



## **Electoral Area Services Committee**

**Thursday, April 16, 2020 - 4:30 pm**

**The Regional District of Kootenay  
Boundary Board Room, Via Video  
Conference**

### **A G E N D A**

1. CALL TO ORDER
2. ACCEPTANCE OF AGENDA (ADDITIONS/DELETIONS)

A) **April 16, 2020**

**Recommendation:** That the April 16, 2020 Electoral Area Services Agenda be adopted as presented.

3. MINUTES

A) **March 12, 2020**

[Electoral Area Services Committee - 12 Mar 2020 - Minutes - Pdf](#)

**Recommendation:** That the March 12, 2020 Electoral Area Services Minutes be adopted as presented.

4. DELEGATIONS
5. UNFINISHED BUSINESS
6. NEW BUSINESS

A) **Waneta Expansion Power Corporation**

**RE: Development Permit**

Highway 22A, Electoral Area A

RDKB File: A-205A-00944.000

[2020-04-16 WAX DP EAS](#)

**Recommendation:** That the staff report regarding the Development Permit application submitted by Columbia Power Corp., on behalf of Waneta Expansion Power Corp., outlining their interim flood mitigation works in the Industrial and Columbia Gardens Aquifer Development Permit Area, on the parcels legally described as Lot 6A and Lot 7A, DL 205A, KD Plan 800, Except part included in SRW Plan 15510 and EPP60444, Electoral Area A, be received.

B) **Darryl & Heather Hammond**  
**RE: Development Variance Permit**

141 Brown Road, Electoral Area C/Christina Lake  
RDKB File: C-969-04329.000  
[2020-04-16 Hammond DVP EAS](#)

**Recommendation:** That the Development Variance Permit application submitted by WSA Engineering (2012) Ltd., on behalf of Darryl and Heather Hammond, for the reconstruction of an existing deck and retaining wall on the property legally described as Lot 10, DL 969, SDYD, Plan 9357, Electoral Area C/Christina Lake, be deferred until a Provincial approval for the reconstruction of the retaining wall has been issued and the applicant has had an opportunity to present a modified variance request.

C) **Darryl & Heather Hammond**  
**RE: Flood Plain Exemption**

141 Brown Road, Electoral Area C/Christina Lake  
RDKB File: D-969-04329.000  
[2020-04-16 Hammond FEX EAS](#)

**Recommendation:** That the application for a Site-Specific Exemption to the Floodplain Bylaw submitted by WSA Engineering (2012) Ltd., on behalf of Darryl and Heather Hammond, in order to reconstruct an existing deck and retaining wall within the required floodplain setback on the property legally described as Lot 10, DL 969, SDYD, Plan 9357, Electoral Area C/Christina Lake, be deferred until a Provincial approval for the reconstruction of the retaining wall has been issued.

D) **Ken & Elaine Kalesnikoff**  
**RE: Development Variance Permit**

3273 East Lake Drive, Electoral Area C/Christina Lake  
RDKB File: C-3063s-07052.000  
[2020-04-16 Kalesnikoff DVP EAS](#)

**Recommendation:** That the Development Variance Permit application submitted by Peter Buchanan of North Architecture Studio Inc., on behalf of Ken and Elaine Kalesnikoff, to reduce the required minimum setback from the Natural Boundary of Christina Lake from 7.5m to 3.0m, a variance of 4.5m, for the construction of a new single family dwelling and deck on the parcel legally described as Lot 25, DL 3063s, SDYD, Plan KAP1919, Electoral Area C/Christina Lake, be presented to the Regional District of Kootenay Boundary Board of Directors for consideration, with a recommendation of support.

