risk of injury,” or by every employer which has 50 or more employees. The “moderate or high risk of injury” should be assumed to apply to the Department’s operations. The OH&S program must apply to “the whole of the employer’s operations”.[47] The program must be designed to prevent injuries and occupational diseases, and is required to include:[48]

(a) a statement of the employer's aims and the responsibilities of the employer, supervisors and workers;

(b) provision for the regular inspection of premises, equipment, work methods and work practices, at appropriate intervals, to ensure that prompt action is undertaken to correct any hazardous conditions found;

(c) appropriate written instructions, available for reference by all workers, to supplement the OH&S Regulation;[49]

(d) provision for holding periodic management meetings for the purpose of reviewing health and safety activities and incident trends, and for the determination of necessary courses of action;

(e) provision for the prompt investigation of incidents to determine the action necessary to prevent their recurrence;[50]

(f) provision for the maintenance of records and statistics, including reports of inspections and incident investigations, with provision for making this information available to the joint committee or worker health and safety representative, as

[47] Section 3.1(1.1) of Part 3 of the OH&S Regulation. Most local governments implement separate, compliant iterations of their OH&S programs for their fire departments.

[48] Section 3.3 of Part 3 of the OH&S Regulation.

[49] This provision establishes the overarching requirement for formal operational guidelines and/or standard operating procedures for the Department’s primary activities, including emergency scene operations.

[50] Section 3.4 of Part 3 of the OH&S Regulation stipulates the required contents of any incident investigation report that is required to be completed.

applicable and, upon request, to an officer, the union representing the workers at the workplace or, if there is no union, the workers at the workplace; and

(g) provision by the employer for the instruction and supervision of workers in the safe performance of their work.

The Department's OH&S program is attached as an appendix to its OGs. This program was adopted from the fire department whose OGs were used as a format for the Department's OGs. That fire department, in turn, borrowed the OGs and accompanying OH&S program from another fire service. The OH&S Program is out of date (e.g., it references the Minister's Order on Training from 2003, rather than the Playbook for training standards; it references the pre-2019 section numbers of the WCA; etc.), and includes non-relevant materials (e.g., references to "Regional District" policies, positions and OGs, or reporting to the Chair of an Improvement District, or sections which reference multiple departments not being revised properly, etc.).[51] There also are certain errors in the source material that were not corrected – for example, it suggests a biennial rather than annual testing of ground ladders in accordance with NFPA 1932 and s. 31.37(2) of the OH&S Regulation. Finally, some of the changes made to re-brand the OH&S program as a Cumberland document, led to the introduction of typographical errors – for example, the Department's name was accidentally inserted into the title of an NFPA standard.[52]

There is a Workplace Hazardous Materials Information System contemplated in Part 5 of the OH&S Program. This program directs the Department's "Safety Officer" to implement and maintain a compliant WHMIS program, including providing training, ensuring labelling and safety data sheets for controlled products are in place, maintaining an inventory of controlled products, and periodically reviewing the program with the Joint Committee.[53] We did not review whether these activities have actually been undertaken however the Department confirms they have several members trained as Safety Officer.

Attached as Appendix B to the OGs is a respiratory program intended to comply with sections 8.32 – 8.45 of Part 8 and section 31.19 – 31.26 of Part 31 of the OH&S Regulation.

The respiratory program refers to the Department using Survivair SCBA – however, the Department has recently switched to using Scott equipment. The Department's joint committee needs to update this program as soon as reasonably possible to reflect the change from Survivair to Scott SCBA. Any related operational guidelines covering SCBA use, maintenance and testing also need to be reviewed and updated as required to reflect the switch in equipment.

[51] See: Cumberland OGs, Appendix A: Occupational Health and Safety Program, Part 2, Part 4 (10th bullet), Part 9, Part 10 and Part 11.

[52] See OH&S Program, Part 4 – Inspection and Monitoring, where the Department's name appears in the title of NFPA 1932 in the 11th bullet.

[53] Cumberland OGs, Appendix A: Occupational Health and Safety Program, Part 5.

4.4.2 Joint Health and Safety Committee

As part of an OH&S program, an employer is required to establish a joint committee (or appoint a worker safety representative) to review and manage safety issues in the workplace. Pursuant to section 31.3 of the Part 31 of the OH&S Regulation, in a situation where an employer is required to

> "establish a joint committee or [appoint a] worker health and safety representative, then a fire department … operated by the employer must have a separate joint committee or worker safety representative, as applicable".

The Department's joint committee is established pursuant to Part 10 of its OH&S Program, "Occupational Health and Safety Committee." This Part 10 covers, among other things, the following matters:

- Joint committee membership (which accidentally includes a position not present in the Village staff structure – i.e., a "fire services coordinator");
- it requires the joint committee to operate in compliance with the WCA and OH&S Regulation;
- a requirement to take action on all items recommended by the joint committee, but in so doing, it failed to sufficiently revise the language imported from the original fire service that created the document, referring to "Each of the Cumberland Fire Rescue Chiefs […]" rather than just the Cumberland Fire Chief;[54]
- it usefully incorporates by reference the functions and obligations set out in the WCA for joint committees, though the section cross reference is now out of date (it should be section 36, not section 130 of the WCA);
- it requires the joint committee to meet "regularly". It should be noted that the WCA requires joint committees to meet not less than monthly, a requirement that should be specified in Part 10 of the Department's OH&S program; and
- it authorizes the joint committee to make recommendations – however, it suggests that there are multiple fire chiefs and refers to the trustees of an improvement district rather than the Village CAO or council.

To assist the Department in updating this section of its OH&S program, we have summarized the joint committee requirements below. The WCA sets out detailed and prescriptive requirements regarding joint committee establishment and operation. These requirements should be fully reflected in the Department's OH&S program:

[54] This OH&S Program originated in a regional district with 13 fire departments. The program was designed to cover all 13 departments.

Section 33: This section addresses membership on the joint committee and appointment of co-chairs from amongst the employer and employee representatives:

(a) a joint committee must have at least four members;

(b) it must consist of worker and employer representatives;

(c) at least half the members must be worker representatives; and

(d) it must have two co-chairs – one selected by the worker representatives and one selected by the employer.

Note: in relation to quorum, there must always be at least the same number (or more) worker representatives than management representatives.

Sections 34 and 35: These sections set out the process for selecting the worker and employer representatives:

(a) if none of the workers are represented by a union, the worker representatives are to be elected by secret ballot (s. 34(b)); and

(b) the employer representatives on a joint committee must be selected by the employer from among persons who exercise managerial functions for the employer and, to the extent possible, who do so at the workplace for which the joint committee is established (s. 35).

Section 36: This section sets out ten required duties and functions of a joint committee. We recommend that these be set out in the description of the joint committee's role, as they are listed in section 36 (amending the final item to read: "to carry out any other duties and functions prescribed by WorkSafe BC"), rather than just incorporating by reference.

Section 37(2): The joint committee is required to meet at least monthly. It is essential that proper records be kept of each meeting and it is helpful if a pre-set agenda for such meetings (covering the regular matters that need to be considered, and providing an opportunity to raise new matters) can be established. We note that the Department has a well-developed meeting template that it follows. Meeting records should track all decisions, and bring forward to the next meeting any matters that require time to address.

Section 39: This section requires an employer to respond to recommendations from the joint committee.

Section 40: This section deals with the payment of members for work on the committee. Under section 40, employers ordinarily must grant worker representatives time off from work and to pay them for that time. In volunteer and paid-on-call departments, we usually recommend that the employer develop a stipend for members serving on the joint committee (i.e., a set amount per year for regular fulfillment of this

function), with a separate hourly rate if members are required to participate in an investigation of a workplace accident or similar event. This issue is addressed further, below.

Sections 41, 42: Under sections 41 and 42, the employer must provide appropriate administrative support to the joint committee, and paid educational leave time for either the worker representative or the committee members. Again, in a paid-on-call system this would be met by treating time spent by the worker representative on such education as compensable.

Sections 43 – 44: These sections set out certain administrative requirements, including:

(a) handling of records and distribution of reports (section 137)

(b) posting of names of joint committee members (s. 138(a));

(c) the keeping and posting of minutes of the joint committee meetings (s. 138 (b)); and

(d) the posting of WorkSafe BC orders (s. 138(c)).

Once established, the joint committee is primarily responsible for ensuring that the Department is meeting the requirements of its OH&S program (including, for example, regular checks of the premises, apparatus and equipment), and for investigating workplace incidents should they arise.

The rules pertaining to the operation of the joint committee/worker representative system were updated in 2016, with effect from 2017. Under BC Reg. 312/2016, which amended the OH&S Regulation with effect from 3 April 2017:

- there must be an annual, written evaluation conducted of the joint committee's operations, examining, among other things:
    - whether the joint committee membership requirements and selection processes met WCA requirements (ss. 3.26(3)(a)(i) - (iii));
    - whether the joint committee fulfilled each of its duties and functions and met as required by the WCA (ss. 3.26(3)(iv) and (v);
    - whether the joint committee operated as provided in the WCA, including with respect to training, administrative support and other specified matters (ss. 3.26(3)(vi) – (xii)); and
    - the effectiveness of the rules of procedure and overall effectiveness of the joint committee (ss. 3.26(4) & (5); and

- members of a joint committee must receive certain specified training, aggregating, in total 8 hours, and worker representatives must receive similar training aggregating 4 hours (ss. 3.27 (2) & (3)), covering various matters specified in the regulations.

The training obligations apply only to new members of a joint committee or new worker representatives, in each case, appointed after 3 April 2017. In certain circumstances, the training obligation is waived where a new appointee has already received the training in question (ss. 3.27 (6) & (7)). Certain records keeping obligations are attached to the new, explicit training requirements.[55] These training obligations should be reflected in the OH&S program.

Similarly, the annual review of the OH&S program itself (see Part 12 of the existing program) and the annual review of the joint committee's operations, should be reflected in the appropriate meeting minutes, even if (for example) no change to the OH&S program results from the review.

The proper operation of a joint committee can be a time-consuming task. One of the issues frequently identified when working with volunteer and paid-on-call departments is a lack of interest or willingness on the part of the members to afford additional personal time to this administrative responsibility. To overcome this problem, the Village should consider the following:

- whether the individuals who participate on the joint committee be remunerated for the time they will be required to commit – perhaps with a separate monthly stipend, plus an hourly rate in the event that the joint committee has to undertake an accident investigation or similar enquiry;

- where training is required for committee members, the training pay otherwise paid to members for attendance at practices should be paid (or compensation otherwise be paid for this work); and

- where possible, the regular monthly meetings of the joint committee could be timed to occur at the end of the one of the regular practice nights. Most monthly joint committee/worker representative meetings will not be long, and the individuals involved can be excused from any post-practice apparatus or equipment clean-up to attend the meeting.

4.5 Recommendations

Bylaw No. 988

#4-1: When Bylaw No. 988 is updated, the division of the Village into three separate fire protection zones should be reviewed and tightened up, including:

- adding a definition of "Village Centre";

[55] B.C. Reg. 312/2016, ss. 3.26(8) & (9).

- revising the definition of “extraordinary fire”, to the provision of fire protection and suppression services beyond the level specified for the particular Service Area;
- clarifying that the fire protection service area can change if the zoning for the property is converted to those covered by the Service Area B designation.

#4-2: When Bylaw No. 988 is updated, the following matters should be considered for inclusion and/or addressed:

- expressly addressing Provincial training standards requirements under the Playbook, including the service level declaration;
- expressly authorizing the Department to pass over or through, or to station on, properties that are proximate to an incident, as required to mitigate that incident;
- specifying the basis on which non-emergency entry onto property or into premises made be made under the *Fire Services Act* and its regulations or under section 16 of the *Community Charter*;
- setting out jurisdictional limits for the Department and circumstances in which it can operate outside of the Village limits;
- including a reference in this bylaw to the power to issue tickets under the Village’s *Municipal Ticket Information Bylaw No. 1053, 2017*.

Occupational Health and Safety

#4-3: The Village and the Department should review and update the OH&S program to ensure it is fully particularized to the Department itself and to the Village, and to remove references to positions which do not exist. At the same time, the program should be reviewed to ensure it is fully up to date based on the latest version of the WCA and OH&S Regulation.

#4-4: The Department’s respiratory program and any associated operational guidelines should be updated to reflect the acquisition of the new Scott airpacks.

#4-5: The Department and the Village should review the materials establishing the joint committee, and update those materials to particularize the document to the Department, and to ensure it is fully up to date based on the current requirements of the WCA and OH&S Regulation.

#4-6: The Department needs to ensure that it maintains the required joint committee meeting and other review processes required by the WCA and OH&S Regulation, including the posting of joint committee minutes, selection of joint committee members, regular reviews of the fire hall, apparatus and equipment, and the required annual review of the joint committee operations. Appropriate records of these processes need to be developed and maintained.

5.0 Service and Aid Agreements

The Village is a party to one service agreement and two mutual aid agreements in relation to the Department:

- an agreement dated 10 January 2018 between the Village and the CVRD, in relation to the provision by the Village of fire protection and emergency response services into the Rural Cumberland Fire Service Area (the "Service Agreement");
- a mutual aid agreement made among the Village, the CVRD, the City of Courtenay, the Town of Comox, the Ships Point Improvement District, the Union Bay Improvement District, and the City of Campbell River, dated 9 May 2013 (the "Aid Agreement"), as extended by an agreement between the parties dated for reference 28 May 2018 (the Extension Agreement"); and
- a mutual aid agreement made between the Village and the Her Majesty the Queen in Right of Canada as represented by the Minister of National Defence (the "DND") dated 19 November 2021 (the "DND Agreement").

5.1 Service Agreement

The Village provides fire protection and emergency response services into a neighbouring CVRD local service area known as the Rural Cumberland Fire Service Area (the "Service Area"). The Service Area was originally an improvement district, which was dissolved, and the assets and liabilities transferred to the CVRD in 2011 pursuant to Order in Council No. 540, 2 November 2011. The CVRD local service was established pursuant to *Rural Cumberland Fire Protection Service Establishing Bylaw No. 192, 2011* and the Department's operational powers and authority are contained in the CVRD's *Rural Cumberland Fire Service Regulations Bylaw No. 258, 2013* (the "CVRD Bylaw No. 258").[56]

Under the Service Agreement, the Village has agreed to provide "fire protection services" which are defined to include a range of emergency responses in addition to fire suppression:[57]

> "fire services comparable to the fire services provided by the fire department within the boundaries of the Village and includes but is not limited to response to and attendance at all dispatched fire alarms, fire suppression, fire investigation and reporting, hazardous material handling, fire prevention activities, vehicle extrication, first responder medical services, and related activities".

[56] The CVRD service establishment bylaw was not reviewed.

[57] Service Agreement, s. 1(d).

The Service Agreement was made effective as of 1 January 2018 and expires as of 31 December 2022.[58]

The Service Area pays its proportionate share of the cost of operating the Department (including capital costs).[59] The annual service fee is based on the Department's approved budget, which is defined in the Service Agreement as the "net cost". In the event that "actual costs in any given year" are less than the approved budget, the Village will refund the difference. If the Department exceeds its approved budget, the additional amounts are added to the following year's service fee.[60] If the proposed net cost rises by more than five percent from the previous year, the CVRD is provided an opportunity to comment on the Department's budget.[61]

The Service Agreement creates the concept of an "Extraordinary Fire" – which is one that, in the opinion of the Fire Chief, involves a response (i.e., use of foam, fire crew and apparatus, specialized machinery costs or mutual aid costs) that is "materially beyond what is typically required to respond to a fire in the Village."[62] The Village may charge for the extra costs associated with the response to an Extraordinary Fire.[63]

This concept largely tracks the similar approach in the Village's Bylaw No. 988 of recovering the costs for "extraordinary fire protection." We would suggest that these provisions in the Service Agreement should be reviewed and tightened somewhat, since there is some uncertainty around what constitutes an "Extraordinary Fire" in the Service Area. Within the Village itself, as discussed above, Bylaw No. 988 creates three separate fire protection zones, with three different concepts of what might be considered "extraordinary fire protection" depending on the zone. The Service Agreement does not clearly indicate how the Service Area would be categorized, which makes it more challenging to determine what would constitute an "Extraordinary Fire".

As such, we would suggest the definition of fire protection services be expressly tied to one of the three zones (e.g., "equivalent to the coverage provided by the Fire Department in Zone C under Bylaw No. 988"), and the concept of what constitutes an "Extraordinary Fire" be similarly tied to the corresponding language in Bylaw No. 988 based on the relevant zone.

The Village's Fire Chief controls the responses into the Service Area, including the allocation of resources to any emergency incident and management of such resources during "simultaneous fire emergencies."[64] In connection with the latter, the Service Agreement provides that the

[58] Service Agreement, s. 1(h).

[59] Service Agreement, s. 1(e) (definition of "Net Cost") and Article 6, Payment for Services.

[60] Service Agreement, ss. 6(a), (e) and (f).

[61] Service Agreement, s. 6(g).

[62] Service Agreement, ss. 1(a) and (b), and Article 7.

[63] Service Agreement, s. 7(a). The Village may also recover the costs of providing security to a fire-damaged property in Service Area, under that same provision.

[64] Service Agreement, ss. 2(d) and (f).

"Village shall not be held liable in any manner whatsoever" for a decision of this nature. We would recommend reviewing this provision with counsel, and considering the following:

- both ss. 2(d) and 2(f) should be broadened to cover all emergency calls (not just "a fire in the Service Area" or "fire emergencies" as currently drafted); and
- the exculpation of liability in this section should also be addressed in the indemnification clause in section 4(a) – which may then require revision of the indemnification provision in section 4(a), if the intention was to exclude a claim based in negligence (which appears to be the intention in the use of the word "whatsoever" in section 2(f)).

It also should be noted that under subsection 3(b)(i), the Fire Chief has the discretion to refuse to respond to an incident where he or she "deems the access routes to be unsafe or inadequate for fire department equipment." Consideration should be given to expressly including decisions of this nature in the indemnity clause in section 4(a). We also would suggest that the parties agree to periodically review the Service Area for properties or locations where access potentially is a challenge and work cooperatively to address such problems. In other agreement of this type, we have sometimes seen language requiring the service recipient annually to notify its property owners of their obligation to keep their properties accessible (e.g., snow clearing, minimum drive width and height clearances, etc.).

There are indemnification and insurance requirements set out in Article 4. The indemnification language in section 4(a) does not cover negligence on the part of the Village or the Department.

When the Service Agreement comes up for renewal (it expires at the end of 2022), in addition to the matters noted above, we would recommend that the following also be reviewed and/or revised:

- as discussed above, the Department's operational powers and authorities within the Service Area are derived from CVRD Bylaw No. 258. We would recommend expressly noting this in the Service Agreement;
- section 2(e) of the Service Agreement grants the Fire Chief the power to restrict water use in the Service Area – this power is not expressly addressed in the CVRD Bylaw No. 258;
- under subsection 3(a)(iii), the CVRD is required to "recognize the fire chief as the local assistant to the fire commissioner…for the Service Area…". If the *Fire Services Act* is still in force when the Service Agreement is renewed, this section should be revised to require the parties to jointly apply to the Fire Commissioner to have the Fire Chief appointed as the LAFC for the Service Area (which is the way the process is intended to work under the *Fire Service Act*);
- section 6(e) stipulates that the "net cost" is the "full and final amount to be paid by the CVRD for that calendar year's service." This section should be revised to read: "except as provided for in Article 7" (which deals with extraordinary fire costs and security costs);

- in connection with the “entire agreement clause” we would recommend removing the phrase “is the entire agreement between the parties regarding this subject matter” from section 10(a) and inserting it into section 9(b), so that the latter section reads something as follows: “This agreement is the entire agreement between the parties relating to the subject matter hereof, and it replaces…(etc.)”; and
- there are two minor drafting notes/corrections:
    - at the end of subsection 3(b)(v) the period should be replaced by a semi-colon and followed by the word “and”; and
    - in section 5(a), which deals with early termination, we would suggest that it be amended to read something like the following: “This agreement may be terminated at any point during the Term by either party, provided that such party gives not less than 12 months’ notice of termination.”

5.2 Fire and Rescue Aid Agreement

The Aid Agreement originally was entered into in 2013. It was extended by the Extension Agreement in 2018. As amended, the Aid Agreement was extended for a further five-year term, ending on 10 May 2023.[65] The only revision made by the Extension Agreement was to the term and to the reimbursement rates as set out in Attachment “A” to the Aid Agreement.[66] If the Aid Agreement is not expressly renewed, it continues on a month-to-month basis, until renewed or, in relation to any party, until such party withdraws from the agreement.[67]

The Aid Agreement currently covers four municipalities, one improvement district and the CVRD. It used to include the Union Bay Improvement District as well, but that improvement district was dissolved and taken over by the CVRD in 2021. By operation of Order in Council No. 221, 6 April 2021, Union Bay Fire Rescue remains a participant in the Aid Agreement, albeit under the jurisdiction of the CVRD.[68]

The Aid Agreement:

- describes when mutual aid may be requested from another party (s. 4.1);
- permits a department to refuse an aid request (s. 4.2);
- deals with incident command (s. 4.5);

[65] Extension Agreement, s. 2.

[66] Extension Agreement, s. 1.

[67] Aid Agreement, s. 3.3.

[68] Order-in-Council No. 221, 6 April 2021, ss. 5 and 6.

- addresses the release of a “Providing Department’s” resources, either to respond to another incident or at the end of incident in respect of which assistance was provided (ss. 4.3 and 4.4);
- includes a broad indemnity in favour of the party of a Providing Department, and includes a release of any claims against a party for not responding to a request for assistance (ss. 5.1 and 5.2);
- creates a process that permits a Providing Party to charge for any assistance given (Articles 6 and 7; Attachment “A”);
- purports to create an obligation for the Comox Valley Fire Chiefs’ Association to maintain and update a resource list annually (s. 9.1);
- sets out a basic dispute resolution process (Article 8); and
- creates a general obligation for each party: to maintain insurance coverage on its firefighting equipment; to have WorkSafe BC coverage; and to maintain third-party liability insurance (Article 11).

When the Aid Agreement is updated again in 2023, we would recommend considering the following:

- adding a provision that addresses the operational powers of responding departments, when operating in the requesting department’s service area. There are two basic approaches that may be adopted:
    - a responding department may be granted the same powers when operating in the requesting department’s jurisdiction, as is enjoyed by the requesting department; or
    - a responding department can exercise the same powers in the requesting department’s jurisdiction as it has in its own service area;
- building out the incident command provisions to address issues such as when unified command should be established and recognizing that a responding department may actually arrive on scene before a requesting department (e.g., in circumstances where the requesting department is already engaged with another incident);
- specifying the minimum training levels for personnel from the responding department, and a common system for readily identifying each member’s training and qualifications during an incident (e.g., colour-coded helmets, or flashes);

- establishing any response limitations for each participating department based on its Playbook Service Level, but confirming that each department can operate at its chosen service level;[69]

- specifying a common personnel accountability system or requiring that the participating departments' chief officers implement a common system;

- specifying how workers' compensation claims will be managed;

- requiring that the participating departments' chief officers develop:

    - common operational guidelines for all potential combined responses (which operational guidelines need to include the agreed incident command system, and accountability system); and

    - common communications protocols for emergency scene communications (e.g., talk groups, identification protocols, etc.);

  In that regard, we note that a role has been given to the Comox Valley Fire Chiefs' Association to maintain an up-to-date resource list. This entity is not a party to the Aid Agreement – and it is not clear that all of the members of this association are actually participants in the Aid Agreement. It would be better to create a committee of fire chiefs under the Aid Agreement to address matters specific to the agreement;

- making provision for the parties to undertake periodic joint training, including tabletop exercises simulating major incidents; and

- setting out a process for regularly reviewing and assessing the effectiveness of combined operations (this should be done at least annually). These reviews should include providing an opportunity for the parties' dispatch provider to be included.

In addition, we would recommend reviewing the dispute resolution process. There are only six separate parties to the Aid Agreement – it is conceivable that an incident arising out of a large event could involve multiple parties, which would make the application of Article 8 impossible. It may be preferable to set out a staged dispute resolution process, where the parties involved in a dispute first try to settle the matter between themselves. In such a structure, there should be an initial review (e.g., by the respective protective services managers or equivalent), followed by a more senior review if the initial review proves unsuccessful (e.g., respective CAOs). If no settlement can be reached, the matter should then be directed to arbitration or the courts.

In relation to cost recovery for "damaged equipment" as provided in subsection 6.1(c), if the intention is to exclude fire apparatus from any such claims, that fact should be specifically

[69] So, where one department operates at the Interior Operations Service Level, and the other at the Exterior Operations Service Level, the Aid Agreement should confirm that Interior Operations department can operate at its higher level of service in the Exterior Operations department's service area. This does not permit the Exterior Operations department or its members to operate at this higher level and careful thought needs to be given to how incident command is managed in such circumstances.

stated. The nature of the records to be kept in relation to each incident (as provided in s. 7.1), which may impact reimbursement claims, should be more clearly specified.

Finally, it may also be of benefit to review the indemnity provisions with legal counsel. Section 5.1 releases a party from liability in connection with not responding to a request for assistance – however, this provision only operates as between the parties and does not (and cannot) preclude claims by a third party (e.g., an aggrieved insurance company). We would suggest that this issue should also be specifically addressed in the indemnity given in section 5.2. That indemnity appears limited to circumstances where a party's fire department has responded to an incident, and may not extend to situations where it has refused or failed to respond. The parties may also wish to exclude claims or damages arising from the mustering of personnel and travel to or from the scene of an incident (an approach that is fairly common).

When the new agreement is prepared, we would recommend correcting various grammatical issues as well (e.g., section 4.2, substituting the word "its" for their" or "they"; section 6.4, replacing "their" with "its"; section 5.2, replace "it's" with "its", etc.).

5.3 DND Agreement

The DND Agreement was entered into in November 2021; it has no fixed term.[70] However, the parties are supposed to review the terms of the agreement every two years.[71]

The DND Agreement:

- sets out a list of apparatus and resources available to each party (s. 1, Schedule A);
- specifies that providing a response to an assistance request is discretionary, and similarly that resources may be withdrawn at the discretion of a party's "Senior Fire Officer" (s. 2);
- sets out a basic process for requesting aid (s. 3);
- specifies that the resources of a responding department remain under the direction of that department's Senior Fire Officer (s. 4);
- sets out response protocols (i.e., resources to be sent) where assistance is provided (s. 5 and Schedule C);
- provides for cost reimbursement, including reimbursement of consumables and, in relation to the DND, the cost of backfilling positions (ss. 6, 7 and Schedules D and E);
- prohibits the use of C8 Class B foam (s. 8);

[70] DND Agreement, s. 15.

[71] DND Agreement, s. 14.

- provides a release of claims as between the parties and an indemnity against third party claims. The indemnity provision excludes workers' compensation claims (ss. 9 and 10); and

- provides for cross-training and consultation between the parties' Senior Fire Officers (ss. 12 and 13).

In relation to the DND Agreement, we would note the following:

- The definition of "Senior Fire Officer" should be reviewed and tightened up. This definition is found in section 2, and reads, in relevant part, as follows:

  > "…'Senior Fire Officer' means, <u>in the absence of such officer</u>, the Fire Chief, the deputy or any other person discharging duties or responsibilities during the period of assistance". [emphasis added]

  It is not entirely clear what was meant by the phrase we underlined – it is possible it simply is misplaced, and should read: "means the Fire Chief, or in the absence of such officer, the deputy…(etc.)". The sweep up language ("any other person…etc.") also seems overly broad. Outside of an incident, it should include any person delegated authority to act in the place of the Fire Chief. At an incident, it likely should be restricted to the most senior member of each party at the scene.

- The DND Agreement should expand on the manner in which incident command will be managed under section 4, and, in particular, the creation of a unified command structure at incidents.

- In relation to the indemnity, we note that the period covered commences when the call for assistance is received, until the responding department has returned to its fire hall. It is not uncommon for indemnities of this nature to exclude the mustering of personnel, and the travel to and from an incident (see ss. 6 and 10(a)). By way of example, it is conceivable to read the indemnity as covering an accident involving a Cumberland volunteer making his or her way to the fire hall in connection with an aid request by the DND. As such, the parties may wish to review the extent of the indemnity.

- The DND Agreement should expressly address the grant of operational powers necessary for a responding department to operate at an incident.

- The discussion in the section above of the CVRD-wide Aid Agreement identifies a number of other issues (e.g., training of personnel, development of common operational guidelines, reviews of mutual aid responses, etc.), that also should be considered for inclusion in the DND Agreement.

- We expect that the DND has aid agreements with other fire departments in the CVRD. We would suggest that the DND be included in any joint meetings of CVRD fire chiefs to review mutual aid issues, and include this in the DND Agreement itself.

5.4 Recommendations

Service Agreement

#5-1: The Service Agreement should expressly note that the Department draws its operational powers from CVRD Bylaw No. 258, when operating in the CVRD Service Area.

#5-2: The parties should review whether the Fire Chief has the authority to restrict water use in the CVRD Service Area, which is included in the Service Agreement but is a power which is not expressly addressed in CVRD Bylaw No. 258.

#5-3: If the *Fire Services Act* is still in force when the Service Agreement is renewed, the appointment of the Village's Fire Chief as the LAFC for the CVRD Service Area under s. 3(a)(iii) should be revised to involve an application to the Fire Commissioner.

#5-4: Section 6(e), which describes the "net cost" as the "full and final amount to be paid by the CVRD" for the services, should be revised to read: "except as provided for in Article 7".

#5-5: The parties should review and clarify the level at which services are being provided in the CVRD service area. In particular, they should tie the definition of fire protection services to one of the three fire protection zones in the Village (e.g., "equivalent to the coverage provided by the Fire Department in Zone C under Bylaw No. 988"), and clarify the concept of what constitutes an "Extraordinary Fire" accordingly.

#5-6: Consider addressing the other issues identified in this section of the report, including:

- reviewing the liability exculpation in ss. 2(d) and (f), and potentially including these matters in the indemnity provisions;
- revising the "entire agreement clause", which is split between ss. 9(b) and 10(a); and
- making some minor drafting changes as noted in this section of the report.

Aid Agreement

#5-7: A provision should be added that addresses the operational powers of responding departments, when operating in the requesting department's service area.

#5-8: The incident command provisions should be expanded to address issues such as when unified command should be established and dealing with situations where a responding department may actually arrive on scene before a requesting department.

#5-9: A provision should be added specifying the minimum training levels for personnel from the responding department, and a common system for readily identifying each member's training and qualifications during an incident (e.g., colour-coded helmets, or flashes).

#5-10: A provision should be added establishing any response limitations for each participating department based on its Playbook Service Level, but confirming that each department can operate at its chosen service level.

#5-11: Provisions should be added addressing:

- a common personnel accountability system;
- specifying how workers' compensation claims will be managed;
- the establishment of common operational guidelines and common communications protocols;
- periodic joint training, including tabletop exercises; and
- setting out a process for regularly reviewing combined operations.

DND Agreement

#5-12: The definition of "Senior Fire Officer" should be reviewed and tightened up.

#5-13: The DND Agreement should expand on the manner in which incident command will be managed and, in particular, when unified command structures will be established.

#5-14: The indemnity provisions should be reviewed. At present, they cover the period from when a call is received until when a departments units return to their base. In our experience, it is more common to exclude the mustering of personnel and the travel to and from an incident.

#5-15: The DND Agreement should expressly address the grant of operational powers necessary for a responding department to operate at an incident.

#5-16: The recommendations made regarding the CVRD-wide Aid Agreement in connection with the training levels of personnel, development of common operational guidelines, reviews of mutual aid responses, etc., also should be considered for inclusion in the DND Agreement.

#5-17: We expect that the DND has aid agreements with other fire departments in the CVRD. We would suggest that the DND be included in any joint meetings of CVRD fire chiefs to review mutual aid issues, and include this in the DND Agreement itself.

6.0 Financial Review

The Department's 2022 operating budget is $1,107,010, as summarized in Table 1, with approximately 25% of the operating budget funding coming from the Service Area under the Service Agreement with the CVRD. [72]

Table 1: Cumberland Fire Department 2022 Budget

Expenditures	Administration	$	244,380
	Volunteers	$	176,110
	Fire Hall O & M	$	41,400
	Protective Equipment	$	33,310
	Fleet	$	48,800
	Total	$	544,000
	Fire Hall Financing	$	269,820
	Equipment Financing	$	45,690
	Special Project	$	4,000
	Total	$	319,510
	Operating Expenditures	$	863,510
	Capital Expenditures	$	243,500
	Total Expenditures	$	1,107,010

Revenue	Business Licence Fees	$	600
	CVRD Service Area Fire Protection	$	223,410
	Other Grants	$	29,850
	Miscellaneous Revenue	$	90,000
	Total	$	343,860
	Transfer from Reserves	$	224,000
	Tax Allocation	$	539,150
	Total Revenue	$	1,107,010

[72] Source: 2022 Annual Ops Budget_Final Review.pdf as provided by the Department.

The Department has provided forward capital budget planning for the five years period from 2022 to 2026[73] as summarized in Table 2.

Table 2: New Budget Requests, 2022-2026

FIRE SERVICES (most costs have 23% covered by Protection District)						
Proposed Project Name	Project Description/Justification	2022	2023	2024	2025	2026
Increase to Fire fleet for vehicle modifications		$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000.00
Operating Projects						
Equipment replacement for wildfire protection unit	to be funded each year by wildfire reimbursements until equipment is up to date	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000.00
Fire Hall Maintenance Projects:						
Pave in the back of the fire hall & finish the cement pad					$50,000	
Fire Capital Projects						
Turnout Gear replacement (2 sets)	annual replacement	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500.00
C-Can for training centre	20-foot storage container	$ 6,000				
Fire Engine - new asset	Sell engine F3 against purchase	$230,000				
Second Duty Officer Truck Replacement			$50,000			
Wildfire bush truck - new				$175,000		
Fire Services Total Budget Requests		$252,500	$66,500	$191,500	$66,500	$16,500

[73] Source: 2022—2026 New Budget Requests—Adopted Financial Plan

In terms of future budgets, we recommend funding a number of new or revised initiatives and the following are considered the highest priorities.

- The Department will be replacing Engine 3, which is approaching the point at which the Fire Underwriters will no longer provide credit for it in their assessment for fire insurance purposes. The Fire Chief is considering replacing this unit with a Quint-type apparatus and the estimated cost for either a new or used unit should be factored into the capital plan to provide funding for this item.

- The Department has recently recruited a Deputy Chief/Training Officer and the wages and benefits for that position may have changed and should be factored into the current and future years.

- The Department will be focusing on improving its regulatory compliance by creating and maintaining enhanced training records for its firefighters and officers. The costs associated with this work, including a recommendation for additional administrative support, should be considered starting in 2023.

- As part of achieving full compliance with the mandatory training for its firefighters, the Department should budget for additional training props and the configuration of the back yard of the fire hall, to ensure required training can be provided at Hall 1.

6.1 Recommendations

#6-1: The Department implement appropriate capital planning to ensure that it is able to replace its apparatus, as such apparatus reaches its age limit. In general, this planning should be based on a 20-year replacement cycle, based on the Fire Underwriters' requirements. (In relation to the Department's existing apparatus, see Recommendation #8-1.)

#6-2: The Department ensure that its budgeting includes the costs associated with meeting its regulatory requirements, including an improved training records system, and the administrative costs associated with such work (see also Recommendation #7-2).

#6-3: The Department budget for the acquisition and installation of appropriate training props at the fire hall, to enable it to meet both recruit training and maintenance training.

7.0 Organizational Structure and Staffing

The Department operates with a Fire Chief, a Deputy Chief and a Bylaw Enforcement Officer. The Fire Chief reports to the Chief Administrative Officer. The current organizational chart for the Village can be found in Appendix 2.

The Fire Chief is responsible for managing the Bylaw Officer, who operates from an office at the fire hall. The incumbent in this position is also a volunteer member of the Department. In terms of the allocation of hours, the Chief spends about 20% of his time working with the Bylaw Officer, and the remaining 80% on managing the Department. As discussed in section 14.0, below, the Fire Chief also has responsibilities under the Village's emergency program.

The Deputy Chief is also the Training Officer and acts as one of the two Duty Officers along with the Fire Chief. The Duty Officer is paid $4 per hour while on call, which is increased to $18 per hour if assigned to an active incident. The Fire Chief and the Deputy Chief discussed the challenge of maintaining the Duty Officer position, due in part to the need to share a single response vehicle, which requires them to meet to hand off the responsibility along with the response vehicle. A second vehicle would allow for a much easier and quicker shift of the Duty Officer function than the present need to meet and swap personal protective equipment ("PPE"). Other members of the Department have been reluctant to act in this role perhaps as a result of the low rate of remuneration for this standby function. Regardless of the reason, sharing the Duty Officer function between only two individuals is potentially problematic. The Village, in consultation with the Department members and officers, should review what would be required to broaden the number of individuals prepared to act in this role.

The Deputy Chief/Training Officer ("DC/TO") retired at the end of March and the Department has recently recruited his replacement from Grand Forks. The workload of the DC/TO has continued to increase for several reasons, including the increasing mandatory training requirements specified in the Provincial Training Standards, coupled with the high turnover of personnel in the Department. Training plans and records are managed in FirePro a fire service software, that has a number of modules not all of which are utilized. The previous DC/TO noted that it was a challenge within the time available to manage all of the required records to track lesson plans and evaluations. This is a concern as complete records for training are a requirement of the Playbook and a better use of the DC/TO's time would be the creation of training plans and evaluations with some administrative support for the actual data entry.

The Department currently has 31 members. At this time there are 20 firefighters trained to Full-Service Level, along with five new recruits and the remainder at varying stages of qualification. The Chief noted that, once firefighters are trained, retention is generally not a problem, but the Department has faced some significant challenges in attracting new members.

As the Department is operating at the Full-Service Operations level, it must train its members to the higher standards required by that level of operations (i.e., full NFPA 1001 Firefighter II, and NFPA 1001 Fire Officer 1 or higher), along with appropriate maintenance training, including live

fire exercises. The costs associated with this higher level of training need to be included in the Department's budgeting process.