E) **Ken & Elaine Kalesnikoff**

**RE: Floodplain Exemption**

3273 East Lake Drive, Electoral Area C/Christina Lake

RDKB File: C-3063s-07052.000

[2020-04-16 Kalesnikoff FEX EAS](#)

**Recommendation:** That the application for a Site-Specific Exemption to the Floodplain Bylaw submitted by Peter Buchanan of North Architecture Studio Inc., on behalf of Ken and Elaine Kalesnikoff, in order to construct a new single family dwelling and deck within the required floodplain setback on the parcel legally described as Lot 25, DL 3063s, SDYD, Plan KAP1919 be presented to the Regional District of Kootenay Boundary Board of Directors for consideration with a recommendation of approval, subject to: adherence to all the recommendations included in the Flood Hazard Assessment report submitted by Deverney Engineering Services Ltd., dated March 5, 2020 and the owner registering a new standard floodplain covenant on title in favour of the Regional District of Kootenay Boundary.

F) **Ken & Elaine Kalesnikoff**

**RE: Development Permit**

**3273 East Lake Drive, Electoral Area C/Christina Lake**

RDKB File: C-3063s-07052.000

[2020-04-16 Kalesnikoff DP EAS](#)

**Recommendation:** That the staff report regarding the Development Permit application submitted by Peter Buchanan of North Architecture Studio Inc., on behalf of Ken and Elaine Kalesnikoff, to construct a new single family dwelling, in the Waterfront Environmentally Sensitive Development Permit Area on the parcel legally described as Lot 25, DL 3063s, SDYD, Plan KAP1919, Electoral Area C/Christina Lake, be received.

- G) **Esso Gas Station**  
**RE: Development Permit Amendment**  
1590 McGregor Frontage Road, Electoral Area C/Christina Lake  
RDKB File: C-498-02994-030  
[2020-04-16 ESSO EAS](#)

**Recommendation:** That the staff report regarding the Development Permit application submitted by Rod Bergum of Bergum Contracting Ltd., on behalf of 1040215 BC Ltd., to construct a 15.7m<sup>2</sup> (169ft.<sup>2</sup>) accessory building for washroom facilities, in the General Commercial Development Permit Area on the parcel legally described as Lot 1, DL 498, SDYD, Plan KAP52010, Electoral Area C/Christina Lake, be received.

- H) **Inez Seymour**  
**RE: MOTI Subdivision**  
575 & 701 Border Road, Electoral Area C/Christina Lake  
RDKB File: C-312-02632-260  
[2020-04-16 Seymour MOTI EAS](#)

**Recommendation:** That the staff report regarding the Ministry of Transportation and Infrastructure referral for a proposed subdivision, for the parcels legally described as Lot 32, DL 312, SDYD, Plan 29935 Except Plan KAP56175 and Lot 1, DLs 312 and 347, SDYD, Plan KAP56175, Electoral Area C/Christina Lake, be received.

- I) **Michael Francis**  
**RE: Development Variance Permit**  
3485 Davy Road, Electoral Area D/Rural Grand Forks  
RDKB File: D-333-03860.055  
[2020-04-16 Francis DP EAS](#)

**Recommendation:** That the Development Variance Permit application submitted by Michael Francis to allow for an increase in the maximum permitted height of an accessory building from 5.0m to 5.8m, a 0.8m variance, for the construction of a detached garage on the property legally described as Lot B, DL 333, SDYD, Plan KAP41743, Electoral Area D/Rural Grand Forks be presented to the Regional District of Kootenay Boundary Board of Directors for consideration, with a recommendation of support.

- J) **Harland Venema**  
**RE: MOTI Subdivision**  
5155 Legebokoff Road, Electoral Area D/Rural Grand Forks  
RDKB File: D-365-03787.050  
[2020-04-16 Venema MOTI EAS](#)

**Recommendation:** That the staff report regarding the Ministry of Transportation and Infrastructure referral for a proposed subdivision, for the parcel legally described as Lot 1, DL 365, SDYD, Plan KAP45565, Electoral Area D/Rural Grand Forks, be received.

- K) **Robin Wellman and Scott Saura**  
**RE: Development Permit**  
386 Feathertop Way, Big White  
RDKB File: BW-4222-07500.825  
[2020-04-16 Wellman-Saura DP EAS](#)

**Recommendation:** That the staff report regarding the Development Permit application submitted by Robin Wellman & Scott Saura to construct a cabin in the Commercial and Multi-Family and Alpine Environmentally Sensitive Development Permit Areas on the parcel legally described as SL 45, DL4222, SDYD, Strata Plan KAS3134, Electoral Area E/West Boundary-Big White, be received.