As part of this review the Consultants met with approximately 80% of the members of the Department on the evening of 12 April 2022. The level of engagement with the members was very positive and they were clearly focused on providing a very high level of service to the residents and property owners in Cumberland. Their comments centred on the following issues:

Training:

It was well understood by the Department members that training requirements for structural firefighting arising from the Provincial Training Standards, as well as those for First Medical Response are increasingly complex and require very complete documentation. They strongly supported the further development of the fire hall property to provide better props specific to the fire hazards they deal with. Related to this, they are looking to further development of the training program with more detailed lesson plans and evaluation against the Job Performance Requirements ("JPRs") under the relevant NFPA training standards.

Administrative Support:

The requirement to provide more complete documentation than is done at the present time is understood and the members felt that, for consistency and accuracy, this role should be fulfilled by an administrative support function.

Recruitment:

There was broad agreement that recruitment of new volunteers is an ongoing concern for several reasons, the main one being the need to have sufficient fully trained members of the Department available which is not always the case currently. Several options were discussed, including to ensure that the training provided was expanded to make it more interesting for potential members. This is tied to the further development of the fire hall property as discussed elsewhere in this document.

Scope:

Several members noted that, as the Village population grows and risks increase in complexity, a higher level of engagement with Council would be helpful to ensure the service mandate is fully understood, endorsed and supported.

Fire Hall:

There was broad agreement that the new fire hall provided sufficient space for in-service and spare apparatus, exercise equipment, usable office space, small equipment maintenance, air bottle management and an emergency operations centre with adjacent kitchen facilities to support the Department and Village in a major emergency.

The output from the meeting with the members was discussed with Fire Chief the following day and there was support for these issues and a sincere appreciation for the degree of engagement the previous evening when every member offered their thoughts.

7.1 Recommendations

#7-1: That the Village and the Department consider the ways in which the Duty Officer function could be filled by additional members of the Department, including the provision of a second vehicle and reassessing and increasing the rate of remuneration.

#7-2: That the Department's budget be increased to provide an administrative support/data entry function to ensure all training records are complete and will satisfy the requirements of the current Provincial Training Standards.

#7-3: That the Department continue to expand its training ground capabilities at the fire hall to ensure the highest level of training within Cumberland, reducing the need to travel further from the Village for required training.

#7-4: That the Village review the compensation package for the Chief Officers and the paid-on-call volunteers.

8.0 Fire Hall and Apparatus

The Department's fire hall is located at 4724 Cumberland Avenue and has three double-length drive-through bays. This hall replaced the original fire hall located on Dunsmuir Avenue built in 1923.

Figure 2: CFRD Fire Hall at 4724 Cumberland Road

The fire hall is centrally located in terms of its response area (shown in Figure 3) which is the core, original part of the Village and in Figure 4 which shows the boundary limits for the Village including the industrial development to the north-west along Bevan Road.

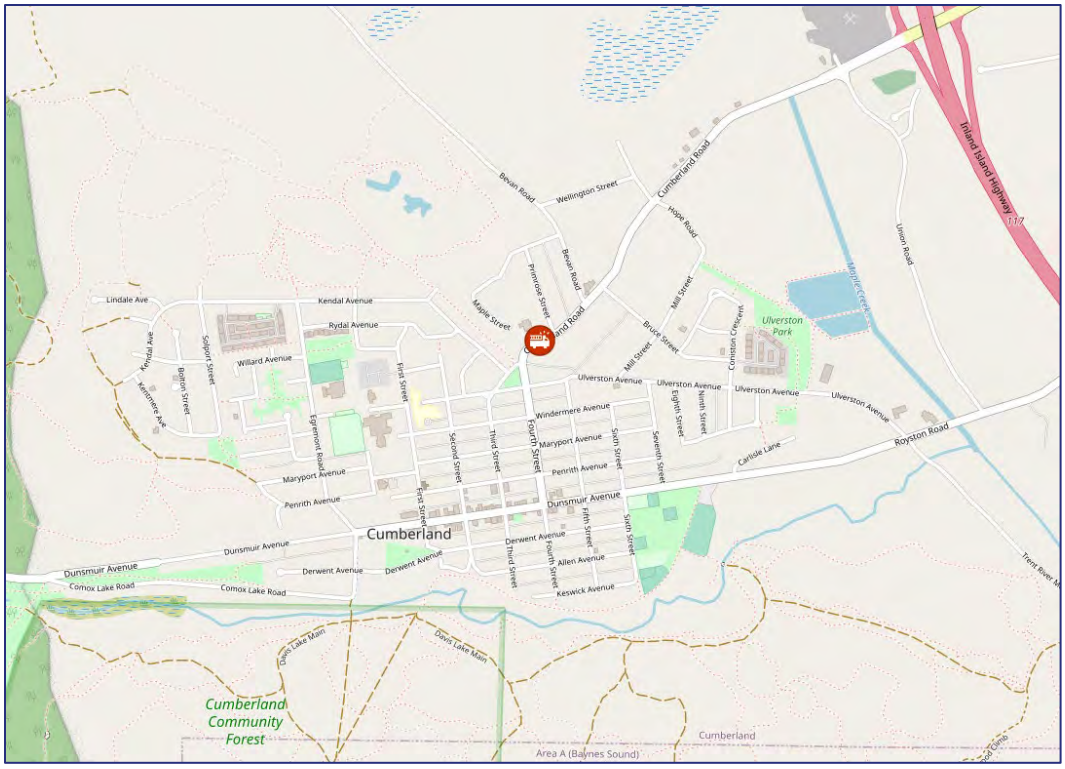

Figure 3: Cumberland Fire Hall: Village Core Area.

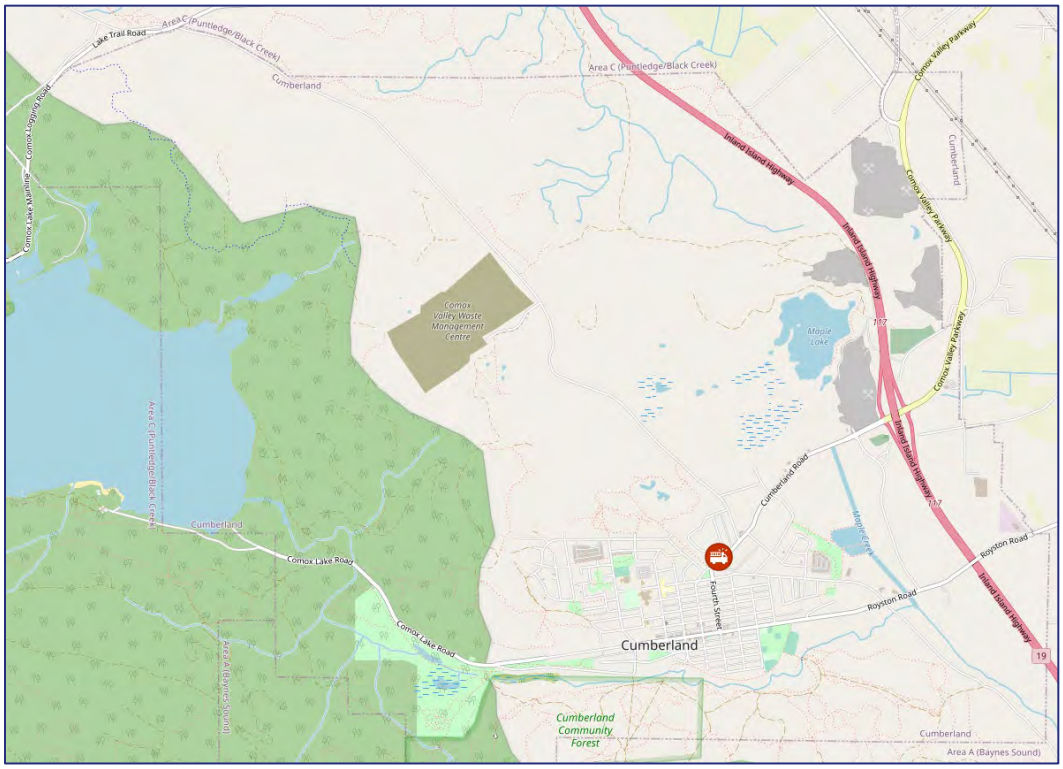

Figure 4: Cumberland Fire Hall: Village Limits.

The fire hall layout is well thought out with sufficient space for apparatus and small equipment including a well ventilated storage room for personal protective equipment (see Figure 5 below), offices as well as showers and change facilities. The hall contains space for training and equipment maintenance. It has a standby uninterruptable power supply and space at the back of the fire hall to provide additional training props. There is also space that would be suitable for the Village's Emergency Operations Centre (the "EOC"), but it is not designated as such.

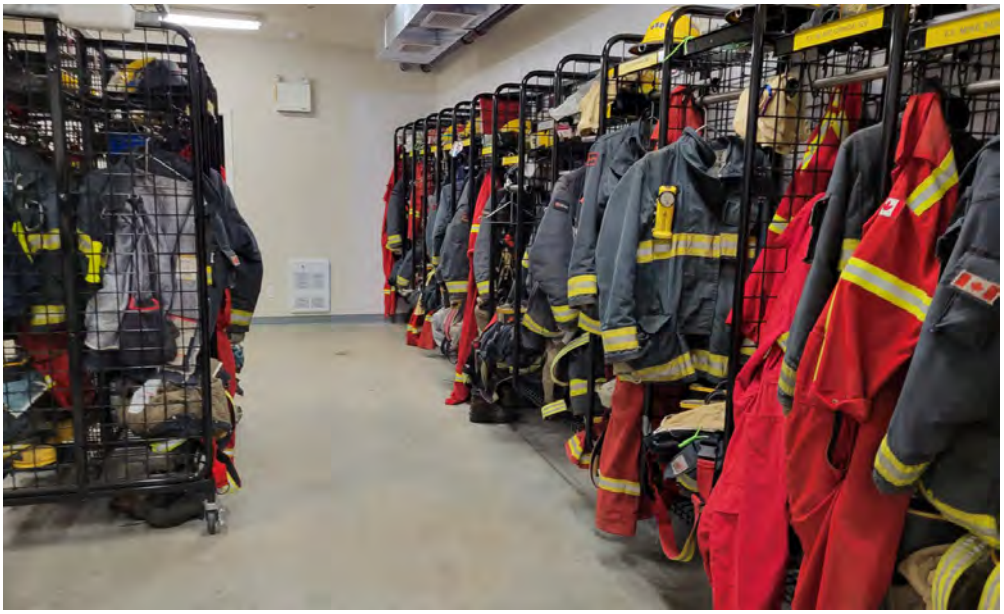

Figure 5: Personal Protective Equipment Vented Storage.

The Department has the following apparatus:

Table 3: Cumberland Apparatus and Equipment

Unit	Manufacturer	Seating	Year Built	Pump Capacity IGPM[74]	Water Tank (Gallons)
Engine 1	Fort Gary	5	2019	1,500	800
Engine 3	Superior	3	2000	1,050	800
Engine 6	Superior	5	1994	1,050	800
Tender 7	International	2	2001	300	2,000
Bush Truck Unit 9	Ford	2	1993		100
Rescue 4	Chevrolet	4	1998		
Unit 9	Tahoe	4	2015		
Unit 8 Fire Boat		2	2021	350	
Structure Protection Unit Trailer					
Environment Protection Trailer					

[74] Imperial Gallons per Minute.

The apparatus are aligned in the fire hall with the first-out apparatus at the front of the three bays; from left to right are Rescue 4, Engine 1 and Engine 3 (Figure 6).

Figure 6: Rescue 4, Engine 1, Engine 3.

The remaining apparatus are placed behind those facing to the rear of the hall and include Engine 6, Tender 7, the Brush Truck, the Fire Boat and the Structure Protection Unit (Figure 7).

Figure 7: Left to Right Engine 6, Tender 7, Brush Truck and Fire Boat, Structure Protection Unit in the Centre.

Significant elements of the existing fleet are aging out, and the Department needs to plan for apparatus replacement. The Fire Underwriters have a general requirement for apparatus to be replaced after a certain number of years as shown in Figure 8 below.[75] For a jurisdiction like Cumberland with a population over 1,000, engines should be replaced after 20 years. These vehicles can be retained as reserve units for up to 30 years based on a successful annual test but their pumping capacity is often not counting in the grading. Engine 6 has aged out under the Fire Underwriters' system, as has Engine 3. Concerns regarding the age of apparatus were noted by a Fire Underwriters' update letter dated 12 October 2018 (the "Update Letter"), which observed that the Department's rating under the "Engine Service" category (FD-1).[76]

Table 1 Service Schedule for Fire Apparatus For Fire Insurance Grading Purposes

Apparatus Age	Major Cities [3]	Medium Sized Cities [4] or Communities Where Risk is Significant	Small Communities [5] and Rural Centres
0 – 15 Years	First Line	First Line	First Line
16 – 20 Years	Reserve	2nd Line	First Line
20 – 25 Years [1]	No Credit in Grading	No Credit in Grading *or* *Reserve* [2]	No Credit in Grading *or* *2nd Line* [2]
26 – 29 Years [1]	No Credit in Grading	No Credit in Grading *or* *Reserve* [2]	No Credit in Grading *or* *Reserve* [2]
30 Years +	No Credit in Grading	No Credit in Grading	No Credit in Grading

[1] All listed fire apparatus 20 years of age and older are required to be service tested by recognized testing agency on an annual basis to be eligible for grading recognition. (NFPA 1071)

[2] Exceptions to age status may be considered in a small to medium sized communities and rural centres conditionally, when apparatus condition is acceptable and apparatus successfully passes required testing.

[3] Major Cities are defined as an incorporated or unincorporated community that has:
- *a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND*
- *a total population of 100,000 or greater.*

[4] Medium Communities are defined as an incorporated or unincorporated community that has:
- *a populated area (or multiple areas) with a density of at least 200 people per square kilometre; AND/OR*
- *a total population of 1,000 or greater.*

[5] Small Communities are defined as an incorporated or unincorporated community that has:
- *no populated areas with densities that exceed 200 people per square kilometre; AND*
- *does not have a total population in excess of 1,000.*

Figure 8: Fire Underwriters' Apparatus Replacement Schedule.

The Department should be planning to replace Engine 3 which is 23 years old. Based on the table shown in Figure 8 this piece of apparatus would already be considered as a reserve unit. One option to provide the greatest flexibility would be the purchase of a single axle Quint as a

[75] Fire Underwriters Survey, Insurance Grading Recognition of Used or Rebuilt Fire Apparatus.pdf, p.2, https://fireunderwriters.ca/Downloads, accessed 28 May 2022.

[76] Update Letter, at p. 4.

replacement for Engine 3. This has been discussed with the Fire Chief and planning for replacement of this capital item should be a priority.

8.1 Recommendations

#8-1: The Department should plan for a replacement for Engine 3, which is now 23 years old, and consider acquiring a single axle Quint as the preferred option.

9.0 Fire Prevention

Fire prevention and public education functions are the responsibility of the Deputy Fire Chief. The majority of the prevention work is focused on the completion of fire inspections with some time spent on preplans and public education activities. There is no formal Fire Prevention program to provide guidance around fire inspections, preplans or investigations or to identify suitable training standards for those activities.

In addition to providing coverage as the duty officer, conducting fire inspections and pre-incident planning, the Deputy Fire Chief's responsibilities include:

- coordination of public education activities;
- fire incident reports;
- fire investigations (and reporting);
- fire safety plans;
- fire permits; and
- burning complaints.

The Fire Chief is responsible to provide supervision and oversight of the Deputy Fire Chief and the bylaw enforcement officer which covers all bylaws, including fire protection.

9.1 Inspections

There is a statutory requirement that a municipal council must provide for a regular system of inspections of hotels and public buildings in the municipality. Bylaw No. 988 establishes a regular system of inspections and mandates the Department meet an inspection frequency based upon the occupancy classification.[77]

Table 4: Prescribed Inspection Frequency of Hotels and Public Buildings

Occupancy*	Group	Minimum Frequency of Regular Inspection
High industrial hazard	F1	6 months
Public assembly	A1, A3, A4	12 months
Institutional	B	12 months
Medium industrial hazard	F2	12 months
Public assembly	A2	24 months
Service industry	D	24 months

[77] Bylaw No. 988, Schedule B

Occupancy*	Group	Minimum Frequency of Regular Inspection
Mercantile	E	24 months
Low industrial hazard	F3	24 months

* Group designations as per the BC Building Code.

The Department has identified approximately 105 properties[78] that require regular inspections, with the majority being inspected annually and a small number being completed on either a six- or 24-month interval. Residential and Fire Smart inspections are provided upon request. During the inspection process, the Deputy Fire Chief also validates the information contained in existing preplans or gathers the necessary information to create new preplans as appropriate.

The Deputy Fire Chief manages the fire inspections and corresponding records using MS Word documents, which are subsequently entered into the FirePro records management system. FirePro is used for most of the Department's records management and it sets up automatic reminders for follow up inspections for outstanding issues. The Deputy Fire Chief has templates that are used for different types of inspections consisting of a combination of checklist and narrative notes. Once in the office, the information that has been gathered is then manually entered into the FirePro system by the Deputy Fire Chief. There is no administrative support for the inspection or preplan-related work.

The Department has not needed to issue any compliance orders in recent years as there has been a high level of cooperation by building owners when issues are identified by the Department for action.

Inspections completed over the past two and a half years are shown in Table 5 below.

Table 5: Inspections Completed

Year	# of Inspections
2020	107
2021	109
2022 (1 January - 31 March only)	27

There currently is no operational guideline or policy to identify a minimum standard of training for fire inspectors.[79]

[78] The actual number of premises fluctuates annually due to the opening/closing of businesses.

[79] As noted in the Regulatory section above, section 5 of Bylaw No. 988 technically incorporates all NFPA standards (which would include training for fire inspectors) but there needs to be clarity around the level of training required and if certification is also required.

9.2 Pre-Incident Planning

The Department is in the process of developing preplans, with 82 of 105 completed. The existing preplans consist of a single page diagram (using Visio software) for each floor of the property which displays the building floorplan identifying the means of egress and locations of key fire protection equipment. Plans are created or validated/updated during the regular fire inspection visits. The Department indicated that it has preplans for most of the properties that would require one.

The current preplans are stored on a tablet in the Fire Chief's vehicle, but that device is not linked into the computer aided dispatch ("CAD") system and cannot be accessed by other officers or dispatch.

The existing content is limited to a diagram showing a floor plan and fire system components, and lacks the content of commonly used preplan templates, such as a site plan, key contact information, hazardous materials on site and a quick action plan. Fire departments use a variety of commercial or department created software to create, access and update preplans. Best practices usually include the use of electronic preplans with storage on a cloud server to enable access by multiple users on mobile platforms (tablets/iPads) and to simplify the updating process. With preplans stored on a single tablet, access for incident commanders is limited and vulnerable to technological failure in the field. It is advisable to have a tablet with preloaded preplans available on each frontline apparatus, to eliminate possible Wi-Fi connectivity issues in the field.

The content of a preplan typically includes a site plan showing the overall property and adjacent property exposures and fire hydrant locations. A floorplan for each level of the building, with key fire protection features noted, such as the fire department connection, sprinkler control valves, utility shut offs and means of egress. Usually there is contact information for the property owners/managers and key holders, along with alarm company contacts. If there are hazardous materials present, then information related to the products, quantities and locations is also included. Many departments also include photographs of the exterior sides of the building and a Quick Action Plan that provides key information to simplify decision making by an arriving incident commander.

The current preplan structure and content are constrained by a lack of staff time to develop more comprehensive preplans and to ensure all buildings that require one are covered. The need for preplans is a requirement for some structures under the Provincial Training Standards and they become increasingly important as the risks in the Village increase, with the planned development of additional multi-story commercial structures, along with the expected construction of large commercial buildings in the industrially zoned area.

There is no operational guideline that provides a framework for the development and maintenance of preplans, so it is recommended that the Department develop a comprehensive operational guideline to outline the overall process, responsibilities and templates for the management of the preplan program. This would provide a uniform approach to ensure the content consistency and a regular update/validation process for existing preplans. As noted, the

preplans should be provided in an electronic format that is readily accessible on the apparatus and through mobile devices, updated from a central server.

The lack of dedicated resources to address pre-incident planning needs will impact any transition to an improved format and the ability to maintain up to date preplans, particularly for contact information and where there are changes in building use or structural alterations.

9.3 Investigations

In a municipality, the fire chief is automatically appointed as the LAFC. In the Village, the Deputy Chief has also been appointed as an LAFC to fulfil roles as the fire inspector and fire investigator. The Department bases its processes on the NFPA standard on fire investigation but, outside of the general adoption of NFPA standards in Bylaw No. 988, has not adopted a specific standard for training investigators. Currently the only formal training provided is the OFC's LAFC online course, which provides a rudimentary overview of the responsibilities of the LAFC appointment. This is not considered a fire investigation course and the OFC does not appear to have provided any direction in this regard.[80]

The Deputy Fire Chief undertakes investigations where possible and within the scope of experience, however in most cases the Department relies upon obtaining the results of the fire insurance company investigation to meet its needs. The Deputy Fire Chief does complete fire investigation reports through the online system to the OFC as required for an LAFC.

There is no specific guidance for fire investigations and it is recommended that an operational guideline be developed to identify fire investigator training requirements, provide suitable direction to guide an investigation process, including reference to the use of personal protective equipment, notification of other agencies and gathering of evidence. The operational guideline should also detail the process required for investigation records management and fire reporting.

9.4 Public Education

The Deputy Fire Chief position is responsible for the overall fire prevention program, including public education. There is no formal public education program or operational guideline related to public education, but there are a series of activities that occur each year that the Department supports where feasible and with the support of the volunteers. These activities include:

- CPR and AED training;
- fire extinguisher training (business employees);
- Fire Smart Program (for residents);
- fire hall tours; and

[80] The OFC/EMBC website notes that the investigation requirement is limited to "Investigating fires in a general way." See: www2.gov.bc.ca/gov/content/safety/emergency-management/fire-safety/lafc (accessed 25 May 2022).

- fund raising and distributing children's books on fire safety, bicycle & skateboarding safety and personal safety.

All public education activities are provided as a secondary duty of career staff and depend on the support of the volunteer firefighters. Consideration could be given to developing an operational guideline to provide a framework for public education priorities and activities. Such a framework would also assist in improving the Department's score in the Fire Prevention section of the Fire Underwriters' survey.

9.5 Recommendations

#9-1: Develop a new operational guideline to address the fire prevention program structure including identification of the roles and responsibilities of the positions throughout the Department.

#9-2: Develop a new operational guideline to identify the process used to determine and set the frequency of fire inspections.

#9-3: The Department identify a minimum standard of training for fire inspectors.

#9-4: The Department consider use of an electronic fire inspection report using a tablet that can upload data into the Fire Pro system without manual data entry.

#9-5: The Department develop a comprehensive operational guideline to outline the overall process, responsibilities and templates for the management of the preplan program.

#9-6: Identify staff time and administrative support required to create and update preplans. Acquire additional tablets for frontline apparatus access to preplans.

#9-7: Develop an operational guideline to address the responsibilities and processes related to fire investigation and reporting to the OFC and to identify a fire investigator training standard.

#9-8: Consider development of an operational guideline to identify an overall public education program, its priorities and guidance for activities.

10.0 Operating Guidelines

The use of standard OGs is a best practice for fire departments. Under the WCA and Regulations, WorkSafe BC requires employers provide written directions for principal tasks. Under Part 31 of the OH&S Regulations, there are requirements that fire departments have specific operational guidelines dealing with certain matters identified in that Part. The updating and maintenance of OGs is, in our experience, a challenge for all fire departments.

It appears that the Department has utilized as an OG template a set borrowed from the Pender Harbour Volunteer Fire Department (which in turn had borrowed its set from the Columbia Shuswap Regional District) and adapted it for Cumberland. There are a number of instances where the conversion has been incomplete, and material not relevant to the Department has been retained. These issues have been noted for review in a separate spreadsheet that has been provided to the Department. In general terms, the Department's OGs were reviewed to confirm the existence of the requisite elements and that the subject titles are consistent with the content of each guideline. However, we did not undertake a detailed review of the content of each OG to ensure it was accurate and correct, as this was outside the scope of our review. As part of the detailed analysis of the Department's operations and administration, any identified issues or gaps related to the existing OGs or suggestions for improvements to the content of specific OGs, are addressed in the corresponding sections of this report.

Overall, the OGs are well structured and there is a clear table of contents provided. The OG structure consists of five sections: Occupational Health and Safety, Operations, Training, Inspections & Maintenance and Administration. Each section contains a variable number of sub-sections which in turn have one or more individual OG documents as outlined in Table 6.

There is a section 6 that is listed as "Organizational Structure" however the content of the OGs in this section is not applicable to Department and should be removed.

Table 6: Operating Guidelines Structure

Section	Number of Sub-Sections	Number of OGs
1	0	5
2	5	36
3	0	5
4	2	12
5	5	33
6	0	0
Total	12	91

There are three appendices that provide additional information that is referenced in some individual OGs. The appendices are:

A. Occupational Health & Safety Program;

B. Respiratory Protection Program; and

C. Fire Apparatus Driver Training Program.

The individual guidelines contain all of the elements commonly found in fire department OGs and includes five main sections: Purpose, Personnel (Scope), Policy, Procedure and References. The overall OG format contains information such as the OG section number and title but lacks page numbering. The footer section has fields for the approval and revision dates, the name of the OG being replaced and the signature of the Fire Chief approving the OG.

In most of the OGs, the required footer content has not been completed – e.g., approval date and name of person approving it. In the References section, a number of the OGs contain only a short title and lack sufficiently specific information to able a reader or user to locate the relevant material - for example: OG 2.3.5 Structure Fires – reference: “BC Hydro”.

There are OGs that identify response procedures for specialized types of rescue such as Confined Space, Trench, Water and Ice rescues. These are not specialty services that the Department provides, and the content of the OGs appears to be a carry over from the OG template from Pender Harbour VFD. Consideration should be given to reviewing these OGs to ensure their content reflects (and properly guides) the level of Department response given the lack of specialized training in these areas.

10.1 Recommendations

#10-1: A review of the OGs should be undertaken to address the issues identified in this report and the detailed OG feedback document.

#10-2: Provide electronic access to OGs for all firefighters and incorporate links to any external documents that are referenced in the OGs. Referenced documents should include information to link to the specific sections of the reference document that are relevant to the OG subject matter.

#10-3: Consider adding an OG to identify and provide guidance around the provision of specialized rescue services, including the identification of training requirements.

#10-4: Identify municipal policies that impact Department personnel and provide (or amend existing) OGs to incorporate them (e.g. Violence in the Workplace, Bullying and Harassment).

#10-5: The Department review, validate and update all OGs to ensure their currency and accuracy. In addition, the Department should establish a process for regularly reviewing and updating the OGs. The reviews should be documented and recorded, along with any updates.

11.0 Training and Qualifications

The fire service has made significant changes over the past decade, particularly in the area of regulations and standards related to the management and administration of the service (such as the increased requirement for record keeping). Notwithstanding those improvements, the key to ensuring effective emergency ground operations, and the safety of firefighters and members of the public, continues to be effective and comprehensive training. Each operational member of a fire department must have the appropriate level and types of training to fulfil the roles and tasks he or she will be assigned at an emergency incident. To enable the Department to manage its obligations effectively, it is vital to ensure that all firefighters are trained to the appropriate level for the operations that they undertake. Appropriate training will improve firefighter safety and effectiveness, and limit liability concerns for both the Department and the Village.

The need for training needs to be examined in light of the risks faced by fire service personnel. The nature of modern construction techniques has amplified the risks faced by firefighters and the public. Lightweight construction components and contents made of composites, synthetics and other unusual fuels, cause fires to get hotter faster and with less predictability, creating a much more volatile fire environment than that of the past. Although firefighters are now better equipped, fires today pose a greater risk than those faced in the 1970s and 1980s.

Aggressive interior operations such as fire attacks and primary searches require firefighters to enter a hazardous environment, dramatically increasing the potential for adverse fire events such as flashover, smoke explosion, or backdraft, along with exposure to a variety of other perils, thereby posing the most significant risk to firefighters involved in fire ground operations. A line of duty death or serious injury is a risk that all fire departments must seek to avoid. In the event of a serious injury or line of duty death, the impact on the individuals involved, their families and the department can be severe and long lasting. There is also a significant potential for liability for the Department, its officers, and the Village.

As a result, the fire service is increasingly focused on issues that affect firefighter safety, including the need to effectively manage and control interior operations, as departments seek to mitigate the risks to which firefighters are exposed. One of the primary ways to improve firefighter safety is to increase the level of comprehensive emergency incident management training – the knowledge and various skills required to perform a variety of supervisory functions safely and effectively at emergency incidents.

Many fire departments also provide other emergency response services, in addition to fire suppression, such as medical responses, vehicle extrication and rescue, high and low angle rescue, confined space rescue, hazardous materials responses, and other specialty services. Each of these service specialities, however, requires proper training for the firefighters involved, and appropriate incident scene management training for the officers. The time and costs involved in achieving both the initial qualifications required to deliver the service and then manage the on-going maintenance training necessary to keep the skills current, can prove challenging.

This issue of appropriate training levels also needs to be considered in the context of WorkSafe BC requirements and the obligation of employers to ensure that their workers are properly trained for their duties and supervised while performing them. An employer that fails to train and supervise its employees properly is in breach of the *Workers Compensation Act* (B.C.). The goal, therefore, should always be to maximize training for all firefighters, and to limit their fire ground operations to those tasks for which they have been properly trained. To put it another way: firefighters should NEVER be permitted to exceed their training.

11.1 Applicable Standards

Under the *Fire Services Act*, the Fire Commissioner is responsible for issuing training standards for "fire services personnel" in the province.[81] The Playbook, a major new set of Provincial Training Standards, was issued in 2014, and then updated and revised in a second edition in May 2015. A third edition of such standards, which will be broader in scope, updated to the current NFPA requirements, and renamed, is being actively developed at the time of the writing of this report and expected to be published sometime late in 2022.

The current version of the Playbook contemplates that a fire department may deliver one of three possible levels of service, and establishes the principal minimum training required to qualify for each level of service:

> **Exterior Operations** – includes fire fighting activities restricted to the control and/or extinguishment of fire from an external position to the building or object; where a fire department does not undertake interior attack or rescue operations on a fire-involved structure or object or operate in an environment that is "immediately dangerous to life and health".
>
> **Interior Operations** – where a fire department, in appropriate circumstances, will enter a fire-involved structure or object to undertake fire suppression activities or conduct rescue operations. Interior operations by these departments are generally to be limited to smaller structures, single family dwellings and vehicles, except where specific hazard assessments and planning have been undertaken in respect of more complex risks.
>
> **Full-Service Operations** – a full-service department is equipped, staffed, and trained to provide a full spectrum of fire services by firefighters and fire officers that are trained to the competencies outlined in the NFPA 1001 FF-II and relevant NFPA 1021 Fire Officer standards; and that such activities are based on response protocols which include appropriate staffing levels, and number and type of apparatus on scene.

The Playbook establishes an explicit requirement for the "Authority Having Jurisdiction" (the "AHJ") over a fire department to expressly set the level of service that is expected to be

[81] *Fire Services Act*, s. 3(3)(b). This power and obligation are continued in the new *Fire Safety Act*. The term fire services personnel is defined in the *Fire Services Act*: it covers essentially all fire departments undertaking structure firefighting, but excludes fire suppression operations undertaken by Wildfire Management Branch under the *Wildfire Act* (B.C.).

provided by its fire department. The training, organization, staffing, equipment, and apparatus required to support the chosen level of service will all be impacted by that determination.

The Playbook was implemented to establish a foundational training standard for structure firefighting with the intent to expand the scope of the training standard in consultation with the fire service. The third edition is aiming to further broaden the scope and coverage of the standards. Although the Playbook is based upon competencies drawn from the NFPA standards, one challenge is the question of what standards apply to matters that it does not explicitly cover. While the previous Minister's Order on training required departments to meet all NFPA standards, the Playbook does not specify the standards expected to apply to other functions,[82] leaving some ambiguity as to the standards applicable for a wide range of firefighter training.

Given the requirements of the *Workers Compensation Act*, which imposes a positive obligation on employers to train workers appropriately, and given that the only recognized standards that exist in North America for the training of fire services personnel are those established by the NFPA, the better approach is to assume that those standards remain as an "industry best practice" to guide all aspects of the Department's operations. Should a local government choose to adopt a different standard (or no standard at all) in relation to the training applicable to other fire service functions, if there is a serious accident or line of duty death which relates back to training issues (as occurred in the Clearwater case[83]), the local government in question will be faced with the unenviable task of justifying the approach that it has taken in circumstances where there is clear evidence of a problem.

As such, when formally implementing the service level standard for the Department, it is recommended that the Village also identify that the NFPA standards form the basis of all training for the operational functions undertaken and emergency services provided by the Department. It is then the responsibility of the incident commander to ensure that firefighters are tasked only with those functions (and situations) for which they have been trained.

The Playbook also establishes minimum standards for individuals providing training. The second edition clarified that no third-party certification is required for in-house trainers. Rather, they must be "qualified" in the subjects or areas they are teaching. That means that they must have already met the requirements for the competency they are teaching, which is achieved when they have been suitably evaluated so as to demonstrate they meet the requirements of the given standard.

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[82] The second edition of the Playbook did not entirely clarify the matter, though it even more clearly suggests that the appropriate standards applicable to matters not yet covered, are those set by the NFPA. The previous Minister's Order on training - MO-368 (December 2002) – incorporated by reference all NFPA standards.

[83] The death of fire fighter Chad Schapansky in Clearwater, BC in 2004 which resulted in a Coroner's report "Judgement of Inquiry into the Death of Chad Jerry Schapansky". This report found that the Clearwater fire department lacked written operational guidelines governing interior attacks; it could also produce no training records for accredited training done by the interior attack team, rapid intervention team or fire officers in charge. The Coroner's findings are discussed in greater detail in section 11.11.

Another critical requirement in the Playbook is that fire departments maintain accurate and current individualized records of each member's training and qualifications, which show compliance with the minimum and other applicable training standards:[84]

> Assessments and evaluations of Competencies can be carried out internally by the AHJ so long as the evaluation instruments follow the criteria of this Playbook (and other applicable NFPA Standards) and that detailed records of firefighter training and evaluation are maintained. […]
>
> It is the responsibility of all fire departments/AHJs to be able to accurately identify record, edit, and report out on a complete list of training records for each individual firefighter including specific training subjects covered at each training session. All training records must be kept in accordance with the requirements of the *Workers Compensation Act* (B.C.) and related regulations, and any other regulatory requirements.

This section of the report will examine the Department's training processes in the context of its operational requirements, declared service level and the associated standards, along with a review of the training facilities, the current levels of qualifications, and the Department's training and evaluation processes, and the training records.

The Consultants attended a site visit/meeting with the Fire Chief and DC/TO on 9 March 2022. During this meeting, various aspects of the Department were reviewed, including the Department's training and training records as an opportunity to learn more about the current state of training and operational readiness. As a part of the site visit, the Consultants toured the community to better appreciate the nature of the Department's operational environment and reviewed the training area and facilities.

This section of the report references various NFPA training and related standards. A list of those standards can be found in Appendix 3.

11.2 Service Levels and Applicable Standards

The Village is the AHJ in relation to the Department, and the service level that has been authorized by Council is "Full-Service Operations". A full-service department is required to be equipped, staffed, and trained to provide a full spectrum of fire services by its firefighters and fire officers. Firefighters must meet the competencies outlined in the NFPA 1001 FF-II and fire officers must meet the relevant NFPA 1021 Fire Officer I standards.

Full-service departments are also required to have and to use written operational guidelines that describe advanced training in fire ground operations activities.

[84] Playbook, pp. 4 and 6. The Playbook's requirements are drawn from and reflect the records keeping requirements established under the *Workers Compensation Act* and regulations.

Services currently provided by the Department:

Basic Firefighter/Fire Suppression:

- Firefighter
- Team Leader/Company Officer
- Emergency Vehicle Driver/Operator (EVD/EVO)
- Rapid Intervention Team (RIT)

Specialty Firefighter Skills:

- Emergency Medical Service
- Technical Rescue Responses:
    - Passenger Vehicle Rescue/Extrication
    - Low Angle Rescue
- Wildland/Urban Interface

A full-service department is required to be organized such that its suppression activities are based on response protocols that include appropriate staffing levels, as well as number and type of apparatus on scene for the services that they provide.

For a volunteer and/or composite fire department, the NFPA 1720 standard states that the minimum number of firefighters required to respond to any single-family structure fire (low-medium hazard) in an urban area is fifteen personnel within 9 minutes 90% of the time, and in a suburban area is ten personnel within 10 minutes 80% of the time. There are no specific staffing recommendations for other incident types. As such, consideration needs to be given to the recommended staffing levels for other incident types as set out in NFPA 1710.[85]

- Ordinary, residential structure fire: minimum staffing of 15 – 17;
- 3-storey apartment building: minimum staffing of 21 – 22;
- Open-air strip shopping mall: minimum staffing of 25 – 26; and
- High-rise (more than 6 storeys):[86] minimum staffing of 35 – 36.

[85] These requirements are drawn from the 2020 version of NFPA 1710, ss. 5.2.4.1 (Single-Family Dwelling Initial Full Alarm Assignment Capability); s. 5.2.4.2 (Open-Air Strip Shopping Center Initial Full Alarm Assignment Capability); s. 5.2.4.3 (Apartment Initial Full Alarm Assignment Capability); and s. 5.2.4.4 (High-Rise Initial Full Alarm Assignment Capability).

[86] Cumberland does not currently have any high-rise buildings.

Based on the information provided, it appears that the average daytime call attendance is approximately 10 members, with most additional members arriving well after the ten-minute time frame. In addition, given the requirements of WorkSafe BC regarding entry into fire-involved structures,[87] a Rapid Intervention Team ("RIT") must be established within 10 minutes of the first team's entry, or before a second team can make entry. As such, to conduct interior operations for more than 10 minutes, a RIT will be required, and therefore, all personnel engaged in interior operations must also meet the competencies required for RIT as identified in the Interior Operations section of the Playbook.[88]

At the time of the site visit in April 2022, the Department's operational staffing model included two full-time members on day-shift hours Monday to Friday (the Fire Chief, Deputy Chief), along with a volunteer contingent of approximately 25 additional members. Given that the majority of members are paid-on-call, this often results in fewer members turning out during day-time hours Monday to Friday when most members are at their place of employment. As a result, the potential response time for 15-16 personnel to arrive at a reported residential structure fire is likely to be greater than 10 minutes. As such the Department will most often not be able to meet these response objectives and RIT requirements with its own personnel. The Department relies on mutual aid with its neighbours. Barring concurrent events which make the resources of the mutual aid departments unavailable, the additional required companies will most likely come from these departments for a structure fire.

The applicable standards and associated requirements for training and development of Department members should include the following:

- The Playbook (which encompasses a range of NFPA standards in addition to those set out below);
- NFPA 1001 – Firefighter Level I & II (NFPA 1001 – FFII (except hazmat and medical response) is required for a full-service operations department);[89]
- NFPA 1002 – Emergency Vehicle Driver and Operator (EVD and EVO);
- NFPA 1021 – Fire Officer Level I, II, III or IV (as per Department's job descriptions; note that a full-service operations department must train its officers at least to NFPA 1021 FO-I);[90]
- NFPA 1521 – Incident Safety Officer;

[87] OH&S Regulation, s. 31.23

[88] The training requirements for member of a RIT include those of an Interior Operations firefighter, plus various competencies in *NFPA 1407 - Standard for Training Fire Service Rapid Intervention Crews*.

[89] Playbook, at p. 16.

[90] Playbook, at p. 16.

- NFPA 1041 – Fire Service Instructor I or II (as per Department's job descriptions. Note that the training officer in a full-service operations department must be trained at least to an NFPA 1041 FSI – 1 level or higher);[91] and

- EMS – FMR Level III.

The Department currently meets these requirements for firefighter and fire officer training with all Company Officers qualified at the NFPA 1021 Fire Officer I (FO-I) level or higher, and the majority of the Firefighters qualified at the NFPA 1001 level. In addition, the Department also meets industry standards for EMS training. The Department's training of its members for their fundamental roles measures up very well against other, similar departments that we have reviewed.

The NFPA training standards for various specialty services typically contemplate three levels of competency: awareness, operations, and technician. The higher levels are more costly to attain and maintain, as they require more training. For specialty responses to other hazards, the following training levels are suggested, given the Department's operational environment:

- NFPA 1006 – Technical Rescue:
    - Passenger Vehicle Rescue/Extrication – operations level;
    - Low Angle Rescue;
- Wildland/Urban Interface – WSPP-WFF1 and WSPP-115.[92]

11.3 Department Training

The Deputy Chief fulfills the Training Officer role, supported by an Assistant Chief, the four Captains and four Lieutenants, who assist with the weekly practice sessions.

The DC/TO is responsible for the planning and overall management of the Department's training portfolios. The DC/TO is also responsible for determining the Department's training needs, developing training programs, planning, organizing, and directing training activities, and evaluating for continuity of training throughout the membership. In addition to scheduling training, the DC/TO is also responsible for conducting some aspects of training and for maintaining the Department's training records. The Assistant Chief primarily supports the Deputy Chief with respect to training administration. The company officers are responsible for delivering training to the firefighters.

The required training levels are primarily determined by the Department's declared service level, and its response requirements within the community. The nature of these services will determine the level of qualification to be achieved, the associated training programs required,

[91] Playbook, at p. 11/20

[92] WSPP-WFF1 – Basic Wildland Firefighter (formerly S100 & S185), WSPP-115 – Interface Structural Protection for Structural FFs (formerly S215).

and the manner in which these competencies will need to be maintained. Given that the Department is operating at the full-service operations level, and that it provides a range of additional specialty services, the Department's OGs need both to address the required emergency scene operational activities with such service level in mind, and tie into the training processes and related NFPA standards required for responding members and officers. Upon a review of the Department's OGs, not all operational requirements and the associated training processes are addressed. Appendix C to the OGs has information related to Fire Apparatus Driver Training and certification, however it is taken from another fire department and it does not accurately reflect the Department's training requirements. This appendix along with the guidelines in OG section 3 (Training) should be reviewed and updated.

The Department has mutual aid agreements with various neighbouring departments, and reports that all are using a similar accountability system; however, there is limited collaborative or joint training currently taking place. These departments are required to work together at major incidents and this type of training is critical for ensuring effective operations and personnel safety.

11.4 Training Facilities

A new fire hall was recently built which includes a large adjacent outdoor area for firefighter training. It has a hydrant for water supply, gas connections for live fire props and a vehicle extrication training pad, but the site has not yet been fully equipped. The space is available to the Department pending its full buildout.

The Department often utilizes nearby commercial buildings to conduct ladder drills and low traffic areas for any larger training exercises, with most training using the fire hall apparatus bays or outside training area.

The training classroom in the fire hall is adequate in size and has appropriate IT systems in place. Live fire training and other training courses are undertaken at the Comox Fire Rescue training centre.

11.5 Current Levels of Qualification

The Department's required qualifications for each of the following roles, and the qualifications of the incumbents, are set out in Table 7 below.

Table 7: Department Member Roles and Qualifications

Position(s)	Required Qualifications	Current Qualifications of Incumbent(s)
Chief Officers		
Fire Chief	• Diploma in Fire Service Leadership (or equivalent or combination of education/experience) • NFPA 1001 FF level 2 • Fire Service trainer/instructor certification • Emergency Scene Management Training • Class 5 with air endorsement	Meets all requirements
Deputy Chief/Training Officer	• NFPA 1001 FF level 2 • NFPA 1021 FO-II • ICS 200 • EOC 200 • Incident Safety Officer • S-100 (or equivalent) • Fire Service trainer/instructor certification • Class 5 with air endorsement	Meets all requirements
Assistant Chief	• FF for minimum of three years • NFPA 1001 FF level 2 • NFPA 1021 FO-I • NFPA 1041 FSI-I • ICS 200 • Incident Safety Officer • S-100 or equivalent -all officers	Meets all requirements
Company Officers		
Captains (4)	• FF for minimum of three years • NFPA 1001 FF level 2 • NFPA 1021 FO-I • NFPA 1041 FSI-I • ICS 200 • Incident Safety Officer • S-100 or equivalent -all officers	• All 4 Captains meet all the points. • Exception: 1 working on completing FO-I

Position(s)	Required Qualifications	Current Qualifications of Incumbent(s)
Lieutenants (4)	• FF for minimum of three years • NFPA 1001 FF level 2 • NFPA 1021 FO-I • NFPA 1041 FSI-1 • ICS 200 • Incident Safety Officer • SPP 115 – all officers	• All 4 Lieutenants meet all the points. • Exception: 1 working on completing FO-I
Firefighters		
Firefighters	• During the Probationary period: o Playbook Exterior Firefighter Level o Complete BC EMA FMR-III & CPR • Within 2 Years: o Playbook Full Service Firefighter Level (NFPA 1001 level 1) • ICS 100 • SPP WFF1	• 5 recruits in progress • 20 FF's have met Full-Service level • 25 have met • 25 have met

11.6 Training and Evaluation Processes

The Department seeks to meet the proficiency requirements of the applicable NFPA standards for substantially all operational skills. Where possible, these qualifications are achieved through weekly delivery of the initial training, as well as the maintenance of those competencies and skills through the subsequent weekly training night processes. The issue of maintenance training is considered in greater detail, below.

The Consultants did not witness actual operational training of Department members. As such, the following observations and comments are based on the various interviews and discussions held with the Fire Chief and DC/TO as an indicator of the level of operational readiness of the Department to carry out its mandated emergency response activities.

The DC/TO retired in March 2022 and the incoming Deputy Chief joined the Department in June 2022. Training has been adversely affected by the restrictions accompanying the pandemic and as a result, the training schedule has been somewhat fluid over the past 18 months with very limited in-person group training.

In past normal training cycles, the DC/TO provided lesson plans to the platoon officers with a schedule of training topics, however the approach was not successful. As a result, the DC/TO moved to providing weekly training topics to the company officers and tracking the delivery to meet the annual maintenance and refresher training needs. The DC/TO indicated that all

firefighters are receiving the necessary training, however the training reports do not capture sufficient training details in order to create comprehensive, individualized training records for each member.

The existing training approach attempts to anticipate the various training needs, which are then scheduled on a weekly basis. As such, the Company Officers are provided the training topic a week in advance and they are required to plan and prepare the training session and resources. Some lesson plans are available if the Company Officer choose to utilize them. Maintaining and/or increasing the level of proficiency in any area of service delivery is challenging, as the Department relies principally on its weekly training nights for all of its (qualified but not accredited) training requirements.

For all of its training, whether provided in-house or by external third parties, the Department needs to ensure that members are formally evaluated against the relevant standard, and the results of such evaluation consistently recorded on an individual basis. The Department has some evaluation checklists and scoring sheets that are somewhat dated (2009) and these should be reviewed to ensure all evaluation sheets meet the current applicable Playbook and NFPA standards.

As noted above, the determination of required training levels is based on the Department's declared service level and response requirements. The current training levels for the services provided by the Department are set out below.[93]

11.7 Firefighter/Fire Suppression Training

Basic Fire Suppression:

As a Full-Service Operations level department, currently all new recruits/members are trained through an in-house program to meet the NFPA 1001 Firefighter II standard, which includes hazardous materials at the operations level. As such, the Department meets the requirements for a Full-Service Operations department as established by the Playbook. This fundamental fire suppression training includes all firefighters completing Live Fire level 1 and 2 initially, followed by annual Live Fire refresher training at the Comox Fire Training Centre to maintain the associated fire ground skills.

Emergency Vehicle Driver/Operator (EVD/EVO):

The Department has developed a training program for its apparatus driver-operators. This program is conducted in-house, training the members in the basic skills required to meet the NFPA 1002 standard. The training is not externally accredited, but meets Playbook requirements provided that the trainers are themselves qualified.

[93] For most specialty services (e.g., Hazmat), the NFPA standards have three qualification levels: "Awareness," "Operations," and "Technician" (in ascending order or level of required training).

Rapid Intervention Team (RIT):

This training is provided at the Comox Fire Training Centre and meets the requirements of the NFPA 1407 standard (and the Playbook requirements), however it is not externally accredited.

Team Leader Role:

The majority of the competencies in the Playbook for this role are derived from the NFPA 1021 FO-I requirements. As such, three Captains and three Lieutenants meet these requirements as they are qualified at the FO-I level or higher, with the remaining two company officers being close to completion of their FO-I. In addition, there are several firefighters who also meet these requirements as they too are qualified at the FO-I level. As such, the Department has sufficient members available to meet the requirements of the Team Leader role as required by the Playbook. It should also be noted that the Playbook indicates that a fully qualified firefighter in a Full-Service department is essentially deemed to meet the Team Leader requirements.[94] However, care should be taken when assigning such roles to firefighters, to ensure that they have the necessary training and qualifications for the supervision they reasonably are expected to provide.

11.8 Specialty Firefighter Skills Training

In addition to the basic fire suppression/firefighter skills, the Department also provides its members with several required and/or specialty operational competencies or skills:

Emergency Medical Service:

All members are trained to the FMR-III level with spinal and AED endorsements. The FMR training is provided through three in-house instructors and evaluated through an externally contracted evaluator.

Technical Rescue Responses:

Vehicle Rescue/Extrication:

The DC/TO indicates that all members are trained and operate to the Operations level through an in-house training program and evaluation process. The intent is to meet and exceed the requirements of the NFPA 1006 standard. The Department has excelled in this area of training, having successfully competed at the national and international level. However, there are no formal assessments or records to qualify most of these members at these levels.

Low Angle Rescue:

The department provides some training for this specialty but there is no qualification or certified training.

[94] See: Playbook, p. 5/20.

Wildland/Urban Interface:

All members have received the basic WSPP WFF-1 training, with all officers receiving the WSPP 115 training.

Note that Wildfire BC has recently made changes to the available training programs for structural firefighters. The new programs WSPP-WFF1 – Basic Wildland Firefighter (formerly S100 & S185), and WSPP-115 – Interface Structural Protection for Structural FFs (formerly S215).

11.9 Company Officer Training

The Department has set NFPA 1021 as a minimum standard for their Company Officers, with completion of FO-I required for the rank of Captain and Lieutenant. Officer and firefighter training should also be supplemented by live fire training, as well as an appropriate level of emergency incident management ("EIM") training to ensure the Department has sufficient qualified individuals who can fill the role of incident commander.

The Department's approach to its officer training is commendable and is designed to ensure that officers have the skills and qualifications to fulfil their roles. Aside from one Captain and one Lieutenant that are nearing completion, all Captains and Lieutenants meet the required Playbook qualifications having completed FO-I, with some of these officers having also completed FO-II, and currently there are nine firefighters who also meet the requirements of FO-I.

The department offers all officers the opportunity to complete FO-I and FO-II for NFPA 1021, much of which has been conducted through on-line processes rather than classroom instruction (arising from the pandemic). Members of the department can also attend in-person training within the CVRD.

Another consideration in the development of the Captains and Lieutenants as Company Officers is the need to ensure that the Incident Safety Officer ("ISO") role can be filled. At this time, all Chief Officers, and Company Officers have the ISO qualification, along with two firefighters.

Chief Officer Training

The Fire Chief has extensive fire service experience, previously fulfilling the role of Deputy Chief, as well as having completed FO-II.

The Chief Officers are expected to be "operational" in that they may choose to take on the Command Function (IC) at any given emergency incident. As such, the Fire Chief is qualified at the FO-III level, as well as for ISO and ICS-300.

Fire Prevention Officer

The Deputy Fire Chief position performs the role of fire prevention officer including fire and life safety inspections, fire investigations, plan review, fire and safety public education and business

inspections. The former Deputy Fire Chief had a variety of training courses but was not formally trained to the NFPA 1031 or 1033 standards.

When the new *Fire Safety Act* comes into effect, there will be accompanying regulations relating to the minimum training required for fire safety inspections and fire investigations. Based on our understanding of what those requirements are likely to be, the Deputy Fire Chief's qualifications may need to be updated.

11.10 Maintenance Training

Historically, the training and development of new skills, and the maintenance of these competencies, has been a priority for the Department; however, with added skills requirements this becomes increasingly difficult with only one training night (2 hours) per week. Generally, initial and maintenance training is accomplished with these weekly training sessions, along with some additional training on other evenings and weekends. These sessions are well supported, although with the Covid restrictions of the past 18 months, and the lack of appropriate training props, and equipment, the operational maintenance training has declined and is proving more difficult to achieve.

The DC/TO notes that maintenance training for most of the services provided has been achieved to the level he considers adequate. The training plan and training records need to be improved in some areas.

In this regard, the Playbook expressly requires on-going skills maintenance, noting that:[95]

> "the maintenance training for such competencies is the responsibility of the AHJ and it is expected that this will be accomplished through ongoing skills maintenance training and education. This ongoing training must be duly recorded for each firefighter and officer."

The issue of maintaining members operational skills for volunteer/POC departments in the fire service is progressively becoming a common problem with increased requirements in the services provided, the associated number of skills involved, and the frequency with which these need to be maintained as it requires a much greater time commitment from these volunteer members.

11.10.1 Firefighter/Fire Suppression Maintenance Training

The Department's approach to maintenance training for fundamental fire suppression skills and qualifications is set out below, along with any challenges that were identified during the review. All maintenance training needs to include formal evaluation processes, with each member's results being maintained in an individualized record.

[95] Playbook, section 7, "Maintenance Training" at p. 7.

Basic Fire Suppression:

The Department has worked to ensure the consistent maintenance of the firefighter skills under the NFPA 1001 and related standards however the annual training plan and monthly training remains informal. The program would benefit from the development of a skills maintenance training plan using an objective based approach for the Company Officers that deliver most of this type of training. In the future, the addition of new training ground props would better enable this fundamental maintenance training.

Live Fire:

In the past, the Department has conducted live fire maintenance training at the Comox Fire Rescue Training Facility. Typically, these training exercises have been conducted by the Comox Fire instructors and some of the Department's in-house instructors, and occasionally some joint training with other departments and their instructors. It is difficult to conduct these exercises for all firefighters on an annual basis, due to the required time commitment. Given the potential risks associated with live fire training, the Department needs to continue to ensure that all instructors and evaluators are properly qualified to deliver such training.

Emergency Vehicle Driver/Operator:

As noted above, this program is conducted in-house to meet the requirements of the NFPA 1002 standard. As with a number of other skills, due to time constraints, these skills are not often revisited or re-evaluated.

Team Leader and Incident Command Roles:

The majority of the competencies for the Team Leader role are derived from the NFPA 1021 – FO-I requirements, and, for a Full-Service department, all NFPA 1001 – FF-II qualified members are considered as meeting the Team Leader requirements, but only for specific tactical assignments for which they have been deemed qualified. These Playbook requirements, however, are the minimum, and do not fully cover all incident command functions.

Rapid Intervention Team (RIT):

RIT maintenance training is conducted mostly at the Comox Fire Training Facility with some in-house training sessions.

11.10.2 Specialty Services Maintenance Training

In terms of specialty skills maintenance training, the general feedback from our interview process was that the competencies and skills in a number of these areas have been well maintained.

Emergency Medical Service:

The members undertake periodic in-house refresher/maintenance training and re-certification as required by the provincial Emergency Medical Assistants Licensing Board.

Technical Rescue Responses:

For the following technical rescue skills, note that s.1.2.6 of NFPA 1006 requires technical rescue personnel to remain current with the general knowledge, skills, and JPRs addressed for each level or position of qualification. Technical rescue personnel are required to remain current with technical rescue practices and applicable standards and to demonstrate competency on an annual basis.

Vehicle Rescue/Extrication:

All members are qualified at the Operations level, with the maintenance of these skills addressed through evening training sessions involving limited evaluation processes and documentation. Given the lack of formal assessments or records it is difficult to confirm that the members skills have been maintained to the Operations level. However, the understanding of the high level of training is supported by the ongoing success in vehicle extrication competitions at the national and international levels.

Low Angle Rope Rescue:

This service is currently provided, and most members are trained in this competency and some maintenance training is conducted. The limited nature of the training records makes it difficult to verify the members level of maintenance training.

Wildland/Urban Interface:

All members have received the basic WSPP WFF-1, with officers having the WSPP 115 training. The Department does some maintenance training and it participates in regular wildland fire exercises that are supported by the CVRD. The maintenance training, including exercise participation should be captured in the training records system.

The Department recognizes that maintenance of specialty skills is a significant challenge, and that some of them have not been adequately maintained. Although members have achieved the necessary qualifications in several specialty rescue areas, such as vehicle rescue or low angle rescue, their skills and qualifications require regular refreshing and the training needs to be recorded in the individual firefighter training records. Part of the problem is the interrelated issues of time and cost as noted above.

11.10.3 Company Officer Maintenance Training

Maintenance training for the Company Officers, Captains and Lieutenants, has not generally been conducted in the past. Day-to-day administrative and supervisory skills, along with advanced EIM training and/or refresher seminars, have not been conducted. As such, one area where further attention should be placed is on the regular maintenance training of the EIM skills

and knowledge to ensure the Company Officers are properly prepared for the for the potential range of emergency incidents that they may encounter.

The Department should review the EIM skills of each of its officers and, if necessary, implement regular “refresher” or maintenance training sessions as required.

Given there is currently no formal program/process for the maintenance/review of the various Company Officers’ role and skills, this maintenance training requirement should be reviewed.

11.11 Training Records

The critical nature of proper records keeping was made evident in the accident investigation report conducted by WorkSafe BC into the 2004 line of duty death in Clearwater. In that case, the members and officers were deemed to be insufficiently trained for the activities undertaken, as the department lacked the necessary training records to support their qualifications.

The full Coroner’s Report in the Clearwater case can be found at Appendix 4.[96] The report quoted the Worker’s Compensation Board findings including the following regarding training and fireground operations:[97]

- The Fire Chief and the Deputy Fire Chief have no accredited incident command training.
- There is no "entry" policy for interior attacks on burning structures (occupied or not).
- There is no training officer designated for this fire department.
- There was no written Operating Guidelines (OG) for this fire department at the time of the accident.
- There were no training records provided by the employer for any accredited training done by the initial interior attack crew, RIT members or the fire management team (Fire Chief and Deputy Fire Chief) on site.
- Documentation received from the Clearwater volunteer fire chief indicated that Mr. Schapansky had limited exposure to interior fighting of burning structures.
- Documentation received from the Clearwater volunteer fire chief and interviews indicate that Mr. Schapansky's [sic] had no previous exposure to interior fighting of burning structures.
- There are no clear standards set out by the local authority (Clearwater Improvement District), to outline the level to which they expect their fire fighters to action fires. Quote: “Our Fire Fighters are expected to fight fires that are within their training limitations."

[96] *BC Coroner’s Judgement of Inquiry into the Death of Chad Schapansky*, 2 February 2006 (the “Coroner’s Report”).

[97] Coroner’s Report, pp. 4,5.

- The (WCB) officer had not found a clear accredited standard that the Justice Institute or Office of the Fire Commissioner has required for volunteer fire fighters provincially. "The Clearwater volunteer fire fighters were training themselves to what they believed was an acceptable standard to fight fires they were required to fight. As being like most small fire halls, the Clearwater volunteer fire fighters had little exposure to fighting structural fires. This led the fire management team and attack crews to make decisions that were not based on recognized industry practices. This not only led to a fatality but also to another injured fire fighter being inside the burning structure for almost 2 hours before being finally rescued.".

Both the *Workers Compensation Act* and the Playbook require that appropriate training records be maintained for firefighters and fire officers. The Playbook makes clear that the training records need to be maintained on an individual basis, and that the AHJ is ultimately responsible for ensuring proper records are kept.[98] That requirement is fully consistent with the AHJ's obligations as the employer under the *Workers Compensation Act* and related *Occupational Health and Safety Regulation.* Appendix 5 sets out the minimum training requirements under the Playbook that need to be reflected in such record keeping.

When setting up a training records system, such as a commercial database like FirePro, or a hard copy filing system, it is important to understand the purpose of a training record. While it is important to record what training a member has received, it is equally important to be able to determine what training an individual has not had or has not had for a long time.

The importance of maintenance training cannot be overstated. In addition, as training programs are revised and updated, it is important to ensure the Department is able to track who has, or has not, had the updated program. The subject matter of the training needs to be clearly described in the records. If the training relates to a particular JPR under the Playbook, or an NFPA standard, that JPR should be identified.

To ensure there are no gaps in a member's skills and competencies between when they are initially hired to when they are trained or confirmed as an officer, the required maintenance training to ensure these members are able to demonstrate the necessary skills, along with annual performance appraisals, should be conducted and duly recorded. The requalification frequency for all programs should be identified and documented so as to provide a guide for the officers and instructors who are responsible to maintain these skills and competencies.

The Department currently maintains its training records in the FirePro system. The DC/TO also uses paper forms and evaluation sheets to track the training of the crews. All forms are paper based until the DC/TO transforms the information into the FirePro system. The training report forms lack a sufficient level of necessary information to properly attribute maintenance training to records of individual firefighters.

Improving the use of the current records management system is a work in progress. When the improvements and updates are completed, it should be possible to identify all drill and

[98] Playbook, Section 6, "Instruction, Evaluation and Records Keeping" at p. 6.

maintenance training, and associated dates for all individuals who attended, along with the skills and time spent on each during the training. Formal training is tracked, but in its present state, it is somewhat difficult to identify the specifics of other training events or examine the complete training record of an individual member.

11.12 Recommendations

#11-1: The Village should specify that the NFPA standards form the basis of all training for the operational functions undertaken and emergency services provided by the Department.

#11-2: The Department review the training OGs to ensure that all operational requirements and the associated training processes are addressed.

#11-3: The Department review and revise its maintenance training report that is used for weekly and periodic training to ensure:

- it captures the date, times and nature of the training session;
- it identifies any lesson plan or JPRs that were followed;
- copies of evaluation forms (when used) are attached to the training reports and the evaluations of individual members is consistently recorded;
- it identifies the skills that were practiced by each member and time spent on each skill area;
- a copy of any scenario(s) used is attached to the training report;
- it contains a brief narrative description of the practice session; and
- the report is in electronic format and utilizes tools to minimize the time required to complete the report form.

#11-4: The Department review the evaluation forms currently in use to update or amend them to ensure their suitability as assessment tools under the current NFPA standards.

12.0 Response Analysis

The Department is dispatched by the North Island 9-1-1, which provided dispatch data for the five years spanning 2017 through 2021. The data set is created in the CAD system and contains information related to the date and time for all incidents as well the location, incident type, source of the call for service and the responding units.

12.1 Incidents by Response Area

The response data are coded by response area as listed in Table 8 which is helpful given that the Department responds outside of the Village. In the following section the responses will be broken out by local government jurisdiction.

Table 8: Response Area Code, Area Description

Response Area Code[99]	Detailed Description
CUMBERLAND a	Fire protection (main fire protection response area)
CUMBERLAND - Z	Rescue (Hwy 19 between Cumberland and Union Bay, KM 100)
CUMBERLAND – Wd	Rescue
CUMBERLAND – Y	Rescue (Comox Lake Mainline out to Branch 25)
CUMBERLAND – Wa	Rescue (large rescue response area, includes most of Comox Lake)
CUMBERLAND b	Fire protection
CUMBERLAND & COURT	Fire protection (auto aid from Courtenay)
CUMBERLAND – X	Rescue (small section of Hwy 19, south of Lake Trail Rd)
CUMBERLAND c	Fire protection
CUMBERLAND d	Fire protection

The data are also coded for Incident Type, which includes “Test”, “No Response” and “Duplicate” and for the following analysis these categories have been deleted as they did not result in a response by the Department.

[99] Areas coded with a capital letter are defined as Rescue areas, the ones with lower case letters are within the fire protection area.

The data for this period include 1,583 incidents as shown in Table 9.

Table 9: CFRD All Incidents 2017 to 2021

Year	Incidents
2017	434
2018	326
2019	285
2020	236
2021	302
Total	1,583

Table 10 lists the response data by response area.

Table 10: CFRD All Incidents 2017 to 2021 by Response Area

Response Area / Year	2017	2018	2019	2020	2021	Total	% of Total
CUMBERLAND – Wa	4	2	1	4		11	0.7%
CUMBERLAND – Wd	1	2				3	0.2%
CUMBERLAND - X		2				2	0.1%
CUMBERLAND - Y	1			3	3	7	0.4%
CUMBERLAND - Z	32	25	14	10	29	110	6.9%
CUMBERLAND & COURTNEY	4	2	9	3	6	24	1.5%
CUMBERLAND a	391	293	261	216	262	1423	89.9%
CUMBERLAND b	1					1	0.1%
CUMBERLAND c					1	1	0.1%
CUMBERLAND d					1	1	0.1%
Total	434	326	285	236	302	1,583	100.0%

Of these, 133 were coded as “Rescue” and are listed by response area in Table 11, of these the first two, Wa, and Wd are within the fire protection area.

Table 11: CFRD Rescue Incidents 2017 to 2021 by Response Area

Response Area / Year	2017	2018	2019	2020	2021	Total	% of Total
CUMBERLAND – Wa	4	2	1	4		11	8.3%
CUMBERLAND – Wd	1	2				3	2.3%
CUMBERLAND - X		2				2	1.5%
CUMBERLAND - Y	1			3	3	7	5.3%
CUMBERLAND - Z	32	25	14	10	29	110	82.7%
Total	38	31	15	17	32	133	100.0%

The remaining incident types are listed in Table 12 with CUMBERLANDa, being the primary response area for the Village.

Table 12: CFRD non-Rescue Incidents 2017 to 2021 by Response Area

Response Area / Year	2017	2018	2019	2020	2021	Total	% of Total
CUMBERLAND & COURTNEY	4	2	9	3	6	24	1.7%
CUMBERLANDa	391	293	261	216	262	1423	98.1%
CUMBERLANDb	1					1	0.1%
CUMBERLANDc					1	1	0.1%
CUMBERLANDd					1	1	0.1%
Total	396	295	270	219	270	1450	100.0%

12.2 Incidents by Local Government Jurisdiction

As noted in the previous section, the response data are also coded by local government jurisdiction, which are summarized in Table 13 by year. Responses in Table 13 that are coded as Courtenay include a portion which are in Cumberland and responded to by a mutual aid agreement with the Courtenay Fire Department.

Table 13: Response by City Code

City / Year	2017	2018	2019	2020	2021	Total	% of Total
Courtenay[100]	64	38	50	48	61	261	16.5%
Cumberland	335	266	224	179	215	1,219	77.0%
Fanny Bay	6	9	8	2	10	35	2.2%
Royston	3					3	0.2%
Rural Comox Valley RD	16					16	1.0%
Union Bay	10	13	3	7	16	49	3.1%
Total	434	326	285	236	302	1,583	100.0%

[100] Responses include incidents within Cumberland as well as those in Courtenay; these are responded to by Mutual Aid.

12.3 Responses by CAD Incident Type

Table 14 lists all incidents for the five-year period, sorted by incident type, showing the count for each and the overall percentage.

Table 14: CFRD Response by Incident Type 2017 to 2021

Incident Type	Count	%
NOT CODED	35	2.2%
ALARMS	91	5.7%
BEACH/BRUSH EMERG	27	1.7%
BURNING COMPLAINT	12	0.8%
CHIMNEY FIRE	15	0.9%
DUTY OFFICER	330	20.8%
FIRST ALARM - A	2	0.1%
FIRST ALARM - B	1	0.1%
FIRST ALARM - C	8	0.5%
FIRST RESP A	1	0.1%
FIRST RESP B	58	3.7%
FIRST RESP C	148	9.3%
FIRST RESP D	418	26.4%
FIRST RESP E	51	3.2%
FIRST RESP ASSIST	37	2.3%
FIRST RESP ASSIST D/E	16	1.0%
FIRST RESP DELAY B/C	17	1.1%
HAZMAT NON EMERGENCY	2	0.1%
HYDRO NON EMERGENCY	1	0.1%
HYDRO TROUBLE	22	1.4%

Incident Type	Count	%
MARINE	2	0.1%
MOTOR VEHICLE ACCIDENT	127	8.0%
MOTOR VEHICLE FIRE	19	1.2%
MVI / EXTRICATION	10	0.6%
MVI PED STRUCK	5	0.3%
NATURAL GAS LINE BREAK	6	0.4%
NATURAL GAS/PROPANE EMERGENCY	8	0.5%
RESCUE HIGH ANGLE	1	0.1%
RESCUE LOW ANGLE/BCAS ASSIST	8	0.5%
RESCUE MARINE	1	0.1%
RESCUE ROAD	75	4.7%
RESCUE SWIFT WATER	1	0.1%
STRUCTURE FIRE	15	0.9%
STRUCTURE SMOKE	10	0.6%
STRUCTURE SMOKE (FIRE IS OUT)	1	0.1%
WILDLAND FIRE	2	0.1%
Total	1583	100.0%

12.4 Response by General Incident Type

One option when analyzing response data is to group the many different incident types coded in CAD by general types. For example, the eight incidents coded as First Responder can be grouped to one general type as First Medical Responder ("FMR"). [101]

From this data table, the largest number of responses by the Department are for FMR, followed by the Duty Officer and Motor Vehicle Incidents ("MVI").

Table 15: CFRD Response by General Type 2017 to 2021

[101] A table listing the CAD incident type and the general type can be found at Appendix 6.

General Incident Type	Count	% of Total
FMR	746	47.1%
Duty Officer	330	20.8%
MVI	161	10.2%
Alarms	91	5.7%
Rescue	86	5.4%
Not Coded	35	2.2%
Beach/Brush Emergency	27	1.7%
Structure Fire	26	1.6%
Hydro	22	1.4%
Chimney	15	0.9%
Burning Complaint	12	0.8%
Structure Fire Smoke	10	0.6%
Natural Gas/Propane Emergency	8	0.5%
Natural Gas Line Break	6	0.4%
Wildland Fire	2	0.1%
Hazmat non-emergency	2	0.1%
Marine	2	0.1%
Hydro non-emergency	1	0.1%
Structure Fire Out	1	0.1%
Total	1,583	100.0%

12.4.1 FMR Responses Only

The effect of the changes to FMR responses caused by Covid-19 and the amended BCEHS response protocols are evident from Figure 9. This chart shows a quite precipitate drop in call volumes April 2020. As the pandemic progressed, BCEHS response protocols evolved, such that by mid-2021, the number of such responses on a monthly basis began to return to the previous totals.

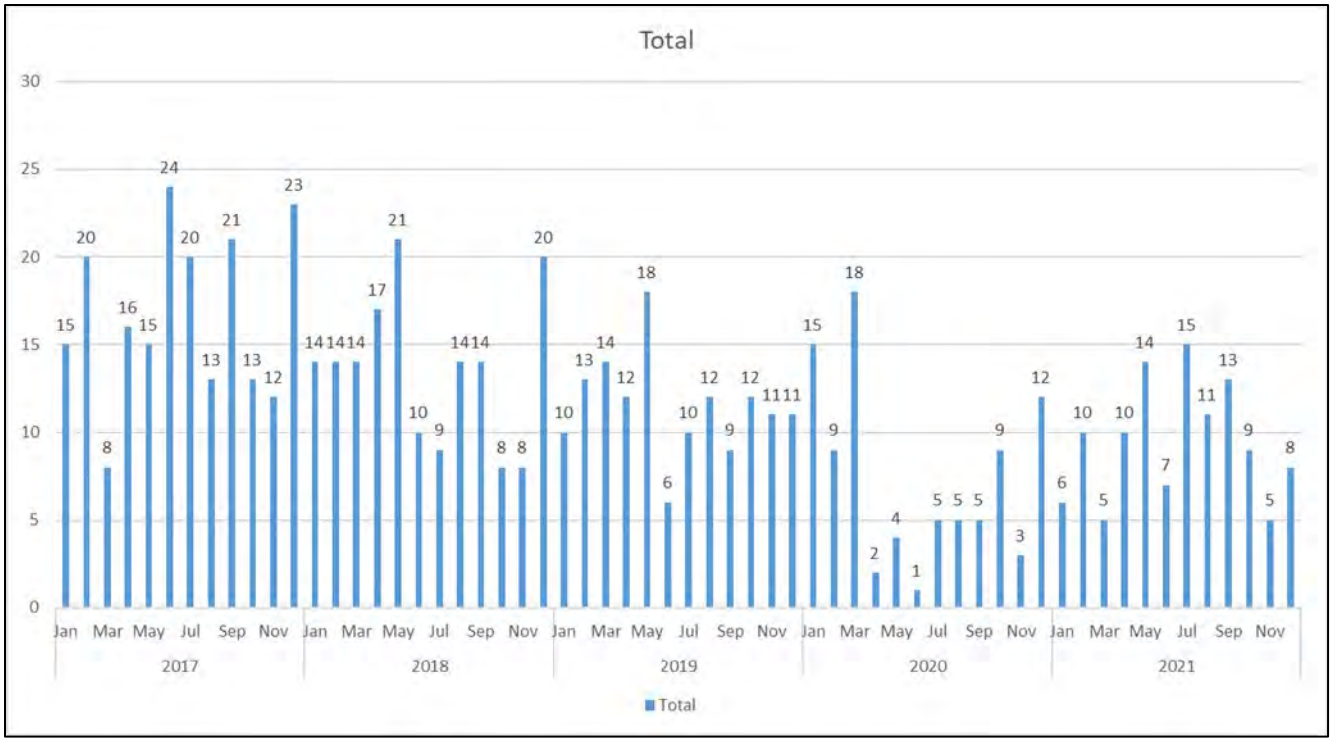


Figure 9: CFRD FMR Responses only 2017 to 2021 by Year and Month

12.4.2 Non-FMR Responses

If the data set is filtered to remove the FMR incident types, the remaining responses by the Department are listed in Table 16 and illustrated in Figure 10 and this presents a slightly different view that the number of all other response types with the exception of 2017 is consistent and perhaps tending slightly higher.

Table 16: CFRD Non-FMR Responses 2017 to 2021

Year	Incidents
2017	221
2018	158
2019	138
2020	148
2021	172
Total	837

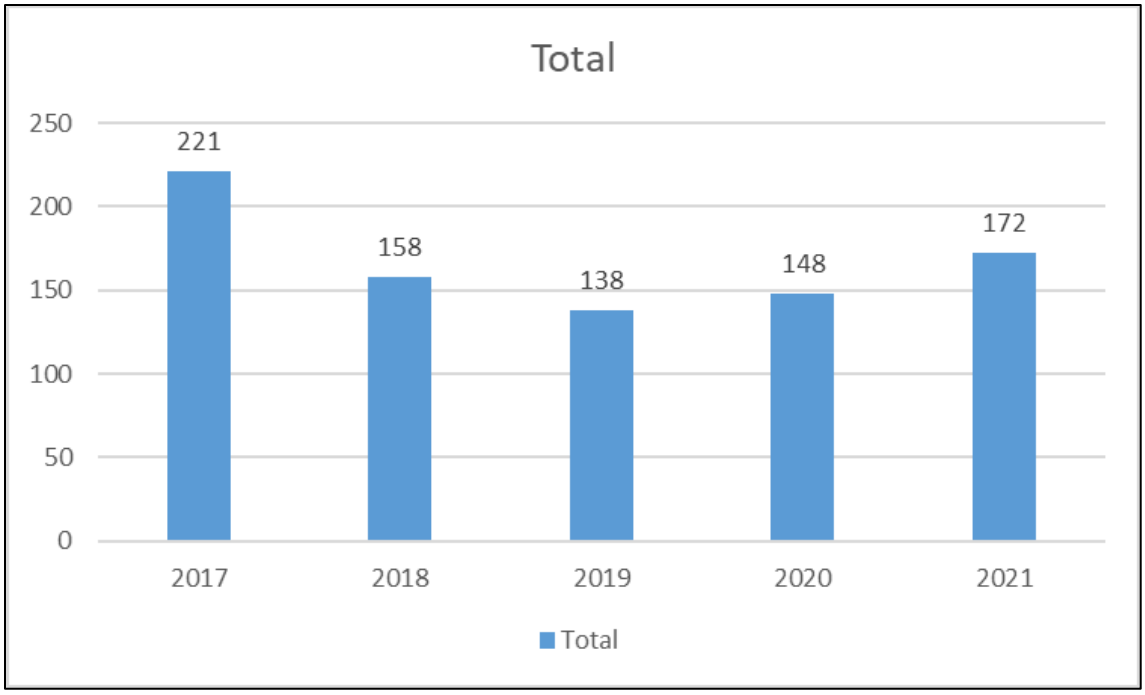


Figure 10: CFRD Non-FMR Responses 2017 to 2021

12.5 Response by Year, Month, Day, Hour

12.5.1 Responses by Year

This data for all responses including FMR are displayed graphically in Figure 11 showing the total number of incidents from 2017 to 2021 inclusive.

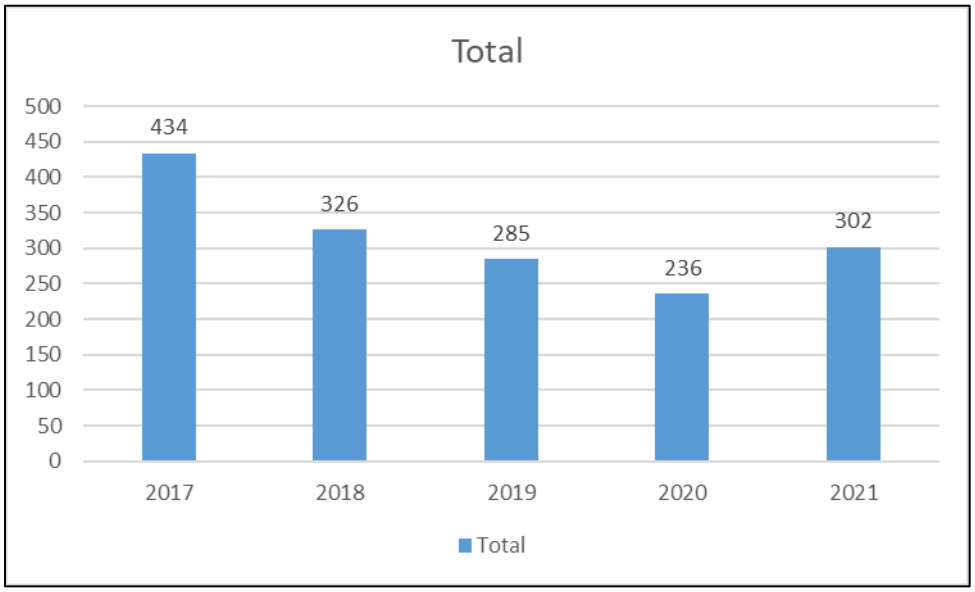


Figure 11: CFRD All Incidents 2017 to 2021

These data show a drop in total responses in 2020 and some part of this may be related to COVID-19 and the changes made by BCEHS in the second quarter of 2020.

12.5.2 Response by Month

Responses by month are shown in Figure 12 with the peak of incidents occurring in July, December and August. The month with the lowest number of responses is November slightly over half the number of incidents in July.

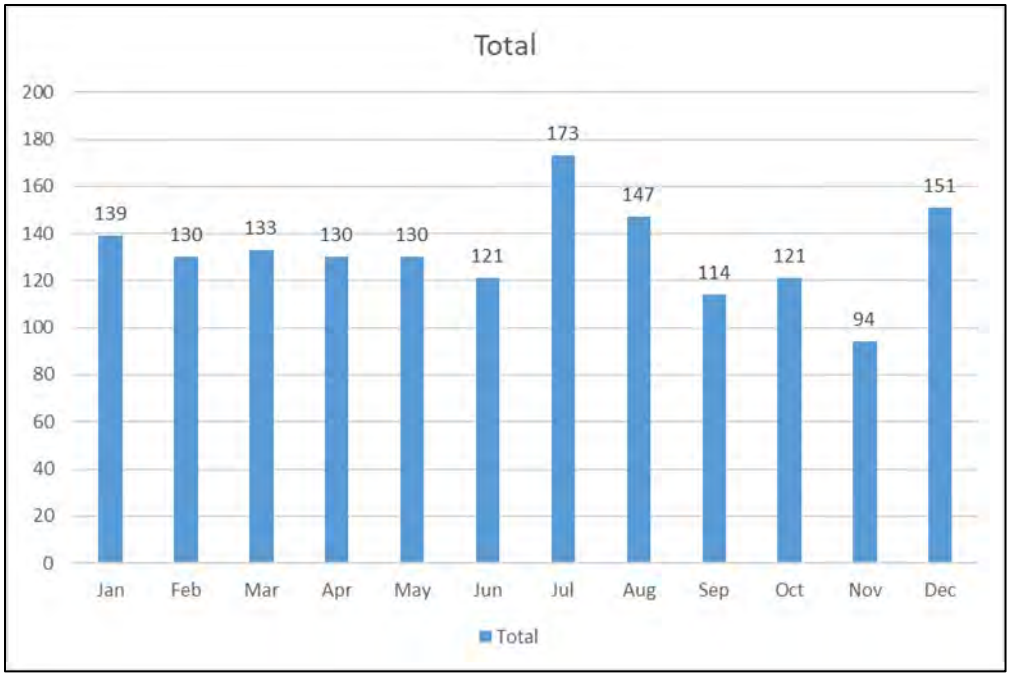


Figure 12: CFRD All Incidents by Month 2017 to 2021

12.5.3 Response by Day of the Week

Responses by day of the week are shown in Figure 13 with the highest number of incidents occurring on Friday and Saturday; Thursday has the fewest incidents, about 73% of the total for Saturday.

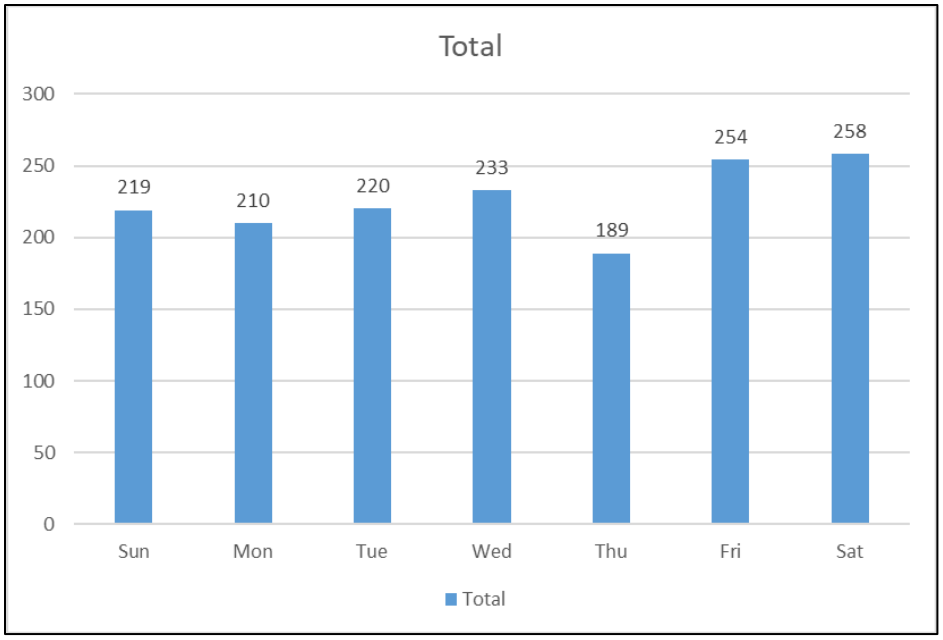


Figure 13: CFRD All Incidents by Day of the Week 2017 to 2021

12.5.4 Response by Hour

Response by the hour is illustrated by Figure 14 with the number of incidents from mid-morning to early evening being triple that of the hours from hours after midnight to early morning.

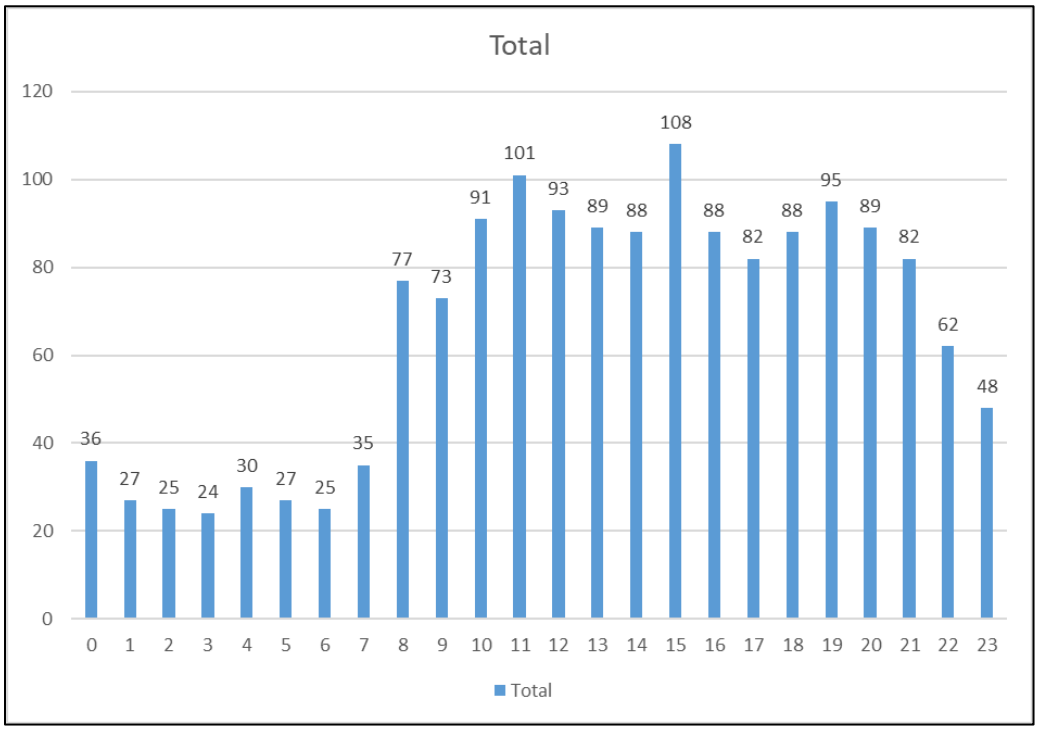


Figure 14: CFRD All Incidents by Hour of the Day 2017 to 2021

12.6 Response by Unit

The Department responds using various apparatus listed in Table 17 showing their CAD system unit designation and a description.

Table 17: CFRD All Units Tracked in CAD, 2017 to 2021

CAD Unit	Description
CUDO5	Bush unit and spare duty truck
CUDO9	Duty truck
CUE1	Engine 1
CUE3	Engine 3
CUE6	Engine 6
CUFB8	Fire Boat
CUR4	Rescue 4
CUDPT	SPU Trailer
CUT7	Tender 7

The CAD units are tracked in the CAD system and Table 18 provides a listing of the total number of primary units which were assigned to an incident to which they responded and arrived at the scene. The Department has additional units that are available for a range of incidents but whether they actually respond to the scene would depend on a number of factors including whether there was sufficient staffing or incidents where in the opinion of the incident commander the unit was required at the scene[102].

Table 18: CFRD Primary Units Tracked in CAD by Year, 2017 to 2021

Unit	2017	2018	2019	2020	2021	Total
CUDO5	13	10	9	10	12	54
CUDO9	243	204	198	170	219	1,034
CUE1				3	31	34
CUE3	28	20	25	18		91
CUE6	26	19	22	21	4	92
CUR4	114	91	98	73	101	477
Total	424	344	352	295	367	1,782

[102] This issue was discussed with the Fire Chief with a view to providing a more complete picture of all units responses in the dispatch CAD and the Fire RMS.

12.7 Spatial Analysis

The Department responds for all incidents within the Village; as well it has a series of response zones noted earlier and summarized in Table 12.

Table 19: CFRD Response Zones

Response Area Code[103]	Detailed Description
CUMBERLAND a	Fire protection (main fire protection response area)
CUMBERLAND - Z	Rescue (Hwy 19 between Cumberland and Union Bay, KM 100)
CUMBERLAND – Wd	Rescue
CUMBERLAND – Y	Rescue (Comox Lake Mainline out to Branch 25)
CUMBERLAND – Wa	Rescue (large rescue response area, includes most of Comox Lake)
CUMBERLAND b	Fire protection
CUMBERLAND & COURT	Fire protection (auto aid from Courtenay)
CUMBERLAND – X	Rescue (small section of Hwy 19, south of Lake Trail Rd)
CUMBERLAND c	Fire protection
CUMBERLAND d	Fire protection

Figure 15 (next page) shows the location of the Hall 1 and the boundary for the Village of Cumberland. Response area CUMBERLAND a includes all of this area.

[103] Areas coded with a capital letter are defined as Rescue areas, the ones with lower case letters are within the fire protection area.

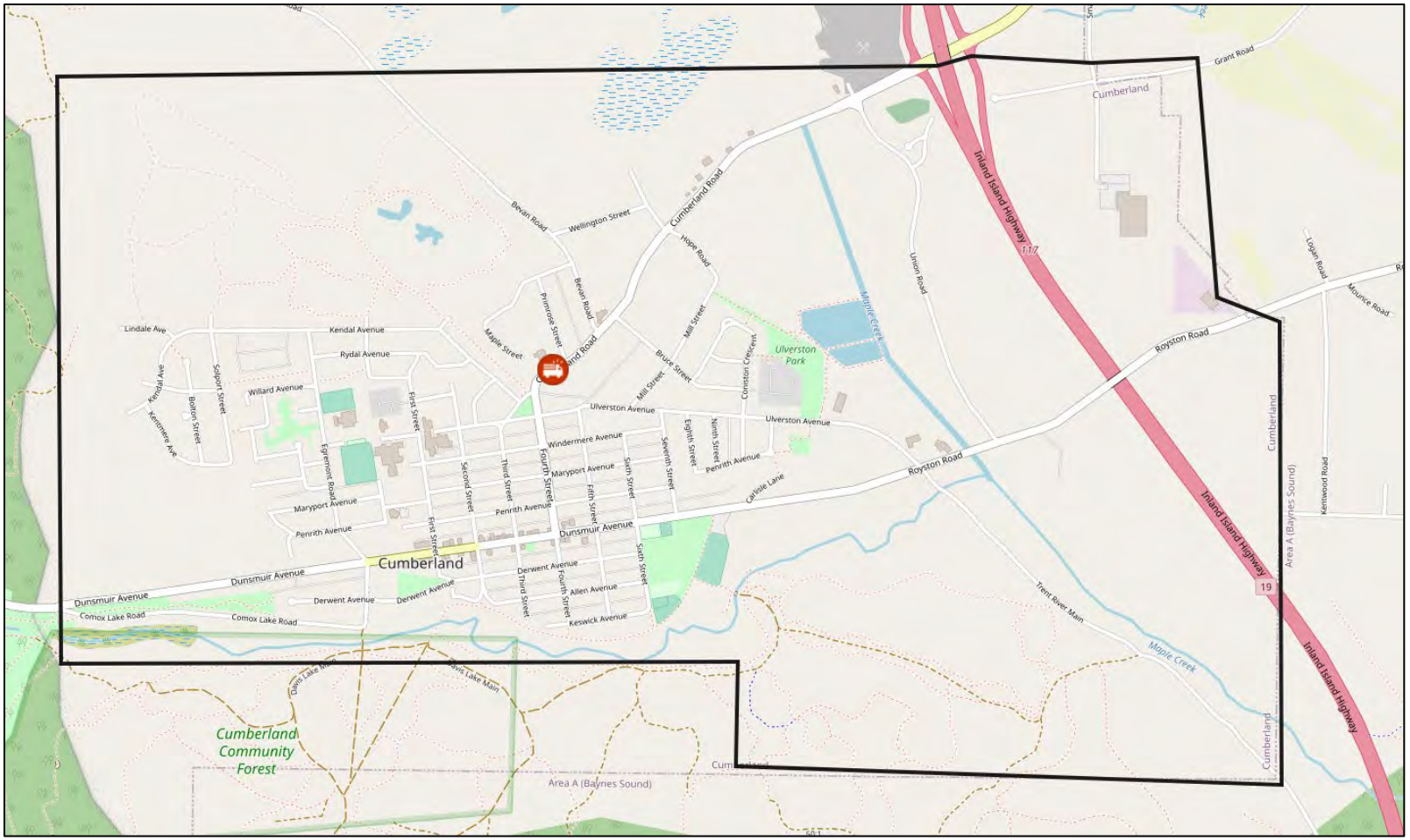


Figure 15: Village of Cumberland Boundary, Fire Hall 1.

Figure 16 shows the eight-kilometre polygon for Cumberland Hall 1. This extends well beyond the Village limits and, subject to confirmation by the Fire Underwriters, this should allow single family residents in Royston which are within Cumberland's response area, to be considered as protected.

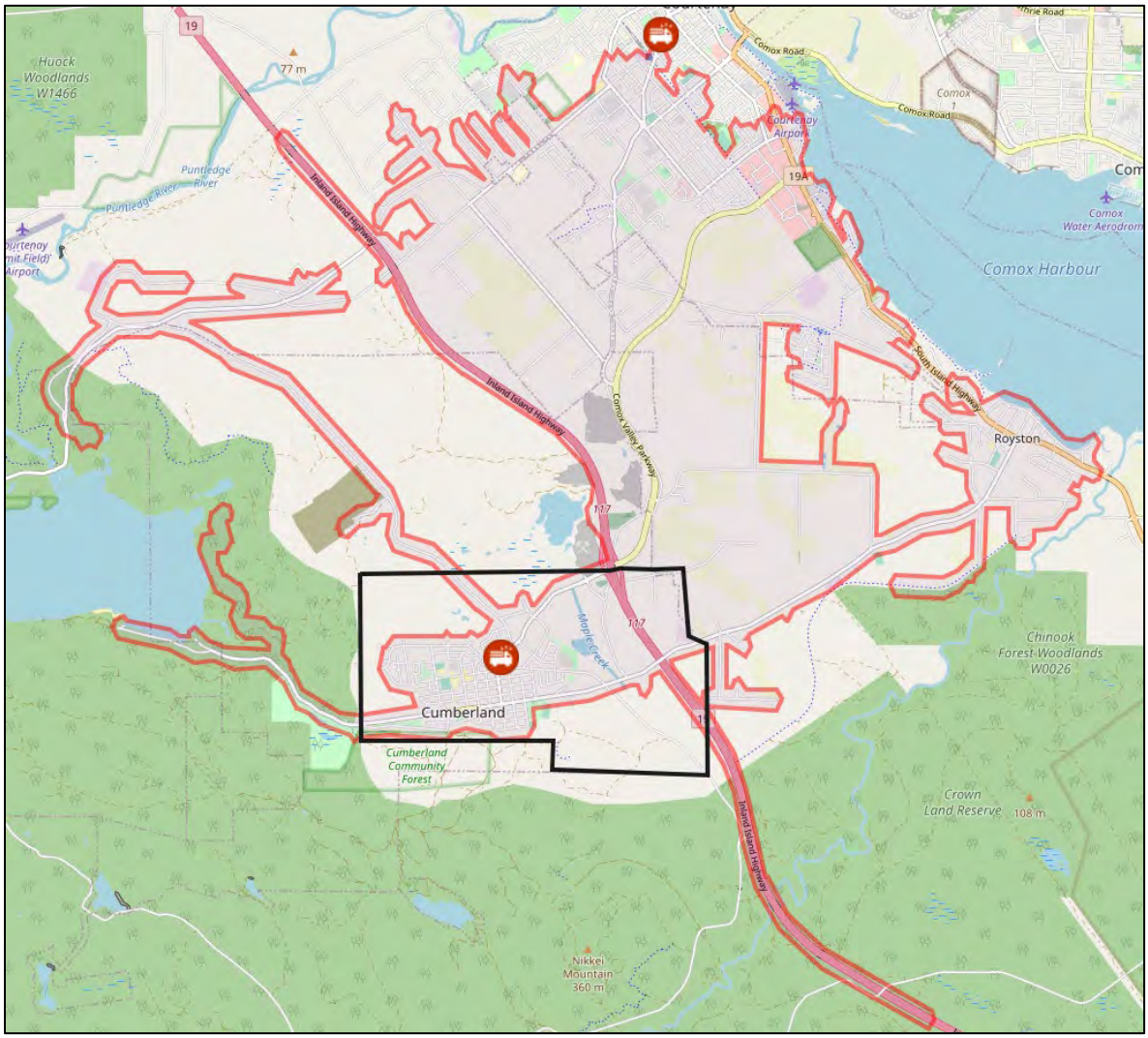


Figure 16: Eight-Kilometre Response Polygon for Cumberland Hall 1

Figure 17 shows the five-kilometre response polygon for Hall 1. Subject to confirmation by Fire Underwriters, this should ensure that all multi-family, commercial and industrial structures within this zone would be considered protected.

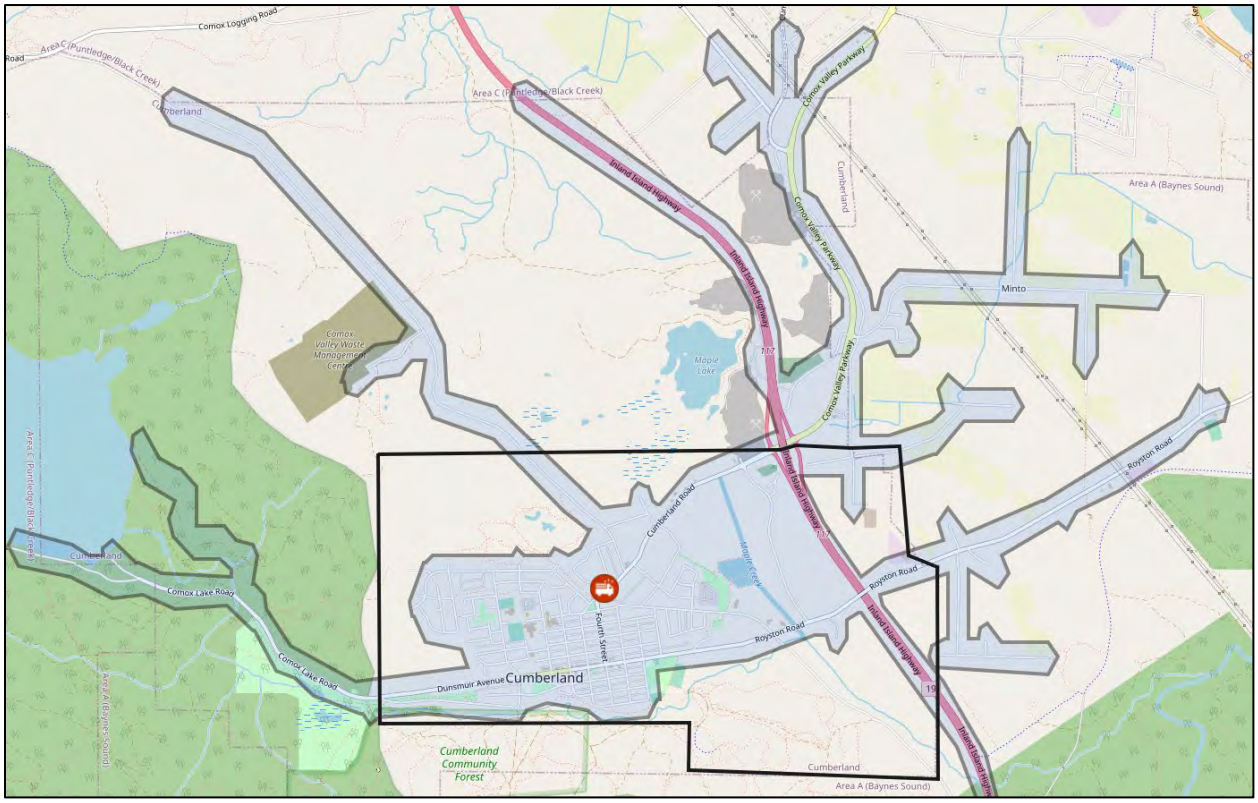


Figure 17: Five-Kilometre Response Polygon for Cumberland Hall 1.

Figure 18 shows the full extent of the Department's fire protection service area which includes CVRD Service Area to the east and the area west to Comox Lake.

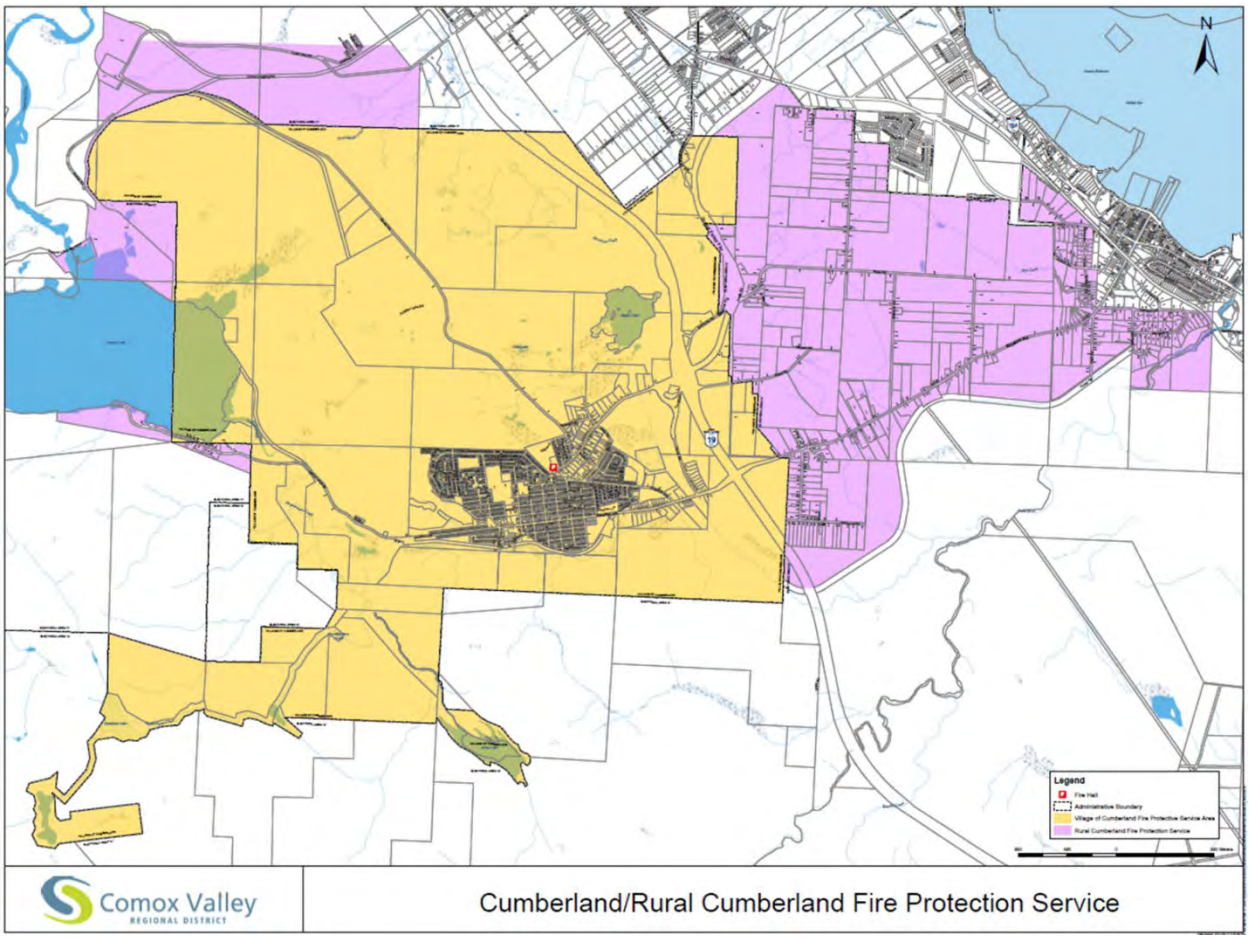


Figure 18: Fire Protection Map for the Cumberland Department.

12.8 Recommendations

#12-1: The Department review the response data with its dispatch provider to clarify the accuracy of unit tracking for all units.

13.0 Fire Underwriters

This section examines the role and importance of Fire Underwriters' reviews for property owners in a fire protection area and provides a brief overview of the methodology that those surveys employ. As the rating provided by the Fire Underwriters materially impacts insurance costs for both residential and commercial properties, it is important to understand how the rating system operates and the potential impact it has on the cost-benefit analysis of local governments investing in their fire services. In particular, it is important to understand how investing in the fire service through civic taxes, to establish, maintain or improve an area's rating from the Fire Underwriters, can potentially result in a net return (or the maintenance of major net savings) for residents and area businesses.

13.1 The Department's Current Rating

The Update Letter set out the following classifications, as compared to the ratings given in the previous classification:[104]

Rating Type	Previous Classification	2018 Classification	Max. Distance to Fire Hall
Village Rating			
PFPC[105] - with hydrants	7	4	5 km
PFPC –no hydrants	9	9	5 km
DPG[106] – with hydrants	3A	3A	8 km
DPG – no hydrants	3B	3B	8 km
CVRD Service Area			
PFPC – with hydrants (Royston)	7	5	5 km
PFPC – no hydrants	9	9	5 km
DPG – with hydrants	3A	3A	8 km
DPG – no hydrants	3B	3B	8 km

The PFPC rating improved in 2018 from 7 to 4 within the Village, and from 7 to 5 in the CVRD Service Area. These improved ratings should have lowered commercial, institutional and multi-family insurance rates. These are excellent ratings for the Department to have achieved and it should be proud of its accomplishment.

[104] We note that the letter has a minor error in on the last page, where it refers to "the Village of Cumberland and fire response area of Flagstaff County" rather than to the CVRD Service Area.

[105] PFPC is the Public Fire Protection Classification of the Fire Underwriters.

[106] DPG is the Dwelling Protection Grade of the Fire Underwriters.

Based on the Update Letter, the DPG rating for hydrant protected areas is DPG 3A. It should be noted (as detailed below), that a property must be located within the specified maximum distances from the fire hall (five kilometres for the PFPC rating and eight kilometres for the DPG rating) to qualify. Mapping of the five- and eight-kilometre response zones is found in the response analysis section of this report. Based on that mapping, all of the Village falls within the five-kilometre zone, and most of the CVRD Service Area is within eight kilometres of the fire hall. Much of CVRD Service Area, however, is more than five kilometres distant, meaning that various commercial and multifamily properties beyond that range may not enjoy the full benefit of the rating that has been achieved.

For hydrant protected areas, the PFPC rating also requires the property be within 150 metres of a fire hydrant and the DPG rating requires that the property be within 300 metres of a fire hydrant.

The Update Letter does not provide any detail of the review conducted, and also does not give the actual scores in each category of assessment. Rather, it provides the scores in a bar graph format, from which an approximate score can be determined, and a total score per category of assessment.[107]

Based on the bar graphs:

(a) In the Fire Department assessment section, the Department's rating was negatively impacted principally by the scores in the following areas:

- FD-1: Engine Service (i.e., the number principal apparatus) – this appears to be driven by some older apparatus;
- FD-6: Number of Line Officers (chief and company officers);
- FD-7: Staffing Levels;
- FD-13: Training and Qualifications;
- FD-15: Fire Ground Operations; and
- FD-18: Pre-incident Planning.

Although the Update letter suggests the Department did well in staffing (FD-7), it actually lost about 175 out of 400 possible points in this category (a not unusual situation). It should be noted that, based on the Fire Underwriters' comments, the staffing levels were materially supported by the aid agreements with the Department's neighbours. In relation to training and qualifications, again the Department lost about 25% of its score in this category – absent detailed discussion from the Fire Underwriters, it is difficult to know where the problems lie. However, a clear and well-executed training program, supported by appropriate records

[107] See the various graphs at pp. 3 (FD Assessment), 5 (Water Supply) and 6 (Emergency Communications and Fire Safety Control) of the Update Letter. The final score in each category of assessment, as well as the penalties applied, is shown on p. 7.

keeping, should help to raise the score in this area in the future. Pre-incident planning represents what might be considered "low hanging fruit": pre-incident plans can be created as part of the Department's regular system of inspections, and the score in this area (which was weak) significantly improved.

Given that the Village's water supply scored very well (see below), focusing on improvements in the Fire Department category of assessment will generate the best overall improvement in scoring from the perspective of the Fire Underwriters' review. This approach arises from the imposition of what the Fire Underwriters call a "divergence penalty." This penalty is applied where either the Fire Department score or the Water Supply score is better than the other. The strength of the water supply rating within the Village when compared to the Department's score, resulted in a divergence penalty of 4.3 points, lowering the Department from a raw score of 69.1 to 64.8 (from which score the "Special Hazards Analysis" penalty of 1.99 was then deducted). Given the divergence penalty and the overall weighting accorded the Fire Department category, improvements in the Fire Department scoring categories will have an outsized effect on the Department's overall score.[108]

(b) The Village's water supply assessment was exceptionally strong, with a number of perfect scores in various categories. Overall, there are few areas for improvement. In the Water Supply assessment section, the Department's rating was somewhat negatively impacted by the scores in the following areas:

- WS-6: Fireflow (water flow) Delivery; and
- WS-7: Reliability of Principal Mains.

The water supply in the Royston (CVRD Service Area) is not as well rated as the Village's. Material negative scores were found in the following categories:

- WS-7: Reliability of Principal Mains; and
- WS-11: Distribution of Hydrants.

It appears that the Fire Underwriters were seeking certain test data ("Available Flow tests in accordance with NFPA 291") that were not available when the review was conducted. It may be worth reviewing this issue with the CVRD and arranging for the appropriate tests to be performed.

(c) In the Fire Safety Control section, the Department's rating was negatively impacted by the scores in the following areas:

- FSC-1: General Program; and

[108] In terms of raw scoring, the 19 Fire Department assessment categories add up to 3650 points. The Department scored approximately 2861 out of 3650. It would need to improve its raw score in this category by about 250 points to move from PFPC 4 to PFPC 3 (assuming the scoring in all other categories remained the same). Nearly half of that additional score can be achieved by completing the necessary pre-incident plans.

- FSC-2: Fire Safety Laws and Enforcement.

No guidance was provided in the Update Letter that would help explain the low scores in these areas – particularly given that the Fire Underwriters considered the inspection and public education programs to be good "for a community of its size".[109] It should be noted that pre-incident planning also contributes to the score in this section of the Fire Underwriters' review.

(d) The Department's score in the Emergency Communications section was generally good (overall, it achieved 80% in this category).[110] Much of this score depends on the operation of North Island 9-1-1, which is the Department's dispatch provider. The only area where points were materially lost was in the "Means of Alarm Dispatch" category (Comm – 4). This section's score is based on the following:[111]

> This grading item considers the point of receipt of fire alarms from the public. It is necessary to have reliable and prompt notification of fire fighters to respond. The use of both audible and visual means is considered essential in larger fire departments having more frequent fire calls.
>
> Sufficiency of circuits or radio frequencies for the transmission of alarms to fire stations shall be provided as required by NFPA 1221. Alarm-receiving equipment in fire stations, and elsewhere as may be required, shall be provided and served as specified in NFPA 1221.

As such, North Island 9-1-1's ability to receive alarms from the public and transmit those alarms effectively and efficiently, as well the Department's ability reliably to receive the dispatch instructions, are being considered.

13.2 Fire Underwriters' Methodology

Given the importance of the Fire Underwriters' rating in assessing the economic cost-benefit analysis of investing in the fire service, it is important to understand how the Fire Underwriters reports are constructed, the issues that they consider, and the impact that their ratings have on insurance costs.

The Fire Underwriters are a national organization administered by Opta Information Intelligence. It has operated under a variety of names in the past (including SCM Risk Management Services Inc.), but in each instance, the organization was, and we believe remains, owned or controlled by the insurance industry.

The primary purpose of the Fire Underwriters is to establish the Dwelling Protection Grade ("DPG") and Public Fire Protection Classification ("PFPC") for each community in the country.

[109] Update Letter, at p. 7.

[110] Update Letter, at p. 7.

[111] Description from a Fire Underwriters' report in 2015.

The DPG rating generally applies to single family detached residences,[112] whereas the PFPC rating applies to multi-family residential, commercial, industrial and institutional buildings or districts, and generally is applied by the "commercial lines" arm of the insurance industry.[113]

Most residential homeowners and businesses carry fire and general perils insurance, and any person with a mortgage is required to maintain such insurance by the mortgagee bank or financial institution. Entities responsible for strata developments are required by provincial legislation to maintain insurance coverage.

Where a community has a fire department that meets Fire Underwriters' standards for performance, the cost of insurance can be significantly decreased. Thus, one of the cost-benefit analyses that underpins the investment required to establish or maintain a rated fire department is the trade-off between the taxes needed to pay for the department (and meet Fire Underwriters' standards) and the expected savings for residents and businesses on insurance costs.

With a well-rated fire department, the aggregate savings on insurance premiums often will offset, in whole or in significant part, the costs of operating the department. For an individual with a house that is assessed at a replacement cost[114] for insurance purposes of $300,000, a "protected" or "semi-protected" rating will generally result in cost saving on insurance of between more than $2,000 annually. For commercial properties, significant reductions in insurance rates can be expected when the community obtains a PFPC rating of 7 or better. From the savings enjoyed on insurance, the tax cost of maintaining the service would then need to be deducted to determine the net direct financial benefit (or cost) of having a "rated" department.[115]

[112] Under the Fire Underwriters' definitions, the DPG ratings generally apply to the following: "One- and Two-Family Detached Dwellings (buildings containing not more than two dwelling units) in which each dwelling unit is occupied by members of a single family with not more than three outsiders, if any, accommodated in rented rooms." In addition, under this system a "typical" detached dwelling is a maximum of 3,600 square feet in size. Fire Underwriters Survey website, "Terms of Reference", http://www.fireunderwriters.ca/dwelling-protection-grade.html.

[113] Fire Underwriters Survey website, "What is the PFPC" at http://www.fireunderwriters.ca/public-fire-protection-classification.html.

[114] It is important to emphasize that "replacement cost" and the "assessed tax value" of a home are not interchangeable concepts. Replacement cost is driven by square footage, level of finishing and the cost of construction, while the assessed tax value of a home is driven by market factors.

[115] The rating system is described in greater detail in the next section. It must be stressed that the actual cost of insurance for any homeowner or business varies based on a number of individual and site-specific factors. While the Fire Underwriters' fire grading for the area has a significant impact, a host of other considerations are also involved in the setting of insurance rates, including matters specific to the individuals or properties involved, or the competitive forces at work in the region.

The following table is often shown in more recent Fire Underwriters' reports. The table shows the amount by which "average" insurance costs drop for residential properties as the DPG rating improves: [116]

Table 20: DPG Rating—Estimated Insurance Costs

Replacement Value $	Unprotected Rate $	60± % Reduction	Semi Protected Rate $	32± % Reduction	Fully Protected Rate $
100,000	1,165		465		315
125,000	1,470		585		400
150,000	1,750		700		475
175,000	2,040		815		555
200,000	2,710		1,215		739
250,000	3,290		1,475		893
300,000	3,880		1,741		1,053
350,000	4,422		1,987		1,201
400,000	4,953		2,226		1,349
450,000	5,489		2,465		1,491

Table 20, while somewhat dated in that it refers to average insurance costs from ~2015, is still useful in showing the material savings that result from having a semi- or fully-protected rating from the Fire Underwriters.

The savings achieved for commercial and multi-family properties comes from the Department's PFPC rating. The table below shows the estimated savings as the rating improves:[117]

Table 21: PFPC Rating—Estimated Insurance Cost Decreases

Public Fire Protection Classification	U- Rate Percentage Decreases
PFPC 10 to PFPC 9	99.2%
PFPC 9 to PFPC 8	96.6%
PFPC 8 to PFPC 7	82.4%
PFPC 7 to PFPC 6	74.4%
PFPC 6 to PFPC 5	63.1%
PFPC 5 to PFPC 4	53.8%
PFPC 4 to PFPC 3	48.0%
PFPC 3 to PFPC 2	47.3%
PFPC 2 to PFPC 1	45.8%

[116] This table is drawn from a 2015 Fire Underwriters' report. While the estimated rates for various insured values are now low (as insurance costs have risen since that time), the approximate cost savings are still enjoyed.

[117] Again, this table is drawn from a 2015 Fire Underwriters' report.

As can be seen in Table 21, ratings improvements in the commercial classification do not result in linear decreases. From a cost-benefit perspective, moving a rating from PFPC 8 down to ~PFPC 4 seems to provide the optimal savings for businesses and multi-family properties. That non-linear relationship is worthy of consideration on a cost-benefit analysis between the amount required to be invested in improving the service and the expected insurance savings for owners of commercial, industrial and multi-family properties.[118] Below PFPC 4, the amount of investment needed to obtain the improved rating may outweigh any insurance savings.

The Department is currently rated as PFPC 4 within the Village, which means that the average saving for commercial and multi-family insurance is about 46 – 47%, and PFPC 5 within portions of the CVRD Service Area, which means that the average saving for commercial and multi-family insurance in that area is about 36-37% (subject to travel distances from the fire hall).

A complicating factor is that the ratings applied to a community are not necessarily uniform. The Fire Underwriters consider a series of issues (examined further below), which include distance from the fire hall and availability of water supplies. Depending on the size and nature of the service area, the insurance benefits may not be equally enjoyed by all ratepayers. Thus, if the fire zone extends more than eight kilometres by road from the fire hall, the residents outside of the eight-kilometre zone may not enjoy the cost savings received by those residents who live within the zone. For commercial properties, the maximum distance drops to five kilometres. Similarly, the ratings are better where there are fire hydrants are available.

13.2.1 Overall Ratings - Weighting

The Fire Underwriters' ratings are weighted against the following four areas of assessment:

- Fire Department..... 40%
- Water Supply..... 30%
- Fire Safety Control..... 20%
- Fire Service Communications..... 10%.

The assessment involves a consideration of the principal fire risks covered by the subject department, including determination of the required fire flows (i.e., water flow requirements for the particular hazards and risks), from which they derive the "basic fire flow" ("BFF") for a department's service area. The BFF calculation is, in many ways, a gating item: the level at which this is set drives the apparatus needs, the staffing requirements and impacts the assessment of the water system's flow and capacity. The fire flow requirements are based on a series of calculations, including building size, height and exposures (how close one building is to another in the community). Taller buildings and more densely built communities generate a higher BFF – which, in turn, requires more apparatus, more firefighters and increased water supplies.

[118] The amount of savings can also vary with the particular type of industry or commercial undertaking. The table gives the average of all savings, across all property types and uses.

One of the factors included in the determination of the BFF is whether there are sprinklers in the building being considered. The better and more comprehensive the sprinklering, the lower the water flow requirements.

The fire department assessment includes a consideration of apparatus, equipment, staffing, training, operations and administration, as well as the location/distribution of fire halls and fire companies. In this segment of its review, the Fire Underwriters analyze the fire department's ability to extinguish fires in all parts of its fire protection area. More recent (post-2013) reviews have 19 separate factors which are assessed in this category.

Part of the fire department assessment includes a review of the apparatus in use and its suitability for the subject department's fire risks. In general, the Fire Underwriters set 20 years as the maximum age for front-line use of apparatus by small to medium-sized communities (and recommends front-line use be limited to 15 years). It also has requirements for certain apparatus types (e.g., aerial devices) depending on its assessment of the community's fire risks, and an aggregate pumping requirement based on the BFF calculation.[119] The age of apparatus can be extended (generally to 25 years), but only by application to the Fire Underwriters and by meeting annual certification requirements. Such extension can also lead to a down-rating of a department's pumping capacity, which in turn can adversely affect the rating for the service area.

The "Water Supply" section examines the hydrant system (if present), and considers issues such as water flow, supply reliability and system redundancy, based on criteria set out in the Fire Underwriters' "Water Supply for Public Fire Protection" document.[120] In the post-2013 reports, there are 15 factors which are assessed in this category. Where no hydrant system is present or where the hydrant system only covers a portion of the fire protection area, the Fire Underwriters then look at the ability of the fire department to access, load, transport and unload water against the risks faced in the non-hydrant protected area. In such cases, the assessment is usually considered as part of the "Fire Department" analysis.

The "Fire Safety Control" category covers fire prevention programs/public education, fire inspections and building/fire code and bylaw enforcement. There are four factors which are assessed within this category. In general, the Fire Underwriters are looking at whether local government is making effective use of these tools in managing the level of fire risk throughout the fire protection area (e.g., inspections, code enforcement, fire prevention/education programs, smoke alarm programs, etc.).

The "Fire Service Communications" category involves an assessment of dispatch services, paging systems and radio communications. Seven factors are assessed within this category, including the communications centre, dispatching and paging processes, and radio

[119] The Fire Underwriters recommend an aerial device once a community has a basic water flow requirement that is calculated to exceed 3,300 Imperial gallons per minute or where there are five or more buildings in the community which exceed 3 stories (10.7 metres) in height.

[120] Fire Underwriters, "Water Supply for Public Fire Protection" (1999), which is available at: http://www.scm-rms.ca/docs/Fire%20Underwriters%20Survey%20-%201999%20Water%20Supply%20for%20Public%20Fire%20Protection.pdf.

communications. As noted, the Department is dispatched by North Island 9-1-1. It may wish to review with the Fire Underwriters the factors that led to the loss of points in the Comm-4 category, to determine if there are any easy solutions to the issues involved.

13.2.2 Ratings System

As noted above, Fire Underwriters' reviews involve two entirely separate rating systems – one for residential properties (DPG) and one for commercial/multi-family properties (PFPC). Strata entities are subject to the PFPC rating, which is a more stringent standard, though individual units within a strata occupied on a residential basis, typically are subject to the DPG rating. The DPG rating is calculated on a five-point numerical scale, whereas the PFPC rating is based on a 10-point scale. In both cases, a "1" is the highest achievable rating. In simplest terms, the goal of a Fire Underwriters' review is to provide insurance companies with a grading of fire protection services provided within a particular fire protection area.

Insurance companies use the grading provided by the Fire Underwriters as one of a number of factors in determining local fire protection insurance rates. It should be emphasized that the system is quite fluid, and individual insurers can and will set rates based on considerations other than the Fire Underwriters' ratings (either higher or lower, depending on the insurer's perception of actual risk, competitive concerns and other factors).[121] It is the responsibility of individual insurance companies to determine what weight they give the Fire Underwriters' grading when determining insurance rates.

DPG Rating

For residential properties, the rating system is graded on a scale from 1 – 5 where "1" is the best possible rating. The rating of "3" is split into two subcategories where "3A" indicates that there is an approved hydrant or water supply system, and "3B" indicates that the department relies on mobile water supplies. From the insurance industry's perspective, the ratings for residential homeowners are generally treated as follows:

Table 22: DPG Rating Details

DPG Rating	Insurance Status	Comment
5	Unprotected	No savings on insurance from having a fire department.
4	Semi-protected	Some savings on insurance likely will be enjoyed; in some regions, this rating and "3B" are often treated as essentially equivalent, though that varies with the underwriter.
3B	Semi-protected	This is usually the rating level at which significant cost savings on insurance are enjoyed. This is usually the highest rating available in areas which are not hydrant-protected.

[121] See a list of other factors on the Fire Underwriters Survey website, "How the PFPC affects individual insurance policies" at http://www.fireunderwriters.ca/public-fire-protection-classification.html.

DPG Rating	Insurance Status	Comment
3A 3B(S) 3B(L)[122]	Protected	Progressively greater savings on insurance. Fully protected status typically means a savings of 50-60+% on insurance costs.
2	Protected	
1	Protected	

In general, the Fire Underwriters estimate that a community which achieves fully protected status can enjoy savings on insurance of up to 60% (or more) versus communities which are rated as "unprotected".[123]

There are some fundamental location and distance requirements for a property to receive a protected or semi-protected rating under the DPG classification:

- residents must live within eight kilometres by road of a fire hall (i.e., the measurement is based on distance travelled on the existing road network, not in a straight line from the fire hall); and
- for hydrant protected areas, the property must be within 300 metres of a fire hydrant (otherwise, the residence is classed based on the community's "non-hydrant protected" rating).[124]

Single family residential properties which are more than eight kilometres by road from a fire hall are treated as DPG 5 (unprotected).

The DPG rating is calculated at the same time as the PFPC rating, using essentially the same assessment process. However, the factors explicitly considered in applying the rating are managed slightly differently. For this assessment, based on descriptions in other reports we have reviewed, the Fire Underwriters consider the following:

- Organization (authorized by bylaw, supported by taxation);

[122] A rating of 3B(s) is a Fire Underwriters' accreditation for tanker shuttle capability, where a department is able to demonstrate its ability to maintain a specified water flow for a stipulated period of time, using tanker units. It applies to areas which are not hydrant-protected, and must be periodically renewed. This specialty rating is treated by most insurers as being the equivalent of a "DPG 3A" (fully protected) rating. Similarly, a 3B(L) rating indicates the particular department has been accredited for "large diameter hose lay," which doubles the reach from a fire hydrant from 300 metres to 600 metres.

[123] This estimate is based on statements in various reviews conducted by the Fire Underwriters we have reviewed for other clients over the past decade or more.

[124] This distance can be extended to 600 metres if a department is certified by the Fire Underwriters as capable of "large diameter hose-lay". See: Fire Underwriters, *Accreditation of Alternate Water Supplies for Public Fire Protection* (2012), at: https://fireunderwriters.ca/Resources/FUS-AlternativeWaterSupplyAccreditationProtocol2012.pdf accessed on 23 August 2020.

- Membership (career versus volunteer or composite);
- Training system – NFPA 1001 FF-I or better for personnel, proper training records, and established training program;
- Required apparatus meeting NFPA 1901 or ULC-S515 standards (and within the maximum age requirements set by Fire Underwriters);
- Necessary additional equipment for operational requirements;
- Appropriate fire hall (location, suitability for purpose, condition);
- Alarm notification system (proper emergency communications); and
- Water supply meeting Fire Underwriters' requirements (and/or ability to transport water as required).

How well each of these factors is met determines the DPG rating.

PFPC Rating

The PFPC rating, which is determined at the same time as the DPG rating, is based on the four fundamental assessment categories (Fire Department, Water Supply, Fire Prevention and Communications) identified above. This rating has a 10-point scale, where 1 is the best and 10 is "unprotected." The PFPC rating is essentially a benchmarking against various standards or requirements in each category and in relation to other communities.

For a commercial property, the application of the rating system depends on the distance from the fire hall (a maximum of five kilometres) and distance from a fire hydrant (a maximum of 150 metres). These requirements can result in "split ratings" for a fire protection area. The Fire Underwriters website used to include a description of split ratings as follows: [125]

> "In many communities, FUS develops a split classification (for example, 5/9). Generally, the first class, (Class 5 in the example) applies to properties insured under Commercial Lines within five road kilometres of a fire station and within 150 metres of a fire hydrant. The second class (Class 9 in the example) applies to properties insured under Commercial Lines within five road kilometres of a fire station but beyond 150 metres of a hydrant. FUS assigns Class 10 to properties insured under Commercial Lines that are located beyond five road kilometres from the responding fire station."

The Update Letter shows the split ratings for the Department in the PFPC rating category (4/9 in the Village and 5/9 in the CVRD Service Area).

[125] The Fire Underwriters' website has been reorganized and this particular language is no longer found, although the concept is still applied.

It should be noted that newer Fire Underwriters' reviews, in addition to introducing more detailed ratings and some new concepts,[126] are increasingly focused on fire prevention, fire education and the importance of bylaws which support good fire protection practices (e.g., sprinklering requirements, a well-considered fire inspection program, building and electrical code enforcement, etc.).

13.3 Summary

The principal benefit of having an effective, well-equipped and well-trained fire department is that it will materially improve the life safety of residents in its fire protection area. Indeed, we would stress that the life-safety issues are the principal ones to focus on, when communities examine the benefits and weigh the costs of investing in their fire services. From a financial perspective, however, it also is important to understand that a fire department which is well rated by the Fire Underwriters will likely result in materially reduced insurance costs for both residential and property owners.

The Department has improved its score in the PFPC rating in both the Village and in the CVRD Service Area. It also suffered from a significant divergence penalty for its PFPC score in the Village, as the Village's water supply was rated significantly better than the score accorded in the Fire Department assessment category. As such, focussing on improving the Fire Department assessment scoring will have the greatest positive impact on the Department's overall rating.

[126] Some of the concepts introduced over the past several years include the "divergence penalty" – where either the water supply system or the fire department is markedly better than the other, the overall score will be reduced – and a general penalty for "special hazards analysis", which seems to be a largely subjective assessment of risks from natural or environmental factors (e.g., earthquake, wildfire and weather). The effect of the divergence penalty on the Department's score is reviewed above.

14.0 Emergency Program

The *Emergency Program Act* (the "EPA") sets out the requirements for local authorities, which includes municipalities such as the Village, relating to emergency planning, risk identification and mitigation, emergency response obligations and recovery efforts. Among other things, the EPA requires a local authority to prepare and maintain an emergency plan, assess area risks, establish and maintain an emergency management organization, provide training to its staff and volunteers, exercise its emergency plan and establish procedures to implement its plan (including responses, management of victims' needs and recovery processes).[127] The EPA permits a local authority to appoint an emergency program coordinator ("EPC") and/or one or more committees, and to delegate its authority (other than the authority to declare a state of local emergency) to such EPC, committee(s) or its emergency management organization.[128]

The Village has sought to meet its obligations under the EPA through the following:

(a) *Emergency Measures Bylaw No. 1022, 2015* ("Bylaw No. 1022");

(b) the Comox Valley Emergency Program Administration Service Agreement, entered into between the Village and CVRD, dated 8 June 2017, as extended by an amending agreement, Amendment #1, (undated – 2021) (the "CVRD EP Agreement"); and

(c) an Emergency Mutual Aid Agreement, made between the CVRD, the Village, the City of Courtenay and the Town of Comox, dated 8 June 2017, as extended by an amending agreement, Amendment #1, (undated – 2021) (the "EP Aid Agreement").

Bylaw No. 1022, the CVRD EP Agreement and the EP Aid Agreement are reviewed in detail below. In general, when implementing emergency programs, there are two broad approaches that are taken in the province: in some cases, each municipality within a regional district, and the regional district itself, operates a separate emergency program (typically with an administrative overlay that attempts to coordinate the individual responses). A classic example of this approach is found in the Capital Regional District, where each of the 13 municipalities operates its own emergency program, with the CRD itself operating three separate programs (one each for its three electoral areas), and any integration between the participants is effected through regional committees and aid agreements. The other approach is where a region-wide service is established, where the service participants include both the electoral areas and municipalities, and a single program is operated across the regional district in question.[129] Good examples of this approach are found in the Kootenay Boundary Regional District ("KBRD") and the Sunshine Coast Regional District ("SCRD").

[127] EPA, s. 6, and *Local Authority Emergency Management Regulation*, B.C. Reg. 380/95 (as amended), s. 2.

[128] EPA, s. 6(4).

[129] A third possibility is where a municipality provides the service under contract to the regional district and to other municipalities, which is conceptually similar to the second approach.

The approach taken within the CVRD is something of a hybrid: the CVRD has taken on certain administrative responsibilities under contract, including maintaining the emergency plan, undertaking Hazard, Risk and Vulnerability Assessments ("HRVAs"), appointing an emergency coordinator, and providing training and plan exercise opportunities. The municipalities (and the CVRD), however, are responsible for operationalizing the plan as required for their local jurisdictions. If a local municipality or the CVRD requires additional assistance, it can be requested (and paid for) under the EP Aid Agreement. Various committees have been created under the CVRD EP Agreement to oversee this system, and to manage the way the parties coordinate responses.

One issue the Village might wish to review with the CVRD, and its other municipal partners, is whether it makes sense to move to a fully integrated regional approach to emergency program development and response, on the KBRD/SCRD model. In that case, the municipalities would still be responsible for declaring local states of emergency (as required by the EPA), but operational responses would the responsibility of the regional service.

The CVRD Emergency Plan (the "Regional Plan"), created under the CVRD EP Agreement, is a regionally-maintained plan that guides Electoral Areas A, B and C and the three area municipalities (Comox, Courtenay and the Village). It contains information related to plan activation, facilities, authorities and essential forms. The Regional Plan includes the "Emergency Operations Centre Response Guidelines," which is a document that was jointly developed by the Mid Island Emergency Coordinators and Managers for use by communities with the understanding that local authorities would insert their individual community/agency specific documents to operationalize it for their own locality. Community emergency plans are intended to be guided by the local HRVA in each area. As discussed further below, the extent to which each municipality needs to supplement the Regional Plan with a second emergency plan, is not entirely clear from the available documentation.

The HRVA is typically completed by the CVRD on a five-year cycle and was last undertaken in 2014. Consideration should be given to a refresh of the HRVA.

The CVRD Emergency Program budget costs that are set out in the CVRD EP Agreement, are proportionally shared among the service participants based on assessed property values. As discussed below, the sharing of operational, as opposed to administrative, costs associated with the overall program, is less clearly specified.

The Regional Plan includes information about the Village's EOC structure and personnel identified for key positions, although the contact names are out of date. There is also a Village EOC layout diagram provided.

The Department's role within the Village's emergency program is to provide emergency services on-site and it would be provided support from either the Village EOC or the CVRD's Regional EOC, depending on the nature of the emergency and level of activation. The Fire Chief (i.e., the manager of protective services) is also a member of the Local Emergency Management Committee under Bylaw No. 1022. We understand the Fire Chief also acts as the Village's EPC.

14.1 Emergency Program – Regulatory Structure

This section reviews the regulatory framework that has been established to meet the Village's obligations under the EPA, to create and implement an emergency program. This section examines Bylaw No. 1022, the CVRD EP Agreement and the EP Aid Agreement. Certain of the Village's statutory and regulatory obligations are met through the CVRD EP Agreement, supplemented by its own, local planning.

14.1.1 Bylaw No. 1022

The Village's obligation to implement an emergency program under the EPA is addressed by Bylaw No. 1022. It should be noted that the Province is in the process of developing a replacement for the EPA. Ironically, perhaps, its introduction has been delayed by a series of major crises over the past 30 months – including the pandemic and significant wildfire and flooding seasons experienced in 2021. The new act likely will not be introduced until sometime in late 2022.[130] When it comes into force, it will be necessary to review and revise the Village's emergency planning bylaw.

It also should be noted that the Province has formally adopted the Sendai model for planning, mitigation, response and recovery from disasters, which model is expected to be enshrined in the new statute. This model can be expected to result in increased obligations for risk mitigation efforts by local governments, improved recovery planning, and the formal inclusion of a broader range of stakeholders in emergency planning, including First Nations. The new statute also will likely impose greater obligations on local governments to ensure that they have tested their emergency plans, although the early concept of having these plans audited by the Province has been dropped.[131]

The following principal obligations in relation to the creation of the Village's emergency program are addressed under Bylaw No. 1022:

- it establishes an emergency management organization – albeit that it designates the "Village of Cumberland" in that role, which is an unusual approach (discussed further below); (s. 3)
- it creates a "Local Emergency Management Committee" comprising the Mayor, another member of council, the CAO, the fire chief, the CFO and the "manager of operations". If a quorum of Council cannot be established, the Council's emergency powers are delegated to this committee; (s. 4) and
- it provides that quorum for the Local Emergency Management Committee is any two members.

[130] See: https://www2.gov.bc.ca/gov/content/safety/emergency-management/emergency-management/legislation-and-regulations/modernizing-epa.

[131] Province of British Columbia, "Modernizing BC's Emergency Management Legislation: Summary of What we Heard in Response to the Discussion Paper Issued on October 28, 2019," (August 2020) at p. 2.

Bylaw No. 1022 should be reviewed and substantially revised. If the Province again delays the introduction of the replacement for the EPA, that revision should proceed under the existing statute (otherwise, it should take into account the new legislation). Based on the existing EPA, we would recommend that the following issues should be addressed:

- the powers of Council to declare a state of local emergency, and power of the Mayor to act alone in this regard, should be addressed (EPA, ss. 12(1) and (3));
- the process to be followed after a state of local emergency is declared should be specified (e.g., forwarding the declaration to the Minister under the EPA, publishing the declaration, informing the CVRD Emergency Coordinator; and, following the emergency, rescinding the emergency declaration);
- the powers of Council following a declaration of emergency should be specified, along with its right to delegate that authority – in practice, this authority typically should be delegated to its Local Emergency Management Committee (see the next point);
- consideration should be given to establishing the Local Emergency Management Committee as the Village's emergency management organization (as opposed to the "Village of Cumberland"), and delegating to this committee the emergency powers arising under a declaration; and
- the integration with the CVRD program should be formally recognized: the plan established pursuant to the CVRD EP Agreement likely should be adopted as the Village's emergency plan (supplemented, if necessary, by any additional localized emergency plan), along with recognizing the role and responsibilities of the CVRD in relation to the maintenance of same. It may also be appropriate to recognize the role of the emergency coordinator and deputy coordinator employed by the CVRD, as well as the various committees created pursuant to the CVRD EP Agreement.

14.1.2 CVRD EP Agreement

Under the CVRD EP Agreement, the CVRD has been contracted to provide various services to the Village necessary for the operation of a compliant emergency program. We understand that there are similar bilateral agreements with Courtenay and Comox: given that each party shares its proportionate cost of the services (based on converted property values for hospital purposes),[132] it may make more sense to create a single agreement covering all three municipalities and the CVRD.

The CVRD EP Agreement's original term was extended to 31 December 2023, by Amending Agreement #1.

[132] CVRD EP Agreement, s. 4.1 and Schedule B.

Under the CVRD EP Agreement:

- the CVRD is made responsible for "the administration of the Program, including contract administration, grant administration, financial services and legislative services" (s. 2.1);
- an Administrative Committee (comprising the four CAOs of the service participants) and an Executive Committee (consisting of the CVRD's "Committee of the Whole"), are established under the agreement (ss. 1.1 and 6.1), and reference is made to the Comox Valley emergency planning committee, though this entity is not defined (s. 6.1);
- the CVRD is made responsible for employing the "emergency coordinator and deputy coordinator," whose roles are set out in their job descriptions (which are not attached to the agreement) (ss. 7.1 and 7.2);
- there is a provision under which the parties release any claims against each other (s. 9.1);
- there are minimum insurance requirements for each party (Article 10);
- there is an early termination provision permitting the agreement to be terminated on not less than 12 months' notice (s. 11.1);
- there is a dispute resolution provision (Article 12); and
- there is a schedule of costs which may be charged against the service by the CVRD, and a list of costs which may not be so charged (Schedule A).

In connection with the CVRD EP Agreement, we would have the following comments and observations.

Conceptual Issues

Nature of the Regional Plan. It is not entirely clear whether the emergency plan developed and maintained as contemplated by the CVRD EP Agreement, is also expected to be adopted and used as the emergency plan of each of the municipalities, to meet their respective obligations under the EPA. The first recital reads:

> The CVRD, together with the City of Courtenay, the Town of Comox and the Village of Cumberland, have prepared, developed and implemented the Comox Valley Emergency Plan as a local emergency plan under the *Emergency Program Act* (the "Plan").

This recital suggests that the Regional Plan constitutes the emergency plan for each participant (including the municipalities and the CVRD), as required by section 6(2) of the EPA. However, within various of the materials that constitute the Regional Plan,[133] it is suggested that each municipality needs to have a "Local Authority Emergency Plan," without clearly indicating what

[133] See, for example, the "Introduction" section to the *Comox Valley Regional Emergency Plan: EOC Activation Guidelines,* at p. 10.

that plan is intended to cover, and whether it is a secondary plan, required to be adopted and maintained by the EPA, or whether it was simply an attempt to distinguish between an ordinary emergency – e.g., a structure fire – and an emergency of the nature and extent that would lead to invoking the broader powers under the EPA and activation of the Regional Plan.

If the Regional Plan is intended to constitute the Village's emergency plan under the EPA, it should be formally adopted as such under the CVRD EP Agreement (and recognized in any update to Bylaw No. 1022). If any additional supplemental emergency plan is required, for purely localized events, then that additional emergency plan should be identified in the agreement (and in the EP Aid Agreement), and formally identified in the Village's bylaw and policy as constituting a complementary or supplementary emergency plan for the purposes of the EPA.

Operational Responsibilities of the CVRD. The intent of the CVRD EP Agreement appears to be that the CVRD will manage the administrative aspects of the Emergency Program, including keeping the Regional Plan up to date. The CVRD's responsibilities, however, are not well defined, and both under the agreement and in practice, it appears to be taking on an operational role without clearly indicating if that operational role is an included cost. Our understanding is that intent was that the Village (and each of the other municipal participants) needs to be able to operationalize the Regional Plan and undertake its own emergency responses as contemplated by the EPA. Should a service participant require operational assistance with a response, such assistance would be requested (and paid for) under the EP Aid Agreement. However:

- the description of the CVRD's responsibilities does not preclude some operational responsibilities as being included within its remit:
    - the job description for the emergency coordinator (the "Manager of Emergency Programs") employed by the CVRD pursuant to section 7.1, includes potential operational responsibilities:[134]
        - support program staff in developing and implementing work plans for handling the program's operational requirements […];
        - carry out the duties as required to coordinate the emergency preparedness, response and recovery plans prepared by the local authorities; and
        - ensure [the] program has 365 days 24/7 hour per day first contact and response coverage scheduled and participate in coverage;
    - the role of the deputy coordinator (the "Emergency Planning Coordinator") employed by the CVRD pursuant to section 7.1, includes supporting "the

[134] CVRD Position Description, "Manager of Emergency Programs," (September 2021). We have assumed that this senior role corresponds to the "emergency coordinator" position identified in section 7.1 – however, it would be preferable if the CVRD EP Agreement correctly described the position as created by the CVRD.

operation of the emergency program including the capacity to activate an emergency operations centre" (which also suggests a potential operational role);[135] and

- based on our discussions with the Village and the CVRD, operational support is generally provided in practice; and

- the CVRD EP Agreement suggests that an incident may involve the activation of a Regional EOC (s. 1.1, definition of "Regional EOC"), but any shared costs associated with operating a Regional EOC are not addressed, and the defined term is not then used in the agreement.

Overall, the distinction between the CVRD's administrative role and any operational role it might play (and how costs for the latter are to be shared), should be addressed more clearly.

Drafting Issues

In addition to the underlying conceptual issues that need clarification, the following drafting issues were noted:

- The job duties and roles of the emergency coordinator and deputy coordinator should be attached to and form part of the CVRD EP Agreement and the position names used in the agreement should align with the CRVD job descriptions for these roles.

- Section 8.1 should expressly note that the declaration of a state of local emergency rests with the relevant local government. Consideration also should be given to addressing the delegation of powers under such a declaration (e.g., possibly to the emergency coordinator/Manager of Emergency Programs), depending on how the parties agree the Plan should be operationalized in different scenarios.

- Also in section 8.1, the reference to the "Comox Valley emergency plan" should be changed to the defined term the "Plan".

- The parties should review the release language in section 9.1. Although the section has a heading reading "Indemnity," none is actually provided for in this section. If each party is to bear its own responsibility for claims by third parties, this issue should be made clear. Liability allocation, indemnification and releases are complex: the parties should agree the approach and then review the language with legal counsel.

- The early termination language in section 11.1 should be reviewed. It currently suggests that a party can terminate only "part" of the agreement, which is an untenable approach.

- In connection with the dispute resolution processes set out in Article 12:

[135] CVRD Position Description, "Emergency Planning Coordinator," (September 2021). Again, we have assumed that this role corresponds to the "deputy coordinator" position identified in section 7.1 – however, it would be preferable if the CVRD EP Agreement correctly described the position.

- consideration should be given to defining some time frames around initial attempts to negotiate a resolution, before moving to mediation; and
- the *Commercial Arbitration Act* is now just the *Arbitration Act*, SBC 2020, c.2.

- If the hybrid structure is retained, the EP Aid Agreement should be explicitly cross-referenced.
- When the agreement is refreshed, the defined terms should be put in alphabetical order.

14.1.3 EP Aid Agreement

The EP Aid Agreement enables a party to request assistance from one of the other local governments within the Comox Valley, in circumstances where such assistance is required to address a state of local emergency. The EP Aid Agreement is co-terminus with the CVRD EP Agreement. It is a critical component of the hybrid emergency program structure that has been established in the Comox Valley.

Under the EP Aid Agreement:

- parties are to mobilize and use their own resources before requesting aid under the agreement (s. 5.1);
- a party may request aid from any one or more of the other parties, who "shall provide the assistance requested subject to this Agreement" (s. 5.2);
- a process for requesting and providing assistance is set out (ss. 5.3 – 5.10);
- a Providing Party's obligation to provide assistance is variously described – section 5.5 indicates that the level and extent of assistance is at the discretion of the EOC director of the Providing Party, while subsection 5.7(a) limits that discretion by indicating that a Providing Party may only "refuse to provide assistance where it considers in good faith that the Resources will be imminently required within its own jurisdiction. This issue is examined further, below;
- the reimbursement principles relating to Resources provided by a Providing Party are set out (Article 6);
- a broad indemnity is given by a Requesting Party to any Providing Party (s. 7.1);
- certain minimum insurance requirements are prescribed (Article 8);
- an early termination provision, identical to that under the CVRD EP Agreement, is set out in section 9. The comments made above in respect of this section also apply; and
- a dispute resolution process, identical to that under the CVRD EP Agreement, is set out (Article 10). The suggestions made above for enhancing this section, apply here as well.

When the EP Aid Agreement is refreshed, if the hybrid model is retained, we would suggest reviewing the following issues:

Conceptual Issues

- The parties should review and determine whether the obligation to provide assistance is discretionary, or must be predicated on a risk assessment conducted at the time of the request. In general, it probably is preferable to make any decision to provide assistance, or any decision as to what Resources will be provided, purely discretionary, to avoid potential liability concerns. We also would suggest, however, that the indemnity in section 7.1 expressly include any claim founded on either a failure to provide Resources, or any provision of Resources that is different than what was requested. We note that s. 5.7(b) indicates that a Providing Party "does not assume any responsibilities or liabilities by providing or not providing assistance."[136] This section suggests that the decision as to whether to provide (and what to provide) should be made purely discretionary.

- We expect that, where an assistance request is being declined or fulfilled only in part, there are operational processes for notifying a Requesting Party of that decision – however, it would be useful to include that obligation in the EP Aid Agreement.

- There should be an express "no third-party beneficiaries" clause in the agreement.

- In connection with cost recovery, the agreement should clarify a Requesting Party's responsibility to repair and/or replace damaged apparatus and equipment. The agreement addresses this issue in several places:

    - paragraph 6.1(b)(ii) requires a Requesting Party to pay the "fair market value" of "supplies, provisions or other property which is destroyed, consumed, damaged beyond repair or otherwise is of no further practical use…";

    - subsection 6.1(d) provides that the Requesting Party is responsible for "reasonable repair costs" but not for "any other charges for breakdown or damage" (presumably to the supplied Resources – this subsection's drafting should be reviewed – see discussion below);

    - subsection 6.1(f) requires that the Resources be returned "in the same working condition as when…provided;" and

    - the indemnity in section 7.1 permits an indemnity claim by the Providing Party for any "damage or injury to…property".

  We would suggest that the parties clarify these requirements – ideally in a single, standalone section. It also may be appropriate to address any insurance proceeds that

[136] One of the complexities with the definitions is that a party does not become a "Providing Party" unless it actually provides Resources. So, if it is asked for Resources and refuses assistance, it technically would not fall within s. 5.7(b).

a Providing Party may be able to claim (e.g., for apparatus or equipment destroyed or damaged beyond repair).

- As noted in the discussion of the CVRD EP Agreement, a process for sharing the costs associated with operating a Regional EOC should be addressed.
- Where a Regional EOC is activated, either this agreement or the CVRD EP Agreement should address the issue of authority delegation from the municipalities under their state of local emergency declarations, to the Regional EOC.

Drafting Issues

- In section 5.8, the phrase: "that is supplies" should read "that it supplies".
- In section 5.11, the word "Agreed" should not be capitalized.
- In subsection 6.1(a):
    - add the word "or" between the terms "Emergency Disaster" in line 3;
    - in line 4, change the phrase "assistance to" to "assistance of";
    - in relation to the recovery of costs under an EMBC task number, indicate who is expected to make this application and whether or not it is an obligation.
- Subject to the substantive comment above regarding clarifying repair and replacement obligations, subsection 6.1(d) should be reviewed. This subsection deals with "vehicles and equipment" as a subset of the defined term "Resources," and it reads, in part, as follows:

    > "but shall not be required to pay rent or any other charges for breakdown or damage to the Providing Party **of** the use of the **equipment**."

    It likely should be revised to read:

    > "but shall not be required to pay to the Providing Party any rent, or other charges for breakdown or damage, **for** the use of the **vehicles or** equipment".

- When revised, a consistent approach to capitalizing (or not capitalizing) defined terms, and using such terms, should be adopted. For example, the term "Requesting Party" is capitalized, and generally used as such throughout the agreement, except in the defined term "Providing Party." The benefit to capitalizing defined terms, and using them consistently throughout the agreement, is that it enhances precision and alerts the reader that the particular term has a specific meaning.
- The defined terms should be in alphabetical order.

14.2 Organizational Structure

Consistent with its obligations under the CVRD EP Agreement, the CVRD has created two emergency planning positions – a Manager of Emergency Programs and an Emergency Planning Coordinator, with responsibility for the overall administrative support of the CVRD Emergency Program. As a matter of practice, the following services are provided when requested for emergency incidents:

- Emergency Support Services to provide for those impacted by emergencies with short term emergency shelter and food;
- Communications Group consisting of regional volunteers with amateur radio equipment to support Incident Commanders or the EOC with back-up communications when normal means are adversely impacted in an emergency; and
- Search and Rescue which is provided by a local society supported by the CVRD to assist with ground search operations in the region.

It appears that, in addition to the Regional Plan, each local government is expected to have some form of localized emergency plan. Each municipality also has a local EOC location, equipment and personnel to support emergency incidents within their jurisdictions. For larger events or where multiple jurisdictions are impacted, the Regional EOC can be activated.

14.3 Training and Exercises

The CVRD offers emergency program and EOC training and exercises to each local government using contracted trainers. Village staff members have received periodic training and the records are maintained by the CVRD and shared with the Village. These programs, if taken up by the Village, would meet the Village's statutory obligations under the EPA.

The CVRD conducts regular wildland fire exercises for all communities.

14.4 Facilities and Equipment

The Village's EOC location is identified as the Village office. This location has a suggested EOC layout, but it does not have any dedicated electronic equipment or EOC materials. The expectation is that existing municipal staff workstations would be used in the event of an EOC activation in this location. It is anticipated that only a level one activation would utilize this space and larger incidents would require the Village to request activation of the Regional EOC.

There is a back-up generator supporting the building housing the Village EOC location.

The CVRD has a location identified, equipped and personnel identified for use as the Regional EOC to support its needs for the Electoral Areas and to support responses to larger emergencies and cross-jurisdictional events.

The Village has a Memorandum of Understanding with the CVRD Emergency Program under which it has agreed to make available the Cumberland Recreational Centre as a reception centre and/or group lodgings when required.[137]

14.5 Planning

We have noted above that there seems to be an intent that the Regional Plan will constitute the Village's emergency plan, potentially supplemented by a local version. We are aware that there is a draft Cumberland-specific emergency plan, under which the Fire Chief is identified as the EPC, that has not yet been adopted.

We understand that the expectation of the CVRD is that the Village will have its own localized emergency plan and an ability to activate a Village EOC for at least a level one incident. The Village is responsible to identify and submit requests to the CVRD for any EOC personnel training needs. There is a comprehensive Evacuation Plan for the Village that was last updated in 2014.[138] This document contains contact information that needs to be updated.

In relation to the Regional Plan, discussed above, there are activation guidelines provided, and the CVRD (assisted by the various committees that have been constituted) is responsible for keeping it up to date.

14.6 Recommendations

#14-1: The Village, in consultation with the CVRD and other municipal service participants, should review whether a fully-integrated regional service to provide emergency planning and operations, one meeting the EPA requirements for all participants, should be created to replace the current hybrid structure.

#14-2: The Village needs to clarify (and formally identify) its emergency plan or emergency plans for the purposes of section 6(2) of the EPA. If the Regional Plan is intended to be the Village's plan (or part thereof) it should be formally adopted. If a further standalone plan is required to supplement the Regional Plan, then it should be completed and also formally adopted.

#14-3: If the hybrid emergency planning structure is retained, the CVRD EP Agreement should be reviewed and potentially updated to address the issues noted in this section of the report, including the following:

- a single agreement with all of the participants should be created;
- the extent, if any, of the CVRD's operational responsibilities (as opposed to administrative responsibilities) under the agreement should be clearly specified;
- the integration between this agreement and the EP Aid Agreement should be expressly noted; and

[137] Comox Valley Emergency Program and Village of Cumberland, Memorandum of Understanding dated 4 May 2021.

[138] Village of Cumberland, "Level 2 and 3 Evacuation Guidelines," (May 2014).

- the various drafting and other issues identified in this section of the report should be addressed.

#14-4: The EP Aid Agreement should be reviewed and the issues identified in this section of the report considered or addressed in any updated version, including the following:

- the nature of a party's responsibility to respond to and fulfill an aid request should be clarified;
- the obligations of a Requesting Party to repair or replace damaged or destroyed Resources should be clarified;
- how the costs of operating a Regional EOC are to be shared should be specified; and
- express provision should be made for situations where powers need to be delegated by the municipalities (or the CVRD) to the Regional EOC; and
- the integration between this agreement and the CVRD EP Agreement should be expressly noted.

#14-5: Consider adding an OG to describe the emergency plan and the role or actions required by the Department during an activation.

#14-6: Update key EOC positions and the corresponding municipal staff positions that are expected to fill the roles and update the chart in the Village's section of the Regional Plan.

#14-7: Update the EOC contact list and organization chart contained in the Village's section of the Regional Plan.

#14-8: Update the contact information contained in the Evacuation Plan.

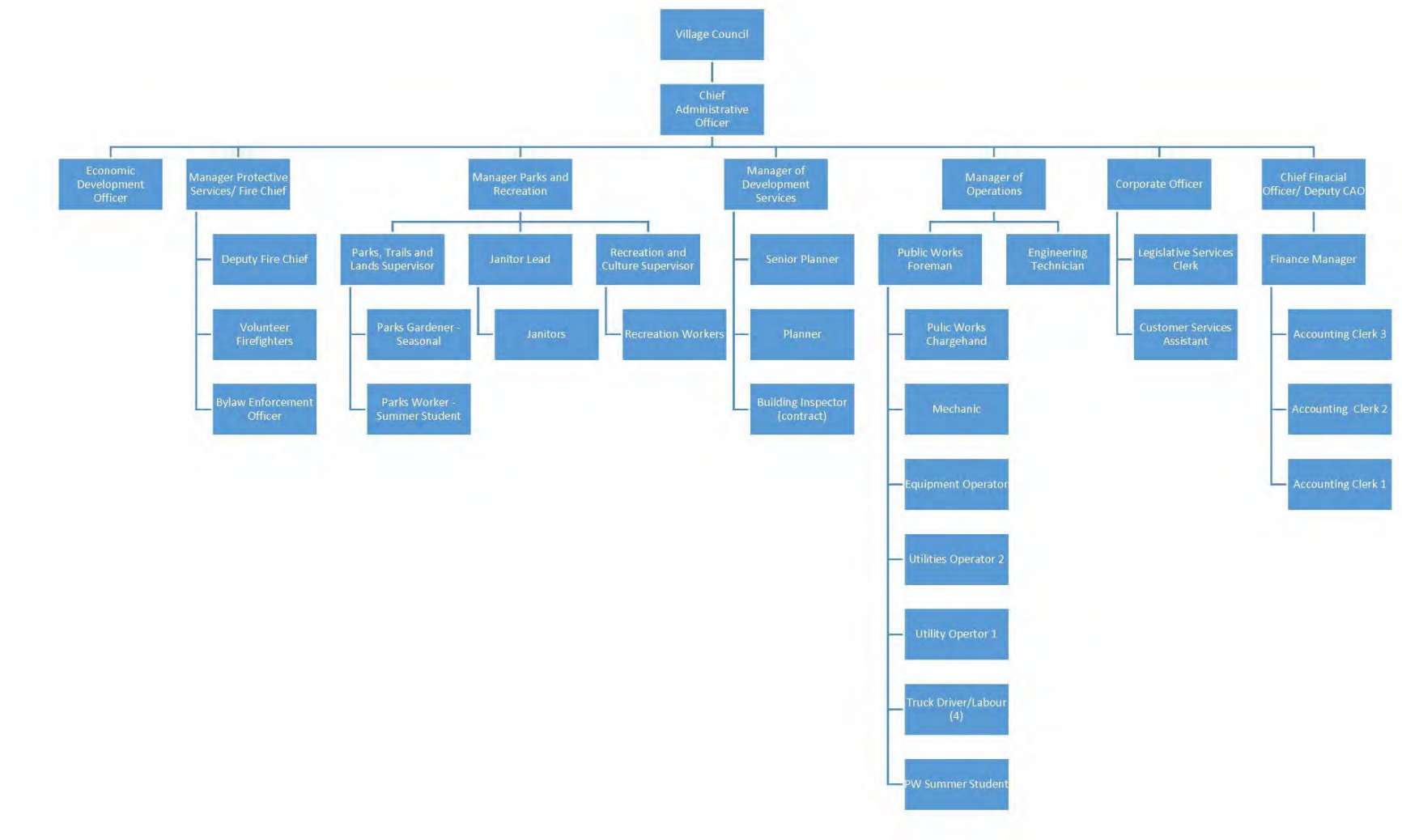
#14-9: Request a refresh of the Hazard, Risk and Vulnerability Analysis by the CVRD.

Appendix 1: Defined Terms and Acronyms

Term/Acronym	Definition
AHJ	Authority Having Jurisdiction
BCEHS	British Columbia Emergency Health Services
BCEMS	British Columbia Emergency Management System
BFF	Basic Fire Flow
Bylaw No. 988	*Fire Protection Services and Regulation Bylaw No. 988, 2014*
Bylaw No. 1022	*Emergency Measures Bylaw No. 1022, 2015*
CAD	Computer Aided Dispatch
CAO	Chief Administrative Officer
CFRD	Cumberland Fire Rescue Department
CVRD	Comox Valley Regional District
DC/TO	Deputy Chief/Training Officer
Department	Cumberland Fire Rescue Department
DMA	Dave Mitchell & Associates Ltd.
DPG	Dwelling Protection Grade
EIM	Emergency Incident Management
EMBC	Emergency Management BC
EOC	Emergency Operations Centre
EPA	*Emergency Program Act*
EPC	Emergency Program Coordinator
FMR	First Medical Responder
FF-I and FF-II	Firefighter I, Firefighter II
FO-I and FO-II	Fire Officer I, Fire Officer II
HRVA	Hazard, Risk and Vulnerability Assessment
IGPM	Imperial Gallons per Minute
ISO	Incident Safety Officer
JIBC	Justice Institute of BC
JPRs	Job Performance Requirements
KBRD	Kootenay Boundary Regional District
LAFC	Local Assistant to the Fire Commissioner
MVI	Motor Vehicle Incident
NFPA	National Fire Protection Association

Term/Acronym	Definition
OCP	*Village of Cumberland Official Community Plan, Bylaw No. 990, 2014*
OFC	Office of the Fire Commissioner
OG	Operational Guideline
OH&S	Occupational Health and Safety
OH&S Regulation	*Occupational Health and Safety Regulation*, B.C. Reg. 296/97
PFPC	Public Fire Protection Classification
Playbook	*British Columbia Fire Service Minimum Training Standards: Structure Firefighters – Competency and Training Playbook* (September 2014; second edition – May 2015)
Policy 14.2	Council Policy 14.2, “Fire Rescue Services in Outside Areas”
PPE	Personal Protective Equipment
RIT	Rapid Intervention Team
SCBA	Self-Contained Breathing Apparatus
SCRD	Sunshine Coast Regional District
WCA	*Workers Compensation Act* (B.C.)
WHMIS	Workplace Hazardous Materials Identification System
Village	Village of Cumberland

Appendix 2: Village Organizational Chart



Appendix 3: NFPA Standards

The following is a list of the referenced NFPA Standards, the date of the current edition, and a brief description of the standard. [139]

NFPA 472: *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2018

This standard shall identify the minimum levels of competence required by responders to emergencies involving hazardous materials/weapons of mass destruction (WMD).

NFPA 1001: *Standard for Fire Fighter Professional Qualifications*, 2019

This standard identifies the minimum job performance requirements (JPRs) for career and volunteer fire fighters whose duties are primarily structural in nature.

NFPA 1002: *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2017

This standard identifies the minimum job performance requirements (JPRs) for career and volunteer fire fighters and fire brigade personnel who drive and operate fire apparatus.

NFPA 1006: *Standard for Technical Rescue Personnel Professional Qualifications*, 2021

This standard identifies the minimum job performance requirements (JPRs) for fire service and other emergency response personnel who perform technical rescue operations.

NFPA 1021: *Standard for Fire Officer Professional Qualifications*, 2020

This standard identifies the minimum job performance requirements (JPRs) for fire officer.

NFPA 1031: *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*, 2014

This standard identifies the minimum job performance requirements (JPRs) for fire inspectors and plan examiners.

NFPA 1033: *Standard for Professional Qualifications for Fire Investigator*, 2014

This standard facilitates safe, accurate investigations by specifying the job performance requirements (JPRs) necessary to perform as a fire investigator in both the private and public sectors.

[139] Source: https://www.nfpa.org/

NFPA 1035: *Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist and Youth Firesetter Program Manager Professional Qualifications*, 2015

This standard identifies the minimum job performance requirements (JPRs) for public fire and life safety educators, public information officers, youth firesetter intervention specialists, and youth firesetter program managers.

NFPA 1041: *Standard for Fire and Emergency Services Instructor Professional Qualifications*, 2019

This standard identifies the minimum job performance requirements (JPRs) for fire service instructors.

NFPA 1072: *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*, 2017

This Standard identifies the minimum job performance requirements (JPRs) for Hazardous Materials/Weapons of Mass Destruction emergency response personnel.

NFPA 1407: *Standard for Training Fire Service Rapid Intervention Crews*, 2020

This standard specifies the basic training procedures for fire service personnel to conduct fire fighter rapid intervention operations so as to promote fire fighter safety and survival.

NFPA 1500: *Standard on Fire Department Occupational Safety, Health, and Wellness Program*, 2021

This standard specifies the minimum requirements for an occupational safety and health program for fire departments or organizations that provide rescue, fire suppression, emergency medical services, hazardous materials mitigation, special operations, and other emergency services.

NFPA 1521: *Standard for Fire Department Safety Officer Professional Qualifications*, 2020

This standard identifies the minimum job performance requirements (JPRs) necessary to perform the duties as a fire department health and safety officer and a fire department incident safety officer.

NFPA 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, 2020

This standard specifies requirements for effective and efficient organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments to protect citizens and the occupational safety and health of fire department employees.

NFPA 1901: *Standard for Automotive Fire Apparatus*, 2016

This standard defines the requirements for new automotive fire apparatus and trailers designed to be used under emergency conditions to transport personnel and equipment and to support the suppression of fires and mitigation of other hazardous situations.

Appendix 4: BC Coroner's Judgement of Inquiry into the Death of Chad Schapansky

The following is the Coroner's Report with regard to the death of Clearwater firefighter Chad Schapansky on 29 March 2004.

To obtain a copy of this Appendix, please contact the Ministry of Public Safety and Solicitor General.

Appendix 5: Playbook Training Requirements

Structure Firefighters Competency and Training

PLAYBOOK

Second Edition: May 2015

References to NFPA Standards for:

Train the Trainer

Exterior Operations Firefighter

Interior Operations Firefighter

Full Service Operations Firefighter

Team Leader Exterior and Interior

Risk Management Officer

Company Fire Officer

Standards Referenced:

NFPA 220	Standard on Types of Building Construction
NFPA 921	Guide for Fire and Explosion Investigations
NFPA 1001	Standard for Fire Fighter Professional Qualifications
NFPA 1021	Standard for Fire Officer Professional Qualifications
NFPA 1041	Standard for Fire Service Instructor Professional Qualifications
NFPA 1407	Standard for Training Fire Service Rapid Intervention Crews
NFPA 1500	Standard on Occupational Safety and Health Program
NFPA 1584	Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises
NFPA 5000	Building Construction and Safety Code

Train the Trainer	Competency Met
NFPA 1041 4.2.1 – 4.2.4 / 4.3.2 – 4.3.3 / 4.4.1 – 4.4.4 / 4.5.1 – 4.5.3 and 4.5.5	
4.2.1 Definition of Duty. The management of basic resources and the records and reports essential to the instructional process.	
4.2.2 Assemble course materials, given a specific topic, so that the lesson plan and all materials, resources, and equipment needed to deliver the lesson are obtained. **(A) Requisite Knowledge.** Components of a lesson plan, policies and procedures for the procurement of materials and equipment, and resource availability. **(B) Requisite Skills.** None required.	Yes ☐ No ☐
4.2.3 Prepare requests for resources, given training goals and current resources, so that the resources required to meet training goals are identified and documented. **(A) Requisite Knowledge.** Resource management, sources of instructional resources and equipment. **(B) Requisite Skills.** Training schedule completion.	Yes ☐ No ☐
4.2.4 Schedule single instructional sessions, given a training assignment, department scheduling procedures, instructional resources, facilities and timeline for delivery, so that the specified sessions are delivered according to department procedure. **(A) Requisite Knowledge.** Departmental scheduling procedures and resource management. **(B) Requisite Skills.** Training schedule completion.	Yes ☐ No ☐
4.3.2* Review instructional materials, given the materials for a specific topic, target audience, and learning environment, so that elements of the lesson plan, learning environment, and resources that need adaptation are identified. **(A) Requisite Knowledge.** Recognition of student limitations and cultural diversity, methods of instruction, types of resource materials, organization of the learning environment, and policies and procedures. **(B) Requisite Skills.** Analysis of resources, facilities, and materials	Yes ☐ No ☐
4.3.3* Adapt a prepared lesson plan, given course materials and an assignment, so that the needs of the student and the objectives of the lesson plan are achieved. **(A)* Requisite Knowledge.** Elements of a lesson plan, selection of instructional aids and methods, and organization of the learning environment. **(B) Requisite Skills.** Instructor preparation and organizational skills.	Yes ☐ No ☐
4.4.1 Definition of Duty. The delivery of instructional sessions utilizing prepared course materials.	
4.4.2 Organize the classroom, laboratory, or outdoor learning environment, given a facility and an assignment, so that lighting, distractions, climate control or weather, noise control, seating, audiovisual equipment, teaching aids, and safety are considered. **(A) Requisite Knowledge.** Classroom management and safety, advantages and limitations of audiovisual equipment and teaching aids, classroom arrangement, and methods and techniques of instruction. **(B) Requisite Skills.** Use of instructional media and teaching aids.	Yes ☐ No ☐
4.4.3 Present prepared lessons, given a prepared lesson plan that specifies the presentation method(s), so that the method(s) indicated in the plan are used and the stated objectives or learning outcomes are achieved, applicable safety standards and practices are followed, and risks are addressed. **(A)* Requisite Knowledge.** The laws and principles of learning, methods and techniques of instruction, lesson plan components and elements of the communication process, and lesson plan terminology and definitions; the impact of cultural differences on instructional delivery; safety rules, regulations, and practices; identification of training hazards; elements and limitations of distance learning; distance learning delivery methods; and the instructor's role in distance learning. **(B) Requisite Skills.** Oral communication techniques, methods and techniques of instruction, and utilization of lesson plans in an instructional setting.	Yes ☐ No ☐
4.4.4* Adjust presentation, given a lesson plan and changing circumstances in the class environment, so that class continuity and the objectives or learning outcomes are achieved. **(A) Requisite Knowledge.** Methods of dealing with changing circumstances. **(B) Requisite Skills.** None required	Yes ☐ No ☐
4.5.1* Definition of Duty. The administration and grading of student evaluation instruments.	

Train the Trainer	Competency Met
4.5.2 Administer oral, written, and performance tests, given the lesson plan, evaluation instruments, and evaluation procedures of the agency, so that bias or discrimination is eliminated the testing is conducted according to procedures, and the security of the materials is maintained. **(A) Requisite Knowledge.** Test administration, agency policies, laws and policies pertaining to discrimination during training and testing, methods for eliminating testing bias, laws affecting records and disclosure of training information, purposes of evaluation and testing, and performance skills evaluation. **(B) Requisite Skills.** Use of skills checklists and oral questioning techniques.	Yes ☐ No ☐
4.5.3 Grade student oral, written, or performance tests, given class answer sheets or skills checklists and appropriate answer keys, so the examinations are accurately graded and properly secured. **(A) Requisite Knowledge.** Grading methods, methods for eliminating bias during grading, and maintaining confidentiality of scores. **(B) Requisite Skills.** None required.	Yes ☐ No ☐
4.5.5* Provide evaluation feedback to students, given evaluation data, so that the feedback is timely; specific enough for the student to make efforts to modify behavior; and objective, clear, and relevant; also include suggestions based on the data. **(A) Requisite Knowledge.** Reporting procedures and the interpretation of test results. **(B) Requisite Skills.** Communication skills and basic coaching.	Yes ☐ No ☐

Exterior Operations – Firefighter	Competency Met
Emergency Scene Traffic NFPA 1001 5.3.3	
5.3.3* Establish and operate in work areas at emergency scenes, given protective equipment, traffic and scene control devices, structure fire and roadway emergency scenes, traffic hazards and downed electrical wires, an assignment, and SOPs, so that procedures are followed, protective equipment is worn, protected work areas are established as directed using traffic and scene control devices, and the fire fighter performs assigned tasks only in established, protected work areas. **(A) Requisite Knowledge.** Potential hazards involved in operating on emergency scenes including vehicle traffic, utilities, and environmental conditions; proper procedures for dismounting apparatus in traffic; procedures for safe operation at emergency scenes; and the protective equipment available for members' safety on emergency scenes and work zone designations. **(B) Requisite Skills.** The ability to use personal protective clothing, deploy traffic and scene control devices, dismount apparatus, and operate in the protected work areas as directed.	Yes ☐ No ☐
Safety & Communications NFPA 1001 5.1.1, 5.1.2, 5.2, 5.2.1, 5.2.2, 5.2.3, 5.3.2, 5.3.17, 5.3.18	
5.1 General. For qualification at Level I, the fire fighter candidate shall meet the general knowledge requirements in 5.1.1; the general skill requirements in 5.1.2; the JPRs defined in Sections 5.2 through 5.5 of this standard; and the requirements defined in Chapter 5, Core Competencies for Operations Level Responders, and Section 6.6, Mission-Specific Competencies: Product Control, of NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents.*	Yes ☐ No ☐
5.1.1 General Knowledge Requirements. The organization of the fire department; the role of the Fire Fighter I in the organization; the mission of fire service; the fire department's standard operating procedures (SOPs) and rules and regulations as they apply to the Fire Fighter I; the value of fire and life safety initiatives in support of the fire department mission and to reduce fire fighter line-of-duty injuries and fatalities; the role of other agencies as they relate to the fire department; aspects of the fire department's member assistance program; the importance of physical fitness and a healthy lifestyle to the performance of the duties of a fire fighter; the critical aspects of NFPA1500, *Standard on Fire Department Occupational Safety and Health Program.*	Yes ☐ No ☐
5.1.2 General Skill Requirements. The ability to don personal protective clothing, doff personal protective clothing and prepare for reuse, hoist tools and equipment using ropes and the correct knot, and locate information in departmental documents and standard or code materials.	Yes ☐ No ☐
5.2 Fire Department Communications. This duty shall involve initiating responses, receiving telephone calls, and using fire department communications equipment to correctly relay verbal or written information, according to the JPRs in 5.2.1 through 5.2.4.	
5.2.1* Initiate the response to a reported emergency, given the report of an emergency, fire department SOPs, and communications equipment, so that all necessary information is obtained, communications equipment is operated correctly, and the information is relayed promptly and accurately to the dispatch center. **(A) Requisite Knowledge.** Procedures for reporting an emergency; departmental SOPs for taking and receiving alarms, radio codes, or procedures; and information needs of dispatch center. **(B) Requisite Skills.** The ability to operate fire department communications equipment, relay information, and record information.	Yes ☐ No ☐
5.2.2 Receive a telephone call, given a fire department phone, so that procedures for answering the phone are used and the caller's information is relayed. **(A) Requisite Knowledge.** Fire department procedures for answering nonemergency telephone calls. **(B) Requisite Skills.** The ability to operate fire station telephone and intercom equipment.	Yes ☐ No ☐
5.2.3 Transmit and receive messages via the fire department radio, given a fire department radio and operating procedures, so that the information is accurate, complete, clear, and relayed within the time established by the AHJ. **(A) Requisite Knowledge.** Departmental radio procedures and etiquette for routine traffic, emergency traffic, and emergency evacuation signals. **(B) Requisite Skills.** The ability to operate radio equipment and discriminate between routine and emergency traffic.	Yes ☐ No ☐

Exterior Operations – Firefighter	Competency Met
5.3.2* Respond on apparatus to an emergency scene, given personal protective clothing and other necessary personal protective equipment, so that the apparatus is correctly mounted and dismounted, seat belts are used while the vehicle is in motion, and other personal protective equipment is correctly used. **(A) Requisite Knowledge.** Mounting and dismounting procedures for riding fire apparatus, hazards and ways to avoid hazards associated with riding apparatus, prohibited practices, and types of department personal protective equipment and the means for usage. **(B) Requisite Skills.** The ability to use each piece of provided safety equipment.	Yes ☐ No ☐
5.3.17 Illuminate the emergency scene, given fire service electrical equipment and an assignment, so that designated areas are illuminated and all equipment is operated within the manufacturer's listed safety precautions. **(A) Requisite Knowledge.** Safety principles and practices, power supply capacity and limitations, and light deployment methods. supply and lighting equipment, deploy cords and connectors, reset ground-fault interrupter (GFI) devices, and locate lights for best effect.	Yes ☐ No ☐
5.3.18 Turn off building utilities, given tools and an assignment, so that the assignment is safely completed. **(A) Requisite Knowledge.** Properties, principles, and safety concerns for electricity, gas, and water systems; utility disconnect methods and associated dangers; and use of required safety equipment. **(B) Requisite Skills.** The ability to identify utility control devices, operate control valves or switches, and assess for related hazards.	Yes ☐ No ☐
PPE and Self Contained Breathing Apparatus NFPA 1001 5.1.2, 5.2, 5.3, 5.3.1, 5.3.2, 5.5.1	
5.1.2 General Skill Requirements. The ability to don personal protective clothing, doff personal protective clothing and prepare for reuse, hoist tools and equipment using ropes and the correct knot, and locate information in departmental documents and standard or code materials.	Yes ☐ No ☐
5.2 Fire Department Communications. This duty shall involve initiating responses, receiving telephone calls, and using fire department communications equipment to correctly relay verbal or written information, according to the JPRs in 5.2.1 through 5.2.4.	Yes ☐ No ☐
5.3 Fireground Operations. This duty shall involve performing activities necessary to ensure life safety, fire control, and property conservation, according to the JPRs in 5.3.1 through 5.3.20.	
5.3.1* Use self-contained breathing apparatus (SCBA) during emergency operations, given SCBA and other personal protective equipment, so that the SCBA is correctly donned, the SCBA is correctly worn, controlled breathing techniques are used, emergency procedures are enacted if the SCBA fails, all low-air warnings are recognized, respiratory protection is not intentionally compromised, and hazardous areas are exited prior to air depletion. **(A) Requisite Knowledge.** Conditions that require respiratory protection, uses and limitations of SCBA, components of SCBA, donning procedures, breathing techniques, indications for and emergency procedures used with SCBA, and physical requirements of the SCBA wearer. **(B) Requisite Skills.** The ability to control breathing, replace SCBA air cylinders, use SCBA to exit through restricted passages, initiate and complete emergency procedures in the event of SCBA failure or air depletion, and complete donning procedures.	Yes ☐ No ☐
5.3.2* Respond on apparatus to an emergency scene, given personal protective clothing and other necessary personal protective equipment, so that the apparatus is correctly mounted and dismounted, seat belts are used while the vehicle is in motion, and other personal protective equipment is correctly used. **(A) Requisite Knowledge.** Mounting and dismounting procedures for riding fire apparatus, hazards and ways to avoid hazards associated with riding apparatus, prohibited practices, and types of department personal protective equipment and the means for usage. **(B) Requisite Skills.** The ability to use each piece of provided safety equipment.	Yes ☐ No ☐
5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer's or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. **(A) Requisite Knowledge.** Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer's or departmental guidelines for cleaning equipment and tools. **(B) Requisite Skills.** The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.	Yes ☐ No ☐

Exterior Operations – Firefighter	Competency Met
Ropes and Knots NFPA 1001 5.1.2, 5.3.20, 5.5.1	
5.1.2 General Skill Requirements. The ability to don personal protective clothing, doff personal protective clothing and prepare for reuse, hoist tools and equipment using ropes and the correct knot, and locate information in departmental documents and standard or code materials.	Yes ☐ No ☐
5.3.20 Tie a knot appropriate for hoisting tool, given personnel protective equipment, tools, ropes, and an assignment, so that the knots used are appropriate for hoisting tools securely and as directed. **(A) Requisite Knowledge.** Knot types and usage; the difference between life safety and utility rope; reasons for placing rope out of service; the types of knots to use for given tools, ropes, or situations; hoisting methods for tools and equipment; and using rope to support response activities. **(B) Requisite Skills.** The ability to hoist tools using specific knots based on the type of tool.	Yes ☐ No ☐
5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer's or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. **(A) Requisite Knowledge.** Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer's or departmental guidelines for cleaning equipment and tools. **(B) Requisite Skills.** The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.	Yes ☐ No ☐
Fire Streams, Hose and Appliances NFPA 1001 5.3.7, 5.3.8, 5.5.1, 5.5.2	
5.3.7* Attack a passenger vehicle fire operating as a member of a team, given personal protective equipment, attack line, and hand tools, so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are overhauled, and the fire is extinguished. **(A) Requisite Knowledge.** Principles of fire streams as they relate to fighting automobile fires; precautions to be followed when advancing hose lines toward an automobile; observable results that a fire stream has been properly applied; identifying alternative fuels and the hazards associated with them; dangerous conditions created during an automobile fire; common types of accidents or injuries related to fighting automobile fires and how to avoid them; how to access locked passenger, trunk, and engine compartments; and methods for overhauling an automobile. **(B) Requisite Skills.** The ability to identify automobile fuel type; assess and control fuel leaks; open, close, and adjust the flow and pattern on nozzles; apply water for maximum effectiveness while maintaining flash fire protection; advance 1½ in. (38 mm) or larger diameter attack lines; and expose hidden fires by opening all automobile compartments. in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved.	Yes ☐ No ☐
5.3.8* Extinguish fires in exterior Class A materials, given fires in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved. **(A) Requisite Knowledge.** Types of attack lines and water streams appropriate for attacking stacked, piled materials and outdoor fires; dangers — such as collapse — associated with stacked and piled materials; various extinguishing agents and their effect on different material configurations; tools and methods to use in breaking up various types of materials; the difficulties related to complete extinguishment of stacked and piled materials; water application methods for exposure protection and fire extinguishment; dangers such as exposure to toxic or hazardous materials associated with storage building and container fires; obvious signs of origin and cause; and techniques for the preservation of fire cause evidence. **(B) Requisite Skills.** The ability to recognize inherent hazards related to the material's configuration, operate handlines or master streams, break up material using hand tools and water streams, evaluate for complete extinguishment, operate hose lines and other water application devices, evaluate and modify water application for maximum penetration, search for and expose hidden fires, assess patterns for origin determination, and evaluate for complete extinguishment	Yes ☐ No ☐

Exterior Operations – Firefighter	Competency Met
5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer's or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. **(A) Requisite Knowledge.** Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer's or departmental guidelines for cleaning equipment and tools. **(B) Requisite Skills.** The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.	Yes ☐ No ☐
5.5.2 Clean, inspect, and return fire hose to service, given washing equipment, water, detergent, tools, and replacement gaskets, so that damage is noted and corrected, the hose is clean, and the equipment is placed in a ready state for service. **(A) Requisite Knowledge.** Departmental procedures for noting a defective hose and removing it from service, cleaning methods, and hose rolls and loads. **(B) Requisite Skills.** The ability to clean different types of hose; operate hose washing and drying equipment; mark defective hose; and replace coupling gaskets, roll hose, and reload hose.	Yes ☐ No ☐
Ventilation NFPA 1001 5.3.11, 5.5.1	
5.3.11 Perform horizontal ventilation on a structure operating as part of a team, given an assignment, personal protective equipment, ventilation tools, equipment, and ladders, so that the ventilation openings are free of obstructions, tools are used as designed, ladders are correctly placed, ventilation devices are correctly placed, and the structure is cleared of smoke. **(A) Requisite Knowledge.** The principles, advantages, limitations, and effects of horizontal, mechanical, and hydraulic ventilation; safety considerations when venting a structure; fire behavior in a structure; the products of combustion found in a structure fire; the signs, causes, effects, and prevention of backdrafts; and the relationship of oxygen concentration to life safety and fire growth. **(B) Requisite Skills.** The ability to transport and operate ventilation tools and equipment and ladders, and to use safe procedures for breaking window and door glass and removing obstructions	Yes ☐ No ☐
5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer's or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. **(A) Requisite Knowledge.** Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer's or departmental guidelines for cleaning equipment and tools. **(B) Requisite Skills.** The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.	Yes ☐ No ☐
Water Supply NFPA 1001 5.3.15, 5.5.1, 5.5.2	
5.3.15* Connect a fire department pumper to a water supply as a member of a team, given supply or intake hose, hose tools, and a fire hydrant or static water source, so that connections are tight and water flow is unobstructed. **(A) Requisite Knowledge.** Loading and off-loading procedures for mobile water supply apparatus; fire hydrant operation; and suitable static water supply sources, procedures, and protocol for connecting to various water sources. **(B) Requisite Skills.** The ability to hand lay a supply hose, connect and place hard suction hose for drafting operations, deploy portable water tanks as well as the equipment necessary to transfer water between and draft from them, make hydrant-to-pumper hose connections for forward and reverse lays, connect supply hose to a hydrant, and fully open and close the hydrant.	Yes ☐ No ☐
5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer's or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. **(A) Requisite Knowledge.** Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer's or departmental guidelines for cleaning equipment and tools. **(B) Requisite Skills.** The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures	Yes ☐ No ☐

Exterior Operations – Firefighter	Competency Met
5.5.2 Clean, inspect, and return fire hose to service, given washing equipment, water, detergent, tools, and replacement gaskets, so that damage is noted and corrected, the hose is clean, and the equipment is placed in a ready state for service. **(A) Requisite Knowledge.** Departmental procedures for noting a defective hose and removing it from service, cleaning methods, and hose rolls and loads. **(B) Requisite Skills.** The ability to clean different types of hose; operate hose washing and drying equipment; mark defective hose; and replace coupling gaskets, roll hose, and reload hose.	Yes ☐ No ☐
Ladders NFPA 1001 5.3.6, 5.5.1	
5.3.6* Set up ground ladders, given single and extension ladders, an assignment, and team members if needed, so that hazards are assessed, the ladder is stable, the angle is correct for climbing, extension ladders are extended to the necessary height with the fly locked, the top is placed against a reliable structural component, and the assignment is accomplished. **(A) Requisite Knowledge.** Parts of a ladder, hazards associated with setting up ladders, what constitutes a stable foundation for ladder placement, different angles for various tasks, safety limits to the degree of angulation, and what constitutes a reliable structural component for top placement. **(B) Requisite Skills.** The ability to carry ladders, raise ladders, extend ladders and lock flies, determine that a wall and roof will support the ladder, judge extension ladder height requirements, and place the ladder to avoid obvious hazards.	Yes ☐ No ☐
5.5.1 Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer's or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. **(A) Requisite Knowledge.** Types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer's or departmental guidelines for cleaning equipment and tools. **(B) Requisite Skills.** The ability to select correct tools for various parts and pieces of equipment, follow guidelines, and complete recording and reporting procedures.	Yes ☐ No ☐
Rehabilitation Area (REHAB) NFPA 1001 5.1.1, NFPA 1500, NFPA 1584	
5.1.1 General Knowledge Requirements. The organization of the fire department; the role of the Fire Fighter I in the organization; the mission of fire service; the fire department's standard operating procedures (SOPs) and rules and regulations as they apply to the Fire Fighter I; the value of fire and life safety initiatives in support of the fire department mission and to reduce fire fighter line-of-duty injuries and fatalities; the role of other agencies as they relate to the fire department; aspects of the fire department's member assistance program; the importance of physical fitness and a healthy lifestyle to the performance of the duties of a fire fighter; the critical aspects of NFPA1500, *Standard on Fire Department Occupational Safety and Health Program.*	Yes ☐ No ☐
+ **NFPA 1500** Standard on Occupational Safety and Health Program	Yes ☐ No ☐
+ **NFPA 1584** Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises	Yes ☐ No ☐
Introduction to Basic Fire Behavior and Building Construction NFPA 220, NFPA 921, NFPA 1001 5.3.11, 5.3.12, 5.3.13 NFPA 5000	
5.3.11 Perform horizontal ventilation on a structure operating as part of a team, given an assignment, personal protective equipment, ventilation tools, equipment, and ladders, so that the ventilation openings are free of obstructions, tools are used as designed, ladders are correctly placed, ventilation devices are correctly placed, and the structure is cleared of smoke. **(A) Requisite Knowledge.** The principles, advantages, limitations, and effects of horizontal, mechanical, and hydraulic ventilation; safety considerations when venting a structure; fire behavior in a structure; the products of combustion found in a structure fire; the signs, causes, effects, and prevention of backdrafts; and the relationship of oxygen concentration to life safety and fire growth. **(B) Requisite Skills.** The ability to transport and operate ventilation tools and equipment and ladders, and to use safe procedures for breaking window and door glass and removing obstructions.	Yes ☐ No ☐

Exterior Operations – Firefighter	Competency Met
5.3.12 Perform vertical ventilation on a structure as part of a team, given an assignment, personal protective equipment, ground and roof ladders, and tools, so that ladders are positioned for ventilation, a specified opening is created, all ventilation barriers are removed, structural integrity is not compromised, products of combustion are released from the structure, and the team retreats from the area when ventilation is accomplished. **(A) Requisite Knowledge.** The methods of heat transfer; the principles of thermal layering within a structure on fire; the techniques and safety precautions for venting flat roofs, pitched roofs, and basements; basic indicators of potential collapse or roof failure; the effects of construction type and elapsed time under fire conditions on structural integrity; and the advantages and disadvantages of vertical and trench/strip ventilation. **(B) Requisite Skills.** The ability to transport and operate ventilation tools and equipment; hoist ventilation tools to a roof; cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements; sound a roof for integrity; clear an opening with hand tools; select, carry, deploy, and secure ground ladders for ventilation activities; deploy roof ladders on pitched roofs while secured to a ground ladder; and carry ventilation-related tools and equipment while ascending and descending ladders.	Yes ☐ No ☐
5.3.13 Overhaul a fire scene, given personal protective equipment, attack line, hand tools, a flashlight, and an assignment, so that structural integrity is not compromised, all hidden fires are discovered, fire cause evidence is preserved, and the fire is extinguished. **(A) Requisite Knowledge.** Types of fire attack lines and water application devices most effective for overhaul, water application methods for extinguishment that limit water damage, types of tools and methods used to expose hidden fire, dangers associated with overhaul, obvious signs of area of origin or signs of arson, and reasons for protection of fire scene. **(B) Requisite Skills.** The ability to deploy and operate an attack line; remove flooring, ceiling, and wall components to expose void spaces without compromising structural integrity; apply water for maximum effectiveness; expose and extinguish hidden fires in walls, ceilings, and subfloor spaces; recognize and preserve obvious signs of area of origin and arson; and evaluate for complete extinguishment.	Yes ☐ No ☐
+ **NFPA 220** Standard on Types of Building Construction	Yes ☐ No ☐
+ **NFPA 921** Guide for Fire and Explosion Investigations	Yes ☐ No ☐
+ **NFPA 5000** Building Construction and Safety Code	Yes ☐ No ☐
Dangerous Goods or Hazmat Awareness *(from NFPA 472)* • Can utilize any training provider, including internal, that meets the competencies of NFPA 472 – Awareness Level [Playbook: Page 16, note1]	Yes ☐ No ☐
Gas & Electrical Safety for Firefighters *(supplied by a BC Utility utilizing an evaluation mechanism)* • Can utilize any program, developed by a registered Gas or Electrical Utility within the Province of BC, which includes an evaluation instrument based upon current recommended practice [Playbook: Page 16, note 2]	Yes ☐ No ☐
Incident Command System 100 *(from BCERMS curriculum)* • Can utilize any training provider, including internal, using certified training and evaluation based upon the BCEMS model. [Playbook: Page 16, note 3]	Yes ☐ No ☐

Interior Operations – Firefighter	Competency Met
All of Exterior Operations Firefighter PLUS the following:	Yes ☐ No ☐
Organization, Safety and Communications NFPA 1001 5.2.4	
5.2.4* Activate an emergency call for assistance, given vision obscured conditions, PPE, and department SOPs, so that the fire fighter can be located and rescued. **(A) Requisite Knowledge.** Personnel accountability systems, emergency communication procedures, and emergency evacuation methods. **(B) Requisite Skills.** The ability to initiate an emergency call for assistance in accordance with the AHJ's procedures, the ability to use other methods of emergency calls for assistance.	Yes ☐ No ☐
RIT Training – pertinent to jurisdictional hazards NFPA 1001 5.3.9 NFPA 1407, NFPA 1500	
5.3.9* Conduct a search and rescue in a structure operating as a member of a team, given an assignment, obscured vision conditions, personal protective equipment, a flashlight, forcible entry tools, hose lines, and ladders when necessary, so that ladders are correctly placed when used, all assigned areas are searched, all victims are located and removed, team integrity is maintained, and team members' safety — including respiratory protection — is not compromised. **(A) Requisite Knowledge.** Use of forcible entry tools during rescue operations, ladder operations for rescue, psychological effects of operating in obscured conditions and ways to manage them, methods to determine if an area is tenable, primary and secondary search techniques, team members' roles and goals, methods to use and indicators of finding victims, victim removal methods (including various carries), and considerations related to respiratory protection. **(B)* Requisite Skills.** The ability to use SCBA to exit through restricted passages, set up and use different types of ladders for various types of rescue operations, rescue a fire fighter with functioning respiratory protection, rescue a fire fighter whose respiratory protection is not functioning, rescue a person who has no respiratory protection, and assess areas to determine tenability.	Yes ☐ No ☐
+ **NFPA 1407** Standard for Training Fire Service Rapid Intervention Crews	Yes ☐ No ☐
+ **NFPA 1500** Standard on Fire Department Occupational Safety and Health Program	Yes ☐ No ☐
Self-Contained Breathing Apparatus NFPA 1001 5.3.1, 5.3.5, 5.3.9	
5.3.1* Use self-contained breathing apparatus (SCBA) during emergency operations, given SCBA and other personal protective equipment, so that the SCBA is correctly donned, the SCBA is correctly worn, controlled breathing techniques are used, emergency procedures are enacted if the SCBA fails, all low-air warnings are recognized, respiratory protection is not intentionally compromised, and hazardous areas are exited prior to air depletion. **(A) Requisite Knowledge.** Conditions that require respiratory protection, uses and limitations of SCBA, components of SCBA, donning procedures, breathing techniques, indications for and emergency procedures used with SCBA, and physical requirements of the SCBA wearer. **(B) Requisite Skills.** The ability to control breathing, replace SCBA air cylinders, use SCBA to exit through restricted passages, initiate and complete emergency procedures in the event of SCBA failure or air depletion, and complete donning procedures.	Yes ☐ No ☐
5.3.5* Exit a hazardous area as a team, given vision-obscured conditions, so that a safe haven is found before exhausting the air supply, others are not endangered, and the team integrity is maintained. **(A) Requisite Knowledge.** Personnel accountability systems, communication procedures, emergency evacuation methods, what constitutes a safe haven, elements that create or indicate a hazard, and emergency procedures for loss of air supply. **(B) Requisite Skills.** The ability to operate as a team member in vision-obscured conditions, locate and follow a guideline, conserve air supply, and evaluate areas for hazards and identify a safe haven.	Yes ☐ No ☐

Interior Operations – Firefighter	Competency Met
5.3.9* Conduct a search and rescue in a structure operating as a member of a team, given an assignment, obscured vision conditions, personal protective equipment, a flashlight, forcible entry tools, hose lines, and ladders when necessary, so that ladders are correctly placed when used, all assigned areas are searched, all victims are located and removed, team integrity is maintained, and team members' safety — including respiratory protection — is not compromised. **(A) Requisite Knowledge.** Use of forcible entry tools during rescue operations, ladder operations for rescue, psychological effects of operating in obscured conditions and ways to manage them, methods to determine if an area is tenable, primary and secondary search techniques, team members' roles and goals, methods to use and indicators of finding victims, victim removal methods (including various carries), and considerations related to respiratory protection. **(B)* Requisite Skills.** The ability to use SCBA to exit through restricted passages, set up and use different types of ladders for various types of rescue operations, rescue a fire fighter with functioning respiratory protection, rescue a fire fighter whose respiratory protection is not functioning, rescue a person who has no respiratory protection, and assess areas to determine tenability.	Yes ☐ No ☐
Search and Rescue NFPA 1001 5.3.9	
5.3.9* Conduct a search and rescue in a structure operating as a member of a team, given an assignment, obscured vision conditions, personal protective equipment, a flashlight, forcible entry tools, hose lines, and ladders when necessary, so that ladders are correctly placed when used, all assigned areas are searched, all victims are located and removed, team integrity is maintained, and team members' safety — including respiratory protection — is not compromised. **(A) Requisite Knowledge.** Use of forcible entry tools during rescue operations, ladder operations for rescue, psychological effects of operating in obscured conditions and ways to manage them, methods to determine if an area is tenable, primary and secondary search techniques, team members' roles and goals, methods to use and indicators of finding victims, victim removal methods (including various carries), and considerations related to respiratory protection. **(B)* Requisite Skills.** The ability to use SCBA to exit through restricted passages, set up and use different types of ladders for various types of rescue operations, rescue a fire fighter with functioning respiratory protection, rescue a fire fighter whose respiratory protection is not functioning, rescue a person who has no respiratory protection, and assess areas to determine tenability.	Yes ☐ No ☐
Fire Behavior NFPA 1001	Yes ☐ No ☐
Fire Extinguishers NFPA 1001 5.3.16	
5.3.16* Extinguish incipient Class A, Class B, and Class C fires, given a selection of portable fire extinguishers, so that the correct extinguisher is chosen, the fire is completely extinguished, and correct extinguisher-handling techniques are followed. **(A) Requisite Knowledge.** The classifications of fire; the types of, rating systems for, and risks associated with each class of fire; and the operating methods of and limitations of portable extinguishers. **(B) Requisite Skills.** The ability to operate portable fire extinguishers, approach fire with portable fire extinguishers, select an appropriate extinguisher based on the size and type of fire, and safely carry portable fire extinguishers.	Yes ☐ No ☐
Building Construction NFPA 1001 5.3.11, 5.3.12	
5.3.11 Perform horizontal ventilation on a structure operating as part of a team, given an assignment, personal protective equipment, ventilation tools, equipment, and ladders, so that the ventilation openings are free of obstructions, tools are used as designed, ladders are correctly placed, ventilation devices are correctly placed, and the structure is cleared of smoke. **(A) Requisite Knowledge.** The principles, advantages, limitations, and effects of horizontal, mechanical, and hydraulic ventilation; safety considerations when venting a structure; fire behavior in a structure; the products of combustion found in a structure fire; the signs, causes, effects, and prevention of backdrafts; and the relationship of oxygen concentration to life safety and fire growth. **(B) Requisite Skills.** The ability to transport and operate ventilation tools and equipment and ladders, and to use safe procedures for breaking window and door glass and removing obstructions.	Yes ☐ No ☐

Interior Operations – Firefighter	Competency Met
5.3.12 Perform vertical ventilation on a structure as part of a team, given an assignment, personal protective equipment, ground and roof ladders, and tools, so that ladders are positioned for ventilation, a specified opening is created, all ventilation barriers are removed, structural integrity is not compromised, products of combustion are released from the structure, and the team retreats from the area when ventilation is accomplished. **(A) Requisite Knowledge.** The methods of heat transfer; the principles of thermal layering within a structure on fire; the techniques and safety precautions for venting flat roofs, pitched roofs, and basements; basic indicators of potential collapse or roof failure; the effects of construction type and elapsed time under fire conditions on structural integrity; and the advantages and disadvantages of vertical and trench/strip ventilation. **(B) Requisite Skills.** The ability to transport and operate ventilation tools and equipment; hoist ventilation tools to a roof; cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements; sound a roof for integrity; clear an opening with hand tools; select, carry, deploy, and secure ground ladders for ventilation activities; deploy roof ladders on pitched roofs while secured to a ground ladder; and carry ventilation-related tools and equipment while ascending and descending ladders.	Yes ☐ No ☐
Forcible Entry NFPA 1001 5.3.4	
5.3.4* Force entry into a structure, given personal protective equipment, tools, and an assignment, so that the tools are used as designed, the barrier is removed, and the opening is in a safe condition and ready for entry. **(A) Requisite Knowledge.** Basic construction of typical doors, windows, and walls within the department's community or service area; operation of doors, windows, and locks; and the dangers associated with forcing entry through doors, windows, and walls. **(B) Requisite Skills.** The ability to transport and operate hand and power tools and to force entry through doors, windows, and walls using assorted methods and tools.	Yes ☐ No ☐
Ventilation NFPA 1001 5.3.12	
5.3.12 Perform vertical ventilation on a structure as part of a team, given an assignment, personal protective equipment, ground and roof ladders, and tools, so that ladders are positioned for ventilation, a specified opening is created, all ventilation barriers are removed, structural integrity is not compromised, products of combustion are released from the structure, and the team retreats from the area when ventilation is accomplished. **(A) Requisite Knowledge.** The methods of heat transfer; the principles of thermal layering within a structure on fire; the techniques and safety precautions for venting flat roofs, pitched roofs, and basements; basic indicators of potential collapse or roof failure; the effects of construction type and elapsed time under fire conditions on structural integrity; and the advantages and disadvantages of vertical and trench/strip ventilation. **(B) Requisite Skills.** The ability to transport and operate ventilation tools and equipment; hoist ventilation tools to a roof; cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements; sound a roof for integrity; clear an opening with hand tools; select, carry, deploy, and secure ground ladders for ventilation activities; deploy roof ladders on pitched roofs while secured to a ground ladder; and carry ventilation-related tools and equipment while ascending and descending ladders.	Yes ☐ No ☐
Loss Control NFPA 1001 5.3.13, 5.3.14	
5.3.13 Overhaul a fire scene, given personal protective equipment, attack line, hand tools, a flashlight, and an assignment, so that structural integrity is not compromised, all hidden fires are discovered, fire cause evidence is preserved, and the fire is extinguished. **(A) Requisite Knowledge.** Types of fire attack lines and water application devices most effective for overhaul, water application methods for extinguishment that limit water damage, types of tools and methods used to expose hidden fire, dangers associated with overhaul, obvious signs of area of origin or signs of arson, and reasons for protection of fire scene. **(B) Requisite Skills.** The ability to deploy and operate an attack line; remove flooring, ceiling, and wall components to expose void spaces without compromising structural integrity; apply water for maximum effectiveness; expose and extinguish hidden fires in walls, ceilings, and subfloor spaces; recognize and preserve obvious signs of area of origin and arson; and evaluate for complete extinguishment.	Yes ☐ No ☐

Interior Operations – Firefighter	Competency Met
5.3.14 Conserve property as a member of a team, given salvage tools and equipment and an assignment, so that the building and its contents are protected from further damage. **(A) Requisite Knowledge.** The purpose of property conservation and its value to the public, methods used to protect property, types of and uses for salvage covers, operations at properties protected with automatic sprinklers, how to stop the flow of water from an automatic sprinkler head, identification of the main control valve on an automatic sprinkler system, forcible entry issues related to salvage, and procedures for protecting possible areas of origin and potential evidence. **(B) Requisite Skills.** The ability to cluster furniture; deploy covering materials; roll and fold salvage covers for reuse; construct water chutes and catch-alls; remove water; cover building openings, including doors, windows, floor openings, and roof openings; separate, remove, and relocate charred material to a safe location while protecting the area of origin for cause determination; stop the flow of water from a sprinkler with sprinkler wedges or stoppers; and operate a main control valve on an automatic sprinkler system.	Yes ☐ No ☐
Live Fire Exterior NFPA 1001 5.3.7, 5.3.8, 5.3.10, 5.3.19	
5.3.7* Attack a passenger vehicle fire operating as a member of a team, given personal protective equipment, attack line, and hand tools, so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are overhauled, and the fire is extinguished. **(A) Requisite Knowledge.** Principles of fire streams as they relate to fighting automobile fires; precautions to be followed when advancing hose lines toward an automobile; observable results that a fire stream has been properly applied; identifying alternative fuels and the hazards associated with them; dangerous conditions created during an automobile fire; common types of accidents or injuries related to fighting automobile fires and how to avoid them; how to access locked passenger, trunk, and engine compartments; and methods for overhauling an automobile. **(B) Requisite Skills.** The ability to identify automobile fuel type; assess and control fuel leaks; open, close, and adjust the flow and pattern on nozzles; apply water for maximum effectiveness while maintaining flash fire protection; advance 1½ in. (38 mm) or larger diameter attack lines; and expose hidden fires by opening all automobile compartments.	Yes ☐ No ☐
5.3.8* Extinguish fires in exterior Class A materials, given fires in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved. **(A) Requisite Knowledge.** Types of attack lines and water streams appropriate for attacking stacked, piled materials and outdoor fires; dangers — such as collapse — associated with stacked and piled materials; various extinguishing agents and their effect on different material configurations; tools and methods to use in breaking up various types of materials; the difficulties related to complete extinguishment of stacked and piled materials; water application methods for exposure protection and fire extinguishment; dangers such as exposure to toxic or hazardous materials associated with storage building and container fires; obvious signs of origin and cause; and techniques for the preservation of fire cause evidence. **(B) Requisite Skills.** The ability to recognize inherent hazards related to the material's configuration, operate handlines or master streams, break up material using hand tools and water streams, evaluate for complete extinguishment, operate hose lines and other water application devices, evaluate and modify water application for maximum penetration, search for and expose hidden fires, assess patterns for origin determination, and evaluate for complete extinguishment.	Yes ☐ No ☐

Interior Operations – Firefighter	Competency Met
5.3.10* Attack an interior structure fire operating as a member of a team, given an attack line, ladders when needed, personal protective equipment, tools, and an assignment, so that team integrity is maintained, the attack line is deployed for advancement, ladders are correctly placed when used, access is gained into the fire area, effective water application practices are used, the fire is approached correctly, attack techniques facilitate suppression given the level of the fire, hidden fires are located and controlled, the correct body posture is maintained, hazards are recognized and managed, and the fire is brought under control. **(A) Requisite Knowledge.** Principles of fire streams; types, design, operation, nozzle pressure effects, and flow capabilities of nozzles; precautions to be followed when advancing hose lines to a fire; observable results that a fire stream has been properly applied; dangerous building conditions created by fire; principles of exposure protection; potential longterm consequences of exposure to products of combustion; physical states of matter in which fuels are found; common types of accidents or injuries and their causes; and the application of each size and type of attack line, the role of the backup team in fire attack situations, attack and control techniques for grade level and above and below grade levels, and exposing hidden fires. **(B) Requisite Skills.** The ability to prevent water hammers when shutting down nozzles; open, close, and adjust nozzle flow and patterns; apply water using direct, indirect, and combination attacks; advance charged and uncharged 1½ in. (38 mm) diameter or larger hose lines up ladders and up and down interior and exterior stairways; extend hose lines; replace burst hose sections; operate charged hose lines of 1½ in. (38 mm) diameter or larger while secured to a ground ladder; couple and uncouple various handline connections; carry hose; attack fires at grade level and above and below grade levels; and locate and suppress interior wall and subfloor fires.	Yes ☐ No ☐
5.3.19* Combat a ground cover fire operating as a member of a team, given protective clothing, SCBA (if needed), hose lines, extinguishers or hand tools, and an assignment, so that threats to property are reported, threats to personal safety are recognized, retreat is quickly accomplished when warranted, and the assignment is completed. **(A) Requisite Knowledge.** Types of ground cover fires, parts of ground cover fires, methods to contain or suppress, and safety principles and practices. **(B) Requisite Skills.** The ability to determine exposure threats based on fire spread potential, protect exposures, construct a fire line or extinguish with hand tools, maintain integrity of established fire lines, and suppress ground cover fires using water.	Yes ☐ No ☐

Full Service Operations – Firefighter	Competency Met
All of NFPA 1001 – FF2 Competencies (except Hazmat and Medical Response) and with the addition of:	Yes ☐ No ☐
Live Fire Exterior and Interior	Yes ☐ No ☐
Hazmat Operations *(NFPA core competencies plus 6.6.1.1.2)*	Yes ☐ No ☐
6.6.1.1.2 The operations level responder assigned to perform product control at hazardous materials/ WMD incidents shall be trained to meet all competencies at the awareness level (*see Chapter 4*), all core competencies at the operations level (*see Chapter 5*), all mission-specific competencies for personal protective equipment (*see Section 6.2*), and all competencies in this section.	Yes ☐ No ☐

Team Leader Exterior & Interior	Competency Met
• Can utilize any training provider, including internal, that meets the competencies of NFPA 1021 – Fire Officer Professional Qualifications [Playbook: Page 16, note 3] ***Completion of the Operational Firefighter requirements for either the Exterior or Interior Service Level PLUS the following Competencies from NFPA 1021:***	Yes ☐ No ☐
Incident Command and Fire Attack NFPA 1021 4.1.1, 4.2.1, 4.2.2, 4.2.3	
4.1.1* General Prerequisite Knowledge. The organizational structure of the department; geographical configuration and characteristics of response districts; departmental operating procedures for administration, emergency operations, incident management system and safety; fundamentals of leadership; departmental budget process; information management and recordkeeping; the fire prevention and building safety codes and ordinances applicable to the jurisdiction; current trends, technologies, and socioeconomic and political factors that affect the fire service; cultural diversity; methods used by supervisors to obtain cooperation within a group of subordinates; the rights of management and members; agreements in force between the organization and members; generally accepted ethical practices, including a professional code of ethics; and policies and procedures regarding the operation of the department as they involve supervisors and members.	Yes ☐ No ☐
4.2.1 Assign tasks or responsibilities to unit members, given an assignment at an emergency incident, so that the instructions are complete, clear, and concise; safety considerations are addressed; and the desired outcomes are conveyed. **(A) Requisite Knowledge.** Verbal communications during emergency incidents, techniques used to make assignments under stressful situations, and methods of confirming understanding. **(B) Requisite Skills.** The ability to condense instructions for frequently assigned unit tasks based on training and standard operating procedures.	Yes ☐ No ☐
4.2.2 Assign tasks or responsibilities to unit members, given an assignment under nonemergency conditions at a station or other work location, so that the instructions are complete, clear, and concise; safety considerations are addressed; and the desired outcomes are conveyed. **(A) Requisite Knowledge.** Verbal communications under nonemergency situations, techniques used to make assignments under routine situations, and methods of confirming understanding. **(B) Requisite Skills.** The ability to issue instructions for frequently assigned unit tasks based on department policy.	Yes ☐ No ☐
4.2.3 Direct unit members during a training evolution, given a company training evolution and training policies and procedures, so that the evolution is performed in accordance with safety plans, efficiently, and as directed. **(A) Requisite Knowledge.** Verbal communication techniques to facilitate learning. **(B) Requisite Skills.** The ability to distribute issue-guided directions to unit members during training evolutions.	Yes ☐ No ☐

Team Leader Exterior & Interior	Competency Met
Pre-Incident Planning, Size-up and Incident Action Planning NFPA 1021 4.5.2, 4.5.3, 4.6, 4.6.1, 4.6.2	
4.5.2 Identify construction, alarm, detection, and suppression features that contribute to or prevent the spread of fire, heat, and smoke throughout the building or from one building to another, given an occupancy, and the policies and forms of the AHJ so that a pre-incident plan for any of the following occupancies is developed: (1) Public assembly (2) Educational (3) Institutional (4) Residential (5) Business (6) Industrial (7) Manufacturing (8) Storage (9) Mercantile (10) Special properties **(A) Requisite Knowledge.** Fire behavior; building construction; inspection and incident reports; detection, alarm, and suppression systems; and applicable codes, ordinances, and standards. **(B) Requisite Skills.** The ability to use evaluative methods and to communicate orally and in writing.	Yes ☐ No ☐
4.5.3 Secure an incident scene, given rope or barrier tape, so that unauthorized persons can recognize the perimeters of the scene and are kept from restricted areas, and all evidence or potential evidence is protected from damage or destruction. **(A) Requisite Knowledge.** Types of evidence, the importance of fire scene security, and evidence preservation. **(B) Requisite Skills.** The ability to establish perimeters at an incident scene.	Yes ☐ No ☐
4.6* Emergency Service Delivery. This duty involves supervising emergency operations, conducting pre-incident planning, and deploying assigned resources in accordance with the local emergency plan and according to the following job performance requirements.	
4.6.1 Develop an initial action plan, given size-up information for an incident and assigned emergency response resources, so that resources are deployed to control the emergency. **(A)* Requisite Knowledge.** Elements of a size-up, standard operating procedures for emergency operations, and fire behavior. **(B)* Requisite Skills.** The ability to analyze emergency scene conditions; to activate the local emergency plan, including localized evacuation procedures; to allocate resources; and to communicate orally.	Yes ☐ No ☐
4.6.2* Implement an action plan at an emergency operation, given assigned resources, type of incident, and a preliminary plan, so that resources are deployed to mitigate the situation. **(A) Requisite Knowledge.** Standard operating procedures, resources available for the mitigation of fire and other emergency incidents, an incident management system, scene safety, and a personnel accountability system. **(B) Requisite Skills.** The ability to implement an incident management system, to communicate orally, to manage scene safety, and to supervise and account for assigned personnel under emergency conditions.	Yes ☐ No ☐
Fire Ground Accountability NFPA 1021 4.6.1, 4.6.2	
4.6.1 Develop an initial action plan, given size-up information for an incident and assigned emergency response resources, so that resources are deployed to control the emergency. **(A)* Requisite Knowledge.** Elements of a size-up, standard operating procedures for emergency operations, and fire behavior. **(B)* Requisite Skills.** The ability to analyze emergency scene conditions; to activate the local emergency plan, including localized evacuation procedures; to allocate resources; and to communicate orally.	Yes ☐ No ☐

Team Leader Exterior & Interior	Competency Met
4.6.2* Implement an action plan at an emergency operation, given assigned resources, type of incident, and a preliminary plan, so that resources are deployed to mitigate the situation. **(A) Requisite Knowledge.** Standard operating procedures, resources available for the mitigation of fire and other emergency incidents, an incident management system, scene safety, and a personnel accountability system. **(B) Requisite Skills.** The ability to implement an incident management system, to communicate orally, to manage scene safety, and to supervise and account for assigned personnel under emergency conditions.	Yes ☐ No ☐
Live Fire – Exterior *(Recommended for Exterior Operations)* NFPA 1001 5.3.7, 5.3.8, 5.3.10	
5.3.7* Attack a passenger vehicle fire operating as a member of a team, given personal protective equipment, attack line, and hand tools, so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are overhauled, and the fire is extinguished. **(A) Requisite Knowledge.** Principles of fire streams as they relate to fighting automobile fires; precautions to be followed when advancing hose lines toward an automobile; observable results that a fire stream has been properly applied; identifying alternative fuels and the hazards associated with them; dangerous conditions created during an automobile fire; common types of accidents or injuries related to fighting automobile fires and how to avoid them; how to access locked passenger, trunk, and engine compartments; and methods for overhauling an automobile. **(B) Requisite Skills.** The ability to identify automobile fuel type; assess and control fuel leaks; open, close, and adjust the flow and pattern on nozzles; apply water for maximum effectiveness while maintaining flash fire protection; advance 1½ in. (38 mm) or larger diameter attack lines; and expose hidden fires by opening all automobile compartments.	Yes ☐ No ☐
5.3.8* Extinguish fires in exterior Class A materials, given fires in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved. **(A) Requisite Knowledge.** Types of attack lines and water streams appropriate for attacking stacked, piled materials and outdoor fires; dangers — such as collapse — associated with stacked and piled materials; various extinguishing agents and their effect on different material configurations; tools and methods to use in breaking up various types of materials; the difficulties related to complete extinguishment of stacked and piled materials; water application methods for exposure protection and fire extinguishment; dangers such as exposure to toxic or hazardous materials associated with storage building and container fires; obvious signs of origin and cause; and techniques for the preservation of fire cause evidence. **(B) Requisite Skills.** The ability to recognize inherent hazards related to the material's configuration, operate handlines or master streams, break up material using hand tools and water streams, evaluate for complete extinguishment, operate hose lines and other water application devices, evaluate and modify water application for maximum penetration, search for and expose hidden fires, assess patterns for origin determination, and evaluate for complete extinguishment.	Yes ☐ No ☐

Team Leader Exterior & Interior	Competency Met
5.3.10* Attack an interior structure fire operating as a member of a team, given an attack line, ladders when needed, personal protective equipment, tools, and an assignment, so that team integrity is maintained, the attack line is deployed for advancement, ladders are correctly placed when used, access is gained into the fire area, effective water application practices are used, the fire is approached correctly, attack techniques facilitate suppression given the level of the fire, hidden fires are located and controlled, the correct body posture is maintained, hazards are recognized and managed, and the fire is brought under control. **(A) Requisite Knowledge.** Principles of fire streams; types, design, operation, nozzle pressure effects, and flow capabilities of nozzles; precautions to be followed when advancing hose lines to a fire; observable results that a fire stream has been properly applied; dangerous building conditions created by fire; principles of exposure protection; potential longterm consequences of exposure to products of combustion; physical states of matter in which fuels are found; common types of accidents or injuries and their causes; and the application of each size and type of attack line, the role of the backup team in fire attack situations, attack and control techniques for grade level and above and below grade levels, and exposing hidden fires. **(B) Requisite Skills.** The ability to prevent water hammers when shutting down nozzles; open, close, and adjust nozzle flow and patterns; apply water using direct, indirect, and combination attacks; advance charged and uncharged 1½ in. (38 mm) diameter or larger hose lines up ladders and up and down interior and exterior stairways; extend hose lines; replace burst hose sections; operate charged hose lines of 1½ in. (38 mm) diameter or larger while secured to a ground ladder; couple and uncouple various handline connections; carry hose; attack fires at grade level and above and below grade levels; and locate and suppress interior wall and subfloor fires.	Yes ☐ No ☐
Live Fire – Exterior & Interior *(Recommended for Interior Operations)*	Yes ☐ No ☐

Risk Management Officer	Competency Met
Completion of the Team Leader requirements for the Exterior Operations level PLUS the following courses (1 from each area):	Yes ☐ No ☐
EITHER Incident Action Planning NFPA 1021 4.6.1, 4.6.2 • *Requires a training program with subject matter covering areas such as strategies and tactics, fire ground command and emergency scene management* [Playbook: Page 16, note 5]	
4.6.1 Develop an initial action plan, given size-up information for an incident and assigned emergency response resources, so that resources are deployed to control the emergency. **(A)* Requisite Knowledge.** Elements of a size-up, standard operating procedures for emergency operations, and fire behavior. **(B)* Requisite Skills.** The ability to analyze emergency scene conditions; to activate the local emergency plan, including localized evacuation procedures; to allocate resources; and to communicate orally.	Yes ☐ No ☐
4.6.2* Implement an action plan at an emergency operation, given assigned resources, type of incident, and a preliminary plan, so that resources are deployed to mitigate the situation. **(A) Requisite Knowledge.** Standard operating procedures, resources available for the mitigation of fire and other emergency incidents, an incident management system, scene safety, and a personnel accountability system. **(B) Requisite Skills.** The ability to implement an incident management system, to communicate orally, to manage scene safety, and to supervise and account for assigned personnel under emergency conditions.	Yes ☐ No ☐
OR Incident Safety Officer NFPA 1521 6.1 – 6.7.2 *(operational)*	Yes ☐ No ☐
6.1 General Functions of the Incident Safety Officer. **6.1.1*** The incident safety officer (ISO) shall be integrated with the incident management system (IMS) as a command staff member, as specified in NFPA 1561, *Standard on Emergency Services Incident Management System*. **6.1.2*** Standard operating procedures (SOPs) shall define criteria for the response of a predesignated incident safety officer. **6.1.2.1** If the incident safety officer is designated by the incident commander, the fire department shall establish criteria for appointment based upon 6.1.1. **6.1.3*** The incident safety officer and assistant incident safety officer(s) shall be readily identifiable at the incident scene. **6.1.4*** Upon arrival or assignment as the incident safety officer at an incident, he or she shall obtain a situation-status briefing from the incident commander, that includes the incident action plan. **6.1.5** The incident safety officer shall monitor the incident action plan, conditions, activities, and operations to determine whether they fall within the criteria as defined in the fire department's risk management plan. **6.1.6** When the perceived risk(s) is not within the fire department's risk management criteria, the incident safety officer shall take action as outlined in Section 4.6. **6.1.7** The incident safety officer shall monitor the incident scene and report to the incident commander the status of conditions, hazards, and risks. **6.1.8** The incident safety officer shall ensure that the fire department's personnel accountability system is being utilized. **6.1.9*** The incident safety officer shall offer judgment to the incident commander on establishing control zones and no entry zones and ensure that established zones are communicated to all members present on the scene. **6.1.10** The incident safety officer shall evaluate motor vehicle incident scene traffic hazards and apparatus placement and take appropriate actions to mitigate hazards as described in Section 8.7 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*.	

Risk Management Officer	Competency Met
6.1.11 The incident safety officer shall monitor radio transmissions and stay alert to transmission barriers that could result in missed, unclear, or incomplete communication. **6.1.12*** The incident safety officer shall ensure that the incident commander establishes an incident scene rehabilitation tactical level management component during emergency operations. **6.1.13*** The incident safety officer shall communicate to the incident commander the need for assistant incident safety officers and/or technical specialists due to the need, size, complexity, or duration of the incident. **6.1.14** The incident safety officer or assistant incident safety officer shall survey and evaluate the hazards associated with the designation of a landing zone and interface with helicopters. **6.1.15*** The incident safety officer shall recognize the potential need for critical incident stress interventions and notify the incident commander of this possibility. **6.1.16** If the incident safety officer or an assistant safety officer needs to enter a hot zone or an environment that is immediately dangerous to life or health (IDLH), the incident safety officer or assistant safety officer shall be paired up with another member and check in with the entry control officer.	
6.2 Fire Suppression. **6.2.1** The incident safety officer shall meet the provisions of Section 6.2 during fire suppression operations. **6.2.2*** The incident safety officer shall ensure that a rapid intervention team meeting the criteria in Chapter 8 of NFPA 1500, is available and ready for deployment. **6.2.3** Where fire has involved a building(s) the incident safety officer shall advise the incident commander of hazards, collapse potential, and any fire extension in such building(s). **6.2.4** The incident safety officer shall evaluate visible smoke and fire conditions and advise the incident commander, tactical level management component's (TLMC) officers, and company officers on the potential for flashover, backdraft, blow-up, or other events that could pose a threat to operating teams. **6.2.5** The incident safety officer shall monitor the accessibility of entry and egress of structures and its effect on the safety of members conducting interior operations.	
6.3 Emergency Medical Service Operations. **6.3.1** The incident safety officer shall meet the provisions of Section 6.3 during emergency medical service (EMS) operations. **6.3.2** The incident safety officer shall ensure compliance with the department's infection control plan and NFPA 1581, *Standard on Fire Department Infection Control Program*, during emergency medical service operations. **6.3.3** The incident safety officer shall ensure that incident scene rehabilitation and critical incident stress management are established as needed at emergency medical service operations, especially mass casualty incidents (MCIs).	
6.4 Technical Rescue. **6.4.1** The incident safety officer shall meet the provisions of Section 6.4 during technical rescue operations. **6.4.2*** In cases where a designated incident safety officer does not meet the technician-level requirements of NFPA 1006, *Standard for Rescue Technician Professional Qualifications*, the incident commander shall appoint an assistant incident safety officer or a technical specialist who meets the technician-level requirements of NFPA 1006 to assist with incident safety officer functions. **6.4.3** The incident safety officer shall attend strategic and tactical planning sessions and provide input on risk assessment and member safety. **6.4.4*** The incident safety officer shall ensure that a safety briefing is conducted and that an incident action plan and an incident safety plan are developed and made available to all members on the scene.	
6.5 Hazardous Materials Operations. **6.5.1** The incident safety officer shall meet the provisions of Section 6.5 during hazardous materials operations.	

Risk Management Officer	Competency Met
6.5.2* In cases where a designated incident safety officer does not meet the technician-level requirements of NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, the incident commander shall appoint an assistant incident safety officer or a technical specialist who meets the technician-level requirements of NFPA 472 to assist with incident safety officer functions. **6.5.3** The incident safety officer shall attend strategic and tactical planning sessions and provide input on risk assessment and member safety. **6.5.4*** The incident safety officer shall ensure that a safety briefing is conducted and that an incident action plan and an incident safety plan are developed and made available to all members on the scene. **6.5.5** The incident safety officer shall ensure that control zones are clearly marked and communicated to all members.	
6.6 Accident Investigation and Review. **6.6.1** Upon notification of a member injury, illness, or exposure, the incident safety officer shall immediately communicate this information to the incident commander to ensure that emergency medical care is provided. **6.6.2** The incident safety officer shall initiate the accident investigation procedures as required by the fire department. **6.6.3*** In the event of a serious injury, fatality, or other potentially harmful occurrence to a member, the incident safety officer shall request assistance from the health and safety officer.	
6.7 Post-Incident Analysis. **6.7.1*** The incident safety officer shall prepare a written report for the post-incident analysis that includes pertinent information about the incident relating to health and safety issues. **6.7.2*** The incident safety officer shall participate in the post incident analysis.	
EITHER FCABC/LGMA: Effective Fire Service Administration	Yes ☐ No ☐
OR Beyond Hoses and Helmets, or equivalent *(administrative)*	Yes ☐ No ☐

Company Fire Officer	Competency Met
Fire Officer 1 (NFPA 1021 in its entirety)	Yes ☐ No ☐
Incident Command 200	Yes ☐ No ☐
Fire Service Instructor 1 (NFPA 1041 Chapter 4)	Yes ☐ No ☐
4.1 General. **4.1.1** The Fire Service Instructor I shall meet the JPRs defined in Sections 4.2 through 4.5 of this standard.	Yes ☐ No ☐
4.2 Program Management. **4.2.1 Definition of Duty.** The management of basic resources and the records and reports essential to the instructional process.	
4.2.2 Assemble course materials, given a specific topic, so that the lesson plan and all materials, resources, and equipment needed to deliver the lesson are obtained. **(A) Requisite Knowledge.** Components of a lesson plan, policies and procedures for the procurement of materials and equipment, and resource availability. **(B) Requisite Skills.** None required.	Yes ☐ No ☐
4.2.3 Prepare requests for resources, given training goals and current resources, so that the resources required to meet training goals are identified and documented. **(A) Requisite Knowledge.** Resource management, sources of instructional resources and equipment. **(B) Requisite Skills.** Oral and written communication, forms completion.	Yes ☐ No ☐
4.2.4 Schedule single instructional sessions, given a training assignment, department scheduling procedures, instructional resources, facilities and timeline for delivery, so that the specified sessions are delivered according to department procedure. **(A) Requisite Knowledge.** Departmental scheduling procedures and resource management. **(B) Requisite Skills.** Training schedule completion.	Yes ☐ No ☐
4.2.5 Complete training records and report forms, given policies and procedures and forms, so that required reports are accurate and submitted in accordance with the procedures. **(A) Requisite Knowledge.** Types of records and reports required, and policies and procedures for processing records and reports. **(B) Requisite Skills.** Basic report writing and record completion.	Yes ☐ No ☐
4.3 Instructional Development. **4.3.1* Definition of Duty.** The review and adaptation of prepared instructional materials.	
4.3.2* Review instructional materials, given the materials for a specific topic, target audience, and learning environment, so that elements of the lesson plan, learning environment, and resources that need adaptation are identified. **(A) Requisite Knowledge.** Recognition of student limitations and cultural diversity, methods of instruction, types of resource materials, organization of the learning environment, and policies and procedures. **(B) Requisite Skills.** Analysis of resources, facilities, and materials.	Yes ☐ No ☐
4.3.3* Adapt a prepared lesson plan, given course materials and an assignment, so that the needs of the student and the objectives of the lesson plan are achieved. **(A)* Requisite Knowledge.** Elements of a lesson plan, selection of instructional aids and methods, and organization of the learning environment. **(B) Requisite Skills.** Instructor preparation and organizational skills.	Yes ☐ No ☐
4.4 Instructional Delivery. **4.4.1 Definition of Duty.** The delivery of instructional sessions utilizing prepared course materials.	
4.4.2 Organize the classroom, laboratory, or outdoor learning environment, given a facility and an assignment, so that lighting, distractions, climate control or weather, noise control, seating, audiovisual equipment, teaching aids, and safety are considered. **(A) Requisite Knowledge.** Classroom management and safety, advantages and limitations of audiovisual equipment and teaching aids, classroom arrangement, and methods and techniques of instruction. **(B) Requisite Skills.** Use of instructional media and teaching aids	Yes ☐ No ☐

Company Fire Officer	Competency Met
4.4.3 Present prepared lessons, given a prepared lesson plan that specifies the presentation method(s), so that the method (s) indicated in the plan are used and the stated objectives or learning outcomes are achieved, applicable safety standards and practices are followed, and risks are addressed. **(A)* Requisite Knowledge.** The laws and principles of learning, methods and techniques of instruction, lesson plan components and elements of the communication process, and lesson plan terminology and definitions; the impact of cultural differences on instructional delivery; safety rules, regulations, and practices; identification of training hazards; elements and limitations of distance learning; distance learning delivery methods; and the instructor's role in distance learning. **(B) Requisite Skills.** Oral communication techniques, methods and techniques of instruction, and utilization of lesson plans in an instructional setting.	Yes ☐ No ☐
4.4.4* Adjust presentation, given a lesson plan and changing circumstances in the class environment, so that class continuity and the objectives or learning outcomes are achieved. **(A) Requisite Knowledge.** Methods of dealing with changing circumstances. **(B) Requisite Skills.** None required.	Yes ☐ No ☐
4.4.5* Adjust to differences in learning styles, abilities, cultures, and behaviors, given the instructional environment, so that lesson objectives are accomplished, disruptive behavior is addressed, and a safe and positive learning environment is maintained. **(A)* Requisite Knowledge.** Motivation techniques, learning styles, types of learning disabilities and methods for dealing with them, and methods of dealing with disruptive and unsafe behavior. **(B) Requisite Skills.** Basic coaching and motivational techniques, correction of disruptive behaviors, and adaptation of lesson plans or materials to specific instructional situations.	Yes ☐ No ☐
4.4.6 Operate audiovisual equipment and demonstration devices, given a learning environment and equipment, so that the equipment functions properly. **(A) Requisite Knowledge.** Components of audiovisual equipment. **(B) Requisite Skills.** Use of audiovisual equipment, cleaning, and field level maintenance.	Yes ☐ No ☐
4.4.7 Utilize audiovisual materials, given prepared topical media and equipment, so that the intended objectives are clearly presented, transitions between media and other parts of the presentation are smooth, and media are returned to storage. **(A) Requisite Knowledge.** Media types, limitations, and selection criteria. **(B) Requisite Skills.** Transition techniques within and between media.	Yes ☐ No ☐
4.5 Evaluation and Testing. **4.5.1* Definition of Duty.** The administration and grading of student evaluation instruments.	
4.5.2 Administer oral, written, and performance tests, given the lesson plan, evaluation instruments, and evaluation procedures of the agency, so that bias or discrimination is eliminated, the testing is conducted according to procedures, and the security of the materials is maintained. **(A) Requisite Knowledge.** Test administration, agency policies, laws and policies pertaining to discrimination during training and testing, methods for eliminating testing bias, laws affecting records and disclosure of training information, purposes of evaluation and testing, and performance skills evaluation. **(B) Requisite Skills.** Use of skills checklists and oral questioning techniques.	Yes ☐ No ☐
4.5.3 Grade student oral, written, or performance tests, given class answer sheets or skills checklists and appropriate answer keys, so the examinations are accurately graded and properly secured. **(A) Requisite Knowledge.** Grading methods, methods for eliminating bias during grading, and maintaining confidentiality of scores. **(B) Requisite Skills.** None required.	Yes ☐ No ☐
4.5.4 Report test results, given a set of test answer sheets or skills checklists, a report form, and policies and procedures for reporting, so that the results are accurately recorded, the forms are forwarded according to procedure, and unusual circumstances are reported. **(A) Requisite Knowledge.** Reporting procedures and the interpretation of test results. **(B) Requisite Skills.** Communication skills and basic coaching.	Yes ☐ No ☐
4.5.5* Provide evaluation feedback to students, given evaluation data, so that the feedback is timely; specific enough for the student to make efforts to modify behavior; and objective, clear, and relevant; also include suggestions based on the data. **(A) Requisite Knowledge.** Reporting procedures and the interpretation of test results. **(B) Requisite Skills.** Communication skills and basic coaching.	Yes ☐ No ☐

Company Fire Officer	Competency Met
Emergency Scene Management (4.6.1, 4.6.2)	
4.6.1 Develop an initial action plan, given size-up information for an incident and assigned emergency response resources, so that resources are deployed to control the emergency. **(A)* Requisite Knowledge.** Elements of a size-up, standard operating procedures for emergency operations, and fire behavior. **(B)* Requisite Skills.** The ability to analyze emergency scene conditions; to activate the local emergency plan, including localized evacuation procedures; to allocate resources; and to communicate orally.	Yes ☐ No ☐
4.6.2* Implement an action plan at an emergency operation, given assigned resources, type of incident, and a preliminary plan, so that resources are deployed to mitigate the situation. **(A) Requisite Knowledge.** Standard operating procedures, resources available for the mitigation of fire and other emergency incidents, an incident management system, scene safety, and a personnel accountability system. **(B) Requisite Skills.** The ability to implement an incident management system, to communicate orally, to manage scene safety, and to supervise and account for assigned personnel under emergency conditions.	Yes ☐ No ☐

Appendix 6: CAD Incident Type - General

The table below, provides a more generic way to view the many incident types that are coded in the CAD system.

CAD Coding	General Type
Blank	Uncoded
ALARMS	Alarms
AVIATION	Aviation
BEACH/BRUSH EMERG	Beach/Brush Emergency
BURNING COMPLAINT	Burning Complaint
CHIMNEY FIRE	Chimney
DUPLICATE	Duplicate
DUTY OFFICER	Duty Officer
FIRST ALARM - A	Structure Fire
FIRST ALARM - B	Structure Fire
FIRST ALARM - C	Structure Fire
FIRST RESP A	FMR
FIRST RESP B	FMR
FIRST RESP C	FMR
FIRST RESP D	FMR
FIRST RESP E	FMR
FIRST RESP ASSIST	FMR
FIRST RESP ASSIST D/E	FMR
FIRST RESP DELAY B/C	FMR
HAZMAT NON EMERGENCY	Hazmat non-emergency
HYDRO NON EMERGENCY	Hydro non-emergency
HYDRO TROUBLE	Hydro
MARINE	Marine
MOTOR VEHICLE ACCIDENT	MVI
MOTOR VEHICLE FIRE	MVI
MVI / EXTRICATION	MVI
MVI PED STRUCK	MVI
NATURAL GAS LINE BREAK	Natural Gas Line Break

CAD Coding	General Type
NATURAL GAS/PROPANE EMERGENCY	Natural Gas/Propane Emergency
NO RESPONSE	No Response
RESCUE HIGH ANGLE	Rescue
RESCUE LOW ANGLE/BCAS ASSIST	Rescue
RESCUE MARINE	Rescue
RESCUE ROAD	Rescue
RESCUE SWIFT WATER	Rescue
STRUCTURE FIRE	Structure Fire
STRUCTURE SMOKE	Structure Fire Smoke
STRUCTURE SMOKE (FIRE IS OUT)	Structure Fire Out
TEST	Test
WILDLAND FIRE	Wildland Fire

Appendix 7: Consultant Backgrounds

Dave Mitchell

Dave Mitchell retired as Division Chief, Communications in 1998 from Vancouver Fire & Rescue Services following a career spanning 32 years. During this time, he was responsible for managing the emergency call taking and dispatch for the Vancouver and Whistler Fire Departments. In 1998, Dave was hired by E-Comm, Emergency Communications BC as its first Director of Operations. In this role he was a member of the founding senior management team and was responsible for the transition of the Regional 9-1-1 Control Centre staff from the Vancouver Police Department to its current location at 3301 East Pender in June 1999.

He left E-Comm in June 2000 to work as a consultant, and since that time has managed the development of corporate, strategic and operational plans for a number of clients. As principal of DMA, Dave participates on all projects undertaken by the company either as the lead consultant or by providing his expertise at an advisory or support level.

Dave holds a Bachelor of Arts Degree (Geography) from Simon Fraser University in addition to a diploma from their Executive Management Development Program. He is past Chair of the Board of Directors of the Vancouver General Hospital and University of British Columbia Hospital Foundation, is currently Chair of the Justice Institute of British Columbia Foundation, and a member of the Fire Chiefs' Association of British Columbia, and the Canadian Association of Management Consultants.

Gordon Anderson

Gordon Anderson retired in 2019 with 29 years in the fire service, serving for the last five as the British Columbia Fire Commissioner. In this role, he was the senior fire authority for the Province providing advice to government and supporting local government fire services, as well as dealing with fire service issues at the national level.

During this time he implemented a new Structure Firefighter Training Standard (the Playbook), modernized and expanded the wildland interface Structure Protection Program in partnership with the BC Wildfire Service and the Fire Chiefs’ Association of BC and, with extensive stakeholder input, successfully developed and passed new provincial legislation to repeal and replace the current Fire Services Act (implementation pending).

Prior to joining the Office of the Fire Commissioner, he spent 13 years with volunteer fire departments, five years with the Victoria City Police and 22 years in Esquimalt Fire Rescue (a combination police/fire public safety department) where he rose through the ranks to finish his last six years as Deputy Fire Chief. He has extensive experience as a career department Chief Training Officer and 12 years as a contract instructor for the Justice Institute of BC’s firefighter training program and all four levels of the Fire Officer Certificate Program.

Gord has a Bachelor of Arts degree from the University of Victoria and NFPA Fire Officer Level 4 certification; in 2018 he earned a Bachelor of Public Safety Administration degree. He also

holds certification as an Executive Chief Fire Officer and is a Fellow at the Institution of Fire Engineers (United Kingdom). He is past-President of the Council of Canadian Fire Marshals and Fire Commissioners as well as having served on the governance board of the Canadian Public Safety Operations Organization.

Ian MacDonald

Ian MacDonald is a retired corporate securities lawyer who practiced international corporate law in Canada and the United Kingdom. Ian was a partner with a major Toronto firm in the 1990s, and moved to England in 1997, where he became the managing partner of a specialist litigation and intellectual property practice. He retired from active practice in 2004.

Ian has worked with Dave Mitchell & Associates since 2007 and has participated in almost all the major fire and emergency service projects since that time. He assists with the analysis of the legal and governance structures affecting fire and emergency services, ranging from establishment and operational bylaws to WorkSafe issues.

COUNCIL REPORT

REPORT DATE: September 8, 2022
MEETING DATE: September 19, 2022

File No. 1855-08 (CARIP)

TO: Mayor and Councillors

FROM: Courtney Simpson, Manager of Development Services

SUBJECT: Local Government Climate Action Program

RECOMMENDATION

i. THAT Council receive the Local Government Climate Action Program report.

ii. THAT Council direct staff to post on the Village website a completed and signed attestation form to confirm all funds were, or will be, used towards climate action; and a completed PDF version of the required program survey.

PURPOSE

The purpose of this report is to seek Council direction for public posting of required documents for eligibility for funding under the Local Government Climate Action Program (LGCAP).

PREVIOUS COUNCIL DIRECTION

Date	Resolution
April 11, 2022	THAT Council direct staff to include a summary of the status of Village and regional climate-related activities in the quarterly update; THAT the Mayor meet with a representative of the delegation Some Concerned Moms of Cumberland to discuss the status of Village activities relating to climate change response; and THAT climate action be further considered during the 2023 budget and strategic priorities discussions.

BACKGROUND

In spring 2022, the BC Ministry of Environment and Climate Change announced the LGCAP. The program will provide funding over three years to each local government and Modern Treaty Nation, to support the implementation of local climate action that reduces emissions and prepares communities for the impacts of a changing climate. Amounts are based on population, and the Village will receive $72,082 in 2022, 2023 and 2024 for a total of $216,246.

Eligibility for the first year of funding includes submission and public posting of:

- a completed and signed attestation form to confirm all funds were, or will be, used towards climate action; and
- a completed PDF version of the required program survey.

Use of the LGCAP funds will be discussed during the upcoming 2023 budget process.

ALTERNATIVES

1. That Council not accept funding from the Local Government Climate Action Program.
2. That Council provide alternate direction.

STRATEGIC OBJECTIVE

☐ Healthy Community
☐ Quality Infrastructure Planning and Development
☒ Comprehensive Community Planning
☐ Economic Development

FINANCIAL IMPLICATIONS

Funding from the LGCAP can be used for a variety of initiatives to support climate action. The Village has budgeted $7,500 in 2021 that will be carried forward and $2,700 per year starting in 2022 for climate initiatives. These funds will be added to the LGCAP funding in the 2023-2027 financial planning process.

OPERATIONAL IMPLICATIONS

In addition to public reporting, other eligibility requirements for the LGCAP funding that will require staff resources are as follows:

- Measure and report corporate greenhouse gas emissions in the first year or prepare for mandatory emissions measurement and reporting for year two.
- Demonstrate climate investment (i.e., matching funding or in-kind contributions) equivalent to 20% of the provincial funding received.
- Report on projects linked to one or more objectives from the CleanBC Roadmap to 2030 and/or the Climate Preparedness and Adaptation Strategy.

These will be responsibilities of Corporate Services and Development Services within existing staff resources. Measuring and reporting on corporate greenhouse gas emissions is already within the Corporates Services workplan as it has been a requirement from the Province under a different program since 2013. The required climate investment is anticipated to be provided by staff time used initiate and manage projects funded by LGCAP.

CLIMATE CHANGE IMPLICATIONS

Specific projects and initiatives to be funded from the LGCAP will be discussed as part of the 2023 budget process.

ATTACHMENTS

1. Local Government Climate Action Program Survey Submission Report and Attestation Form

Respectfully submitted,

C. Simpson

_____
Courtney Simpson
Manager of Development Services

M. Mason

_____
Michelle Mason
Chief Administrative Officer

Local Government Climate Action Program Survey Submission Report

Cumberland

Report generated on Friday, July 15, 2022 11:06 PST

Question	Answer
1. Does your local government or Modern Treaty Nation have a climate action plan or strategy?	Yes
1.a. Indicate the date the plan was adopted.	February 7, 2013
1.b. Include a link to the document (URL) or webpage.	https://cumberland.ca/wp-content/uploads/2013/02/Corporate-Climate-Action-Plan-Report-Feb-7-2013.pdf
2. For the calendar year 2021, did your local government or Modern Treaty Nation measure and publicly disclose corporate greenhouse gas (GHG) emissions?	No, corporate GHG emissions are not currently being measured, but we are currently undertaking one and it will be completed in the next two years
3. For calendar year 2021, did your local government or Modern Treaty Nation measure and publicly disclose a community-wide emissions inventory?	No, but we will ask Council to consider a community energy and emissions inventory in our 2023-2027 financial planning process
4. Is your local government or Modern Treaty Nation tracking progress on its community-wide GHG reduction target?	No

4.e. If no, select all that apply:	"The Comox Valley Regional District is beginning a program to track progress on community-wide GHG emissions under the Regional Growth Strategy Service."
5. Describe up to four climate intiatives, and their outcomes, your local government or Modern Treaty Nation is currently undertaking for Buildings	1. LED lighting upgrade project in the Recreation Centre Gymnasium will result in reduced CO2 emissions, lowered maintenance costs, enhanced user experience and long term savings to the Village. Implementation timeline: summer-fall 2022. Partial funding received from BC Hydro Power smart Program and the rest of the funding will come from the Village and can be considered part of the 20%. LED lighting upgrades have already been completed in our other facilities. 2. We have replaced most of our heating/cooling systems in our buildings to higher efficiency systems that will save CO2 emissions. The most recent replacement/upgrade will save approximately 1.5 tonnes of GHG emissions. Higher efficiency systems will be purchased when future required replacements come up of any systems that have not been replaced to date . In addition, occupancy sensors have been installed in most facilities inside and outside for lighting and programmable thermostats have been installed as well. 3. Reusable water bottle filling stations have been installed in both Recreation facilities which will significantly reduced plastic bottles going into the waste system. 4. Electric vehicle charging station has been installed at the fire hall which will facilitate fleet conversion for new future purchases and will encourage electric vehicle travel to save CO2 emissions. Other new building requirements in development permit areas in the OCP are solar ready, higher efficiency irrigation and other efficiency building requirements.
6. Describe up to four climate intiatives, and their outcomes, your local government or Modern Treaty Nation is currently undertaking for Transportation	Active Transportation Foundations Project - completed in 2022. This includes a policy review, active transportation facilities inventory, and results of community survey. Report provides background information for the Transportation Master Plan update scheduled to begin later in 2022. The Transportation Master Plan will include a focus on active transportation. The OCP includes development permit area requirements for installation of electric vehicle charging stations on new builds.

7. Describe up to four climate intiatives, and their outcomes, your local government or Modern Treaty Nation is currently undertaking for Community	1. We provide an organics curbside collection service to residents. Cumberland and the Comox Valley Regional District (CVRD) have a memorandum of understanding that they will explore the possible uses for integrated resources from the landfill located within Cumberland but owned and operated by the CVRD and that the Village will have first option on the use of any integrated resource recovery (e.g. methane gas capture and re-use). 2. The Village's OCP will be updated in 2023 with a focus on climate change mitigation and the Transportation Master plan in 2022 will have a strong focus on active transportation. 3. Two public dual port electric vehicle charging stations will be installed in the downtown core of the Village in 2022. Many picnic tables, garbage receptacles and other outdoor amenities have been installed around the Village to encourage outdoor walking use of the Village. 4. Perseverance Watershed Initiative – supporting natural asset infrastructure via land protection and land management planning in the Perseverance Watershed, Cumberland primary drinking water source. The Perseverance Watershed Initiative (PWI) is a new partnership between the Village of Cumberland, Mosaic Forest Management, and the Cumberland Community Forest Society. The initiative was developed in order to move away from the historic pattern of acting on forest harvesting concerns and other issues in the watershed on a block-by-block and case-by-case basis. The PWI instead brings together private forest industry, conservation leadership, and the Village to develop a collaborative strategy for integrated watershed planning and management in support of long-term sustainability and resiliency of the Perseverance Creek watershed. The Village partnered with the Comox Valley Regional District on a municipal natural asset initiative that is now focussed on Perseverance Creek located in Cumberland.
8. Describe up to four climate intiatives, and their outcomes, your local government or Modern Treaty Nation is currently undertaking for Climate Resilience	The municipal natural asset initiative partnership with Comox Valley Regional District that is currently in process has a strong focus on Perseverance Creek watershed in Cumberland and this will identify risks and future climate hazards and we are expecting to understand what plans could be in place to address those risks through this process. The region is also working towards understanding the requirements for a "green new deal" that was presented by youth in the valley to all municipalities. Once this process is better understood by our regional partners, the Village expects to address these requirements at that time.
9. Which elements of your community's current official community plan (OCP) (or other relevant strategies, policies and/or plans) support the creation of more complete, compact communities?	The Residential Infill designation encourages compact development within a 10 minute walk to the Village Core. This has been implemented in the Zoning Bylaw by allowing smaller infill lots, and both secondary suites and accessory dwelling units on all lots in the Residential Infill 1 zone.

10. What actions has your local government or Modern Treaty Nation taken to increase community completeness and compactness since 2020 (e.g. urban containment boundary, increasing density by allowing secondary suites and laneway or carriage housing options)?	We are currently working on removing barriers to building accessory dwelling units. The recommendation is to not require a development permit but to allow an ADU outright if it follows requirements in the Zoning Bylaw.
11. What data would be most valuable to your local government or Modern Treaty Nation in decision-making related to the creation of complete, compact communities?	Data on the contribution to affordable housing versus enabling investment properties.
12. From 2021 to now, has your local government or Modern Treaty Nation taken any action(s) to address climate impacts?	We recently made some design changes to our in-process $10m wastewater project upgrades to completely change and upgrade the aeration system to be able to handle hot weather conditions and to relocate all the post-lagoon treatment components to higher ground, forcing us to pump to them in order to handle higher rain events. We have engaged a biologist to work with us in our watershed as well as be part of the design team for our No. 2 dam upgrades project so that we can ensure climate resiliency is incorporated into the design from the beginning. Perseverance Watershed Initiative that has been described previously will address climate impacts as well.
13. Has a climate risk and vulnerability assessment (or similar assessment) been undertaken for your local government or Modern Treaty Nation?	No, but we will more than likely undertake one; however, we're not sure when this can happen.
14. What are the three most significant climate hazards faced by your jurisdiction	"Wind, rain, and other storm events","Wildfire","Extreme heat and heat stress","Water shortage","Extreme cold, snow and ice","Ecological, cultural and/or human health impacts (examples of cultural impacts include threats to identities, languages, and livelihoods; examples of ecological impacts include biodiversity loss, erosion, invasive species, ecosystem changes)","Overland flooding","Coastal flooding, storm surge events and/or other coastal hazards"
15. Are you responding to this survey on behalf of a Modern Treaty Nation?	No

16. Based on the hazard you indicated as most significant in question 14, as a local government, which groups are most exposed/vulnerable to the impacts of that climate hazard?	"municipal operations / infrastructure","Low-income households","People experiencing homelessness","Seniors"
17. Based on the hazard you indicated as second most significant in question 14, as a local government, which groups are most exposed/vulnerable to the impacts of that climate hazard?	"all families will be affected","Low-income households","Indigenous peoples","Racialized communities","Newcomers to Canada (immigrants and refugees)","People experiencing homelessness","Seniors"
18. Based on the hazard you indicated as third most significant in question 14, as a local government, which groups are most exposed/vulnerable to the impacts of that climate hazard?	"outdoor recreation users","Low-income households","People experiencing homelessness","Seniors"
19. Select the top three factors your local government or Modern Treaty Nation needs most to increase the capacity to adapt to climate impacts and build community resilience.	"Increased funding","Increased staff knowledge, expertise and data specific to climate adaptation","Increased staff capacity"
20. How does your local government or Modern Treaty Nation ensure equitable access to, and distribution of, climate action opportunities and benefits?	"There are no specific measures in place at this time to ensure equitable access to, and distribution of, opportunities and benefits"
21. Do the climate action plan(s) and priorities of your local government or Modern Treaty Nation align with the climate action plans and priorities of senior levels of government?	"No, there is no process currently for multilevel government collaboration and alignment of climate plans and implementation"
22. Is your local government a signatory to the B.C. Climate Action Charter or a Modern Treaty Nation?	Yes

23. To demonstrate commitment to climate action, climate investments (i.e., matching funding or in-kind contributions) equivalent to 20% of the provincial funding received are required of local governments and Modern Treaty Nations. The intent is to show past, current, and future investments in climate action and create awareness and education.	"Purchase of carbon offsets up to the year 2020 and multiple facility efficiency upgrades.","Staff time","Climate or energy studies and/or assessments","Climate resilient infrastructure and/or capital project (s)"
24. Please provide your (or survey primary contact's) first and last name.	Michelle Mason
25. Please indicate your (or survey primary contact's) position with your local government or Modern Treaty Nation.	Interim CAO / CFO
26. Please provide your (or survey primary contact's) business email address.	mmason@cumberland.ca
27. Please provide your (or survey primary contact's) business phone number.	2508975132

Local Government Climate Action Program Attestation Form

Instructions for the Attestor:
1. Complete and sign this form by filling in the fields below.
2. Email the completed and signed form to LGCAP@gov.bc.ca.

I, the Chief Financial Officer, or equivalent position, of The Village of Cumberland (name of local government) confirm the following:

1. That Local Government Climate Action Program funding has been, or will be, allocated to climate action.
2. That if funds are held in reserve, they will be spent by the end of March 2025.
3. That a completed and signed version of this form will be submitted by email to the Climate Action Secretariat, Ministry of Environment and Climate Change Strategy by July 29, 2022.
    a. If council approval is required, it will be submitted no later than September 30, 2022.
4. That a completed and signed version of this form will be publicly posted by September 30, 2022.
5. That a completed and exported version of the program survey (submitted online) will be publicly posted by September 30, 2022.

Attested to by me at (name of local government) The Village of Cumberland
on (date) July 15 20 22

Signature of Attestor: MMason

Printed Name of Attestor:
Michelle Mason

Title or Profession of Attestor (i.e. Chief Financial Officer or equivalent position):
Chief Financial Officer

Telephone Number of Attestor:
250-336-2291

Email Address of Attestor:
mmason@cumberland.ca

COUNCIL REPORT

REPORT DATE: 9/14/2022
MEETING DATE: 9/19/2022

File No. 1760/1700

TO: Mayor and Councillors

FROM: Michelle Mason, Chief Administrative Office

SUBJECT: Municipal Finance Authority Financing for 2022 Vehicle/Equipment Purchase

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RECOMMENDATION

i. THAT Council receive the Municipal Finance Authority Financing for 2022 Vehicle/Equipment Purchase report.

ii. THAT Council approve the short-term borrowing from the Municipal Finance Authority through the Equipment Financing Program up to $65,000 for the purchase of a 2022 bylaw enforcement van for a five year term that must be repaid in five years.

PURPOSE

The purpose of this report is to seek Council approval for the short-term borrowing for the purchase of a 2022 bylaw enforcement van that is approved in the 2022 financial plan.

PREVIOUS COUNCIL DIRECTION

Date	Resolution
January 10, 2022	THAT Council adopt 2022 - 2026 Financial Plan Bylaw No. 1152, 2021".

BACKGROUND

The Village funds the regular replacement of its vehicle fleet and equipment by borrowing through Municipal Finance Authority (MFA). Criteria for the Equipment Financing Program through MFA requires a Council resolution approving the short-term borrowing for the vehicle purchase and staff has recommended an appropriate resolution in order to fund the vehicle purchase through the MFA equipment financing program.

Council approved a budget of $65,000 for the purchase of a bylaw enforcement van in the 2021 year of the 2021-2025 Financial Plan. The van has been carried forward to the 2022 and the 2022-2026 Financial Plan includes the full debt payment for the borrowing for the van purchase. The purchase has taken place and required modifications have been made. However, total costs for the van are not yet known, but it may be less than the budget. Staff will only borrow what the total cost of the van is up to the approved borrowing amount of $65,000.

ALTERNATIVES

1. Council can request further information to come back.
2. Not proceed with any action at this time.

STRATEGIC OBJECTIVE

- ☐ Healthy Community
- ☐ Quality Infrastructure Planning and Development
- ☐ Comprehensive Community Planning
- ☐ Economic Development
- ☐ Reconciliation

FINANCIAL IMPLICATIONS

The Equipment Financing fixed monthly interest rate is currently 3.34% and the maximum term without public approval is five years. The total estimated interest payable over the five years is $5,670. The program does not charge fees, the Village retains ownership of the asset, and extra principle payments may be made at any time without penalties for early payout. The final pay will change based on interest rate fluctuations over the term of the loan.

OPERATIONAL IMPLICATIONS

Borrowing documents are required to be completed and authorized by Village staff prior to approval of the loan. Accounts payable staff process the monthly debt payments that are automatically withdrawn from the Village's general bank account. Sufficient cash flow to cover all payments, including debt payments, is ensured. Annual monitoring and adjustments are required during preparation for the year-end audit.

CLIMATE CHANGE IMPLICATIONS

While debt does not specifically relate to climate change implications, the bylaw van itself does. The bylaw van is not an electric vehicle and due to supply chain issues and cost increases, the vehicle is second hand (2020 Ford Transit Connect Van). The Village contracts two days per week of animal control to the City of Courtenay and provides three days of bylaw enforcement to the Village of Cumberland. Therefore, this vehicle travels a significant distance each day as it performs its service which has an impact on the carbon emissions from this vehicle. Without an analysis being done, the actual impact of the vehicle is currently unknown; however we know that as per the 2022 Fuel Consumption Guide on the Natural Resources Canada website that between 211 and 249 Co2 emissions per kilometre is emitted by this type of vehicle and the vehicle itself has idle shut down technology and is very fuel efficient.

ATTACHMENTS

None

CONCURRENCE

None

Respectfully submitted,

M. Mason

_____
Michelle Mason
Chief Administrative Officer

COUNCIL REPORT

REPORT DATE: September 14, 2022
MEETING DATE: September 19, 2022

File No.1970-03

TO: Mayor and Councillors

FROM: Michelle Mason, Chief Administrative Officer

SUBJECT: 2023 Permissive Tax Exemptions

RECOMMENDATION

i. THAT Council receive the 2023 Permissive Tax Exemptions report.
ii. THAT Council consider first, second, third reading of the "Permissive Tax Exemption 2023 Bylaw No. 1177, 2022".

PURPOSE

The purpose of this report is to introduce the "Permissive Tax Exemption 2023 Bylaw No. 1177, 2022" for consideration of first, second and third reading.

PREVIOUS COUNCIL DIRECTION

N/A

BACKGROUND

The policy for granting permissive tax exemptions was discussed and adopted with the 2022-2026 Financial Plan Bylaw No. 1152, 2021 (can be found on the Village website at: https://cumberland.ca/budget-bylaw/). The policy states that Council may only grant exemptions for lands surrounding land and buildings subject to statutory exemption and municipal properties occupied by a community group or partner agency where the group or agency has been granted a reduced or zero lease rate but may, under Section 229 of the Charter, be subject to property tax.

The permissive tax exemptions are granted under Clauses 224 (2) (a) and (f) of the Community Charter. Bylaw 1177 was prepared based on the above noted policy and must be adopted prior to October 31, 2023 for the 2023 tax year. Per section 227 of the Community Charter, staff has provided public notice that Council will be considering the Bylaw.

ALTERNATIVES

1. Council can direct staff to make amendments before accepting the "Permissive Tax Exemption 2023 Bylaw No. 1177, 2022", however, it's important to note that it may affect the regulatory deadline for bylaw submission.
2. Not proceed with any action at this time.

STRATEGIC OBJECTIVE

- ☐ Healthy Community
- ☐ Quality Infrastructure Planning and Development
- ☐ Comprehensive Community Planning
- ☐ Economic Development
- ☐ Reconciliation

FINANCIAL IMPLICATIONS

The policy, as outlined in the 2022-2026 Financial Plan, results in exemptions for two places of worship and one municipal property. The estimated total property taxes foregone for 2023 are $7,100 and the following table outlines the details that has been advertised to the public:

Property	Description of Exemption	Estimated Property Taxes if Not Exempt		
		2023	2024	2025
BC Conference Property Development Council United Church Of Canada	All land surrounding the church	$1,100	$1,100	$1,200
Cumberland Community Church	All land surrounding the church	$1,100	$1,200	$1,200
Cumberland and District Historical Society	Occupiers of Municipal Property – apportionment of land and building	$4,900	$5,100	$5,500

OPERATIONAL IMPLICATIONS

Each year during the financial planning process, staff updates the permissive tax exemption policy as directed by Council. Financial staff time is spent each year in August, September and October on the following permissive tax exemption tasks:

- Estimate taxes foregone based on the approved financial plan tax revenue estimates
- Prepare a permissive tax exemption bylaw
- Report to Council introducing the bylaw for Council consideration
- Advertise the permissive exemptions to the public

- Update the listing of municipal occupier property information for BC Assessment Authority (BCA)
- Once the bylaw is adopted by Council, the entire package is sent to BCA by October 31st each year

Finally, the actual permissively exempted property taxes must be reported to the public each year in April through the Village's Annual Report.

CLIMATE CHANGE IMPLICATIONS

There are no climate change implications known with this bylaw as it is in relation to tax exemptions based on a policy that does not include climate change mitigation.

ATTACHMENTS

1. The Permissive Tax Exemption 2023 Bylaw No. 1177, 2023

CONCURRENCE

None

Respectfully submitted,

M. Mason

_____
Michelle Mason
Chief Administrative Officer

THE CORPORATION OF THE VILLAGE OF CUMBERLAND

BYLAW NO. 1177

A bylaw to exempt from taxation certain lands and improvements for the 2023 taxation year.

The Council of the Corporation of the Village of Cumberland, in open meeting assembled, enacts as follows:

1 This Bylaw may be cited as "Permissive Tax Exemption 2023 Bylaw No. 1177, 2022".

2 The following land or improvements, or both, are exempted from taxation for the 2023 taxation year as follows:

(a) the following land or improvements, or both, held by a charitable, philanthropic or other not for profit corporation and meeting the provisions under section 224(2)(a) of the *Community Charter*:

(i) that portion of Lot 3, Block H, Plan 522E, District Lot 21, Nelson Land District, PID 008-932-212, occupied by the Cumberland and District Historical Society; and

(b) the following land and improvements used for the purposes of a church hall or the area of land surrounding a church as permitted under section 224(2)(f) of the *Community Charter*:

(i) that portion of Lot 1, Block 4, Plan 522, District Lot 21, Nelson Land District, PID 008-970-513, held BC Conference Property Development Council United Church Of Canada; and

(ii) that portion of Lot B, Plan 43397, District Lot 21 Nelson Land District, PID 003-382-281, held by the Cumberland Community Church.

3 This Bylaw shall come into full force and effect and is binding on all persons during the 2023 taxation year.

READ A FIRST TIME THIS	**DAY OF**	**2022.**
READ A SECOND TIME THIS	**DAY OF**	**2022.**
READ A THIRD TIME THIS	**DAY OF**	**2022.**
ADOPTED THIS	**DAY OF**	**2022.**

Mayor

Corporate Officer

COUNCIL REPORT

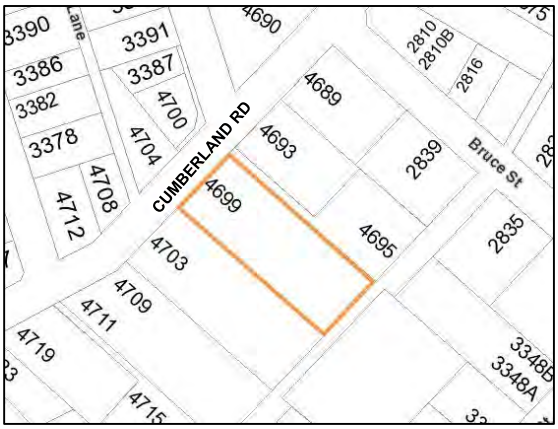
REPORT DATE: 8/22/2022
MEETING DATE: 9/19/2022

File No. 2022-02-RZ

TO: Mayor and Councillors

FROM: Meleana Searle, Planner

SUBJECT: Zoning Amendment, 4699 Cumberland Road, First and Second Reading of Bylaw 1176



RECOMMENDATION

i. THAT Council receive the "Zoning Amendment, 4699 Cumberland Road, First and Second Reading" report.

ii. THAT Council give first and second reading to Bylaw 1176 cited as "Zoning Amendment Bylaw No. 1176, 2022".

PURPOSE

The purpose of this report is to introduce Bylaw 1176 to amend Zoning Bylaw No. 1027, 2016, to increase the maximum gross floor area (GFA) and height of a substantially completed accessory building located at 4699 Cumberland Road. This rezoning is initiated by the Village to address an oversight in 2018 when plans were initially reviewed for a building permit application.

BACKGROUND

Proposed Development

The subject property contains one accessory dwelling unit, a single-family home currently under construction and an accessory building currently under construction.

In February 2018 the Village received a building permit application for an accessory building at 4699 Cumberland Road. Unfortunately, the application was reviewed as being in the R-3 zone in error (the neighbouring property is R-3) resulting in the accessory building being both over height and over the permitted maximum gross floor area (GFA) for the R-1A zone.

The constructed building is 93.2m² (1,003.3ft²) with an attached covered area of 38.1m² (410.4ft²) which is in compliance with the R-3 Zone. The plans show the building height as 5.0m (18ft) and a height survey has been requested. The setbacks and lot coverage are compliant with both R-1A and R-3.

Construction was started in 2018 and the permit expired in March 2020 before the building was completed. The applicant re-applied in February 2021 and the new building permit was issued. The building plans were not re-checked as they had previously been approved by planning staff and the building official. At an inspection for framing in March 2021 the building official requested a height survey as the structure looked too tall for the R-1A zone. Framing was not approved, and no further inspections were carried out until May 2022. The building official asked for a height survey again – this is when development services staff were notified of the potential height issue, reviewed the file, and found the error. The building has not received occupancy, and no further inspections will occur until this is resolved.

Official Community Plan

The Official Community Plan (OCP) future land use designation for this property is Residential Infill. This land use is intended to accommodate ground orientated medium density housing within a 10-minute walk of the Historic Village Commercial Core. The area is envisioned as primarily single- and two-family dwellings in a more compact arrangement with densities ranging from 25 to 37 units per hectare (10 to 15 units per acre). Proposed Zoning Amendment Bylaw No. 1176 does not affect the future land use designation in the OCP.

Zoning Bylaw

The subject property is within the R1-A – Residential Infill Zone. The Residential Infill zone permits one single family dwelling, a secondary suite and an accessory dwelling unit. The Large Lot Residential Zone (R-3) starts on the adjacent property to the east. The table below shows the permitted height and combined GFA for accessory buildings in the R1-A and R-3 zones.

Zone	Permitted Height of Accessory Building	Permitted Combined GFA of Accessory Building
R1-A	4.5m (14.8ft)	50.0m² (538.2ft²)
R-3	6.0m (19.6ft)	100.0m² (1,076.4ft²)

ANALYSIS

To bring the height of the structure into compliance, the owner could apply for a development variance permit, however, the maximum GFA cannot be increased through a development variance permit as it is considered a measure of density. As per *Local Government Act*, section 498 (2)(a) development variance permits must not vary the use or density of land as specified in the Zoning Bylaw.

In the Village of Cumberland, GFA for some buildings can be varied (such as accessory dwelling units) as the Zoning Bylaw considers the GFA of some types of buildings to be a measure of density and some not. To allow this accessory building to remain, with a GFA that exceeds the maximum permitted, rezoning is the only option. To simplify the process staff have included the increased height of the accessory building in the proposed zoning amendment.

Zoning Amendment Bylaw No. 1176, 2022 is prepared for Council's consideration as a property specific zoning amendment. The Bylaw only affects this property and is not being proposed as a change to the entire R-1A Zone. The rezoning would only apply to the accessory building that is

substantially under construction and would not apply to any future accessory buildings, including on any future subdivided lots.

There would be minimal land use impacts to rezoning as the property is on the border of the zone boundary with R-3 where an accessory building of this size is permitted, and the boundary is mid block (See Zoning Map below).

PUBLIC NOTIFICATION AND CONSULTATION

Public Hearing

A public hearing is not required as the proposed Zoning Bylaw amendment is consistent with the OCP. Previously, a public hearing was a default requirement for zoning bylaw amendments that could be waived when the amendment was consistent with the OCP. A recent *Local Government Act* amendment removed this default requirement, and instead, if a public hearing is not held, requires a public notice before the zoning bylaw amendment is considered for first reading.

Notification

As required under the *Local Government Act*, the Village has advertised the Zoning Amendment Bylaw No. 1176, 2022 in two consecutive issues of the local newspaper. The ad was published on September 7th and 14th, 2022.

The Village mailed a notice of Council consideration of the Zoning Amendment to owners of properties located within a 75.0 metre radius of the property under application. At this time staff have not received any public feedback.

ALTERNATIVES

1. THAT Council request amendments to Bylaw 1176.
2. THAT Council not proceed with the rezoning and revoke the building permit.

STRATEGIC OBJECTIVE

- ☐ Healthy Community
- ☐ Quality Infrastructure Planning and Development
- ☐ Comprehensive Community Planning
- ☐ Economic Development

FINANCIAL IMPLICATIONS

As this is a Council-initiated rezoning, no application fees were collected. Financial resources were required to advertise the Zoning Amendment in the local newspaper.

OPERATIONAL IMPLICATIONS

Zoning Bylaw amendments are part of the services provided by the Development Services Department.

CLIMATE CHANGE IMPLICATIONS

The Zoning Bylaw Amendment doesnot have an easily quantifiable impact on factors contributing to climate change.

ATTACHMENTS

1. Zoning Bylaw No. 1176, 2022

CONCURRENCE

Courtney Simpson, Manager of Development Services ***CS***

Respectfully submitted,

M. Searle

_____
Meleana Searle
Planner

M. Mason

_____
Michelle Mason
Chief Administrative Officer

THE CORPORATION OF THE VILLAGE OF CUMBERLAND

BYLAW NO. 1176

A bylaw to amend the Zoning Bylaw No. 1027, 2016

The Council of the Corporation of the Village of Cumberland, in open meeting assembled, enacts as follows:

Citation

1. This Bylaw may be cited for all purposes as the "Zoning Amendment Bylaw No. 1176, 2022".

Text Amendments

2. The Zoning Bylaw No. 1027, 2016 is hereby amended as follows:

   a. to section 7.2 R-1A—Infill Residential Zone, add the following after sub-section 8. Conditions of Uses:

9. Additional Regulations	a) for the property described as Lot 5, Block 5, District Lot 24, Nelson District, Plan 4222 (4699 Cumberland Road): i) *Accessory buildings* substantially under construction by August 24, 2022 are permitted to have a combined Floor Area no greater than 100.0square metres(1,076.4square feet). ii) *Accessory buildings* substantially under construction by August 24, 2022 are permitted to have a height maximum of 6.0metres (19.6ft).

READ A FIRST & SECOND TIME THIS __ **DAY OF** _____ **2022.**

READ A THIRD TIME THIS __ **DAY OF** _____ **2022.**

ADOPTED THIS __ **DAY OF** _____ **2022.**

Mayor

Corporate Officer