- L) **Tony and Tanya Molachyk**  
**RE: Development Permit**  
331 Buck Road, Mt. Baldy  
RDKB File: E-100s-01371.030  
[2020-04-16 Molachyk DP EAS](#)

**Recommendation:** That the staff report regarding the Development Permit application submitted by Antony Molachyk to construct a cabin, in the Alpine Residential and Commercial Development Permit Area on the parcel legally described as Lot 7, DL 100s, SDYD, Plan KAP 82817, Electoral Area E/West Boundary-Mount Baldy be received.

- M) **Union of BC Municipalities**  
**RE: Federal Gas Tax Fund Compliance**  
[UBCM Compliance Letter](#)

**Recommendation:** That the memo dated March 10, 2020 from the Union of BC Municipalities regarding Federal Gas Tax Fund compliance

be received.

- N) **Ministry of Agriculture**  
**RE: Bill 15 - Agricultural Land Commission Amendment Act, 2019 (Exclusions, Statutory Rights-of-way and Application Fee Process**  
[Letter from Ministry of Agriculture Regarding Bill 15](#)

**Recommendation:** That the letter dated March 18, 2020 from the Ministry of Agriculture regarding Bill 15-Agricultural Land Commission Amendment Act, 2019 (Exclusions, Statutory Rights-of-way and Application Fee Process, be received.

- O) **Grant in Aid Report**  
[Grant In Aid Report Revised](#)

**Recommendation:** That the Grant in Aid report be received.

- P) **Gas Tax Report**  
[Gas Tax Agreement](#)

**Recommendation:** That the Gas Tax report be received.

7. LATE (EMERGENT) ITEMS
8. DISCUSSION OF ITEMS FOR FUTURE AGENDAS
9. CLOSED (IN CAMERA) SESSION
10. ADJOURNMENT



## **Electoral Area Services Committee Minutes**

Thursday, March 12, 2020 at 3:30 p.m.  
RDKB Board Room, 843 Rossland Ave., Trail, BC

### **Directors Present:**

Director Ali Grieve, via video-conference  
Director Linda Worley  
Director Grace McGregor  
Director Vicki Gee, via video-conference

### **Other Directors Present:**

Alternate Director Michael Tollis, via tele-conference

### **Directors Absent:**

Director Roly Russell

### **Staff Present:**

Barb Ihlen, General Manager of Finance  
Donna Dean, Manager of Planning and Development  
Maria Ciardullo, Recording Secretary

### **Members of the Public:**

Ralph and Elizabeth Plant  
Sheldon Bennett  
Craig Boruck

### **CALL TO ORDER**

Vice-Chair McGregor called the meeting to order at 3:01 p.m.

### **ACCEPTANCE OF AGENDA (ADDITIONS/DELETIONS)**

### **March 12, 2020**

*Page 1 of 5  
Electoral Area Services  
March 12, 2020*

Moved: Director Worley

Seconded: Director Gee

That the March 12, 2020 Electoral Area Services Agenda be adopted as presented.

Carried.

## **MINUTES**

### **February 13, 2020**

Director Gee stated that the wording on page 12, under Noxious Weed Control - Area 'D' & 'E' (092) Financial Plan that reads "Directors Gee and Russell agreed that an increase in the budget for this service is warranted to both take into consideration cost of living increases and costs of rental space", be removed from the minutes.

Moved: Director Gee

Seconded: Director Worley

That the February 13, 2020 Electoral Area Services Minutes be adopted as amended.

Carried.

## **DELEGATIONS**

There were no delegations in attendance.

## **UNFINISHED BUSINESS**

There was no unfinished business to discuss.

## **NEW BUSINESS**

### **Summer Magic Estate Corporation**

#### **RE: Development Variance Permit**

2586 Graham Road, Electoral Area C/Christina Lake

RDKB File: C-1181s-04644.000

It was stated that the Electoral Area C/Christina Lake Advisory Planning Commission (APC) does not support this application as there are concerns with environmental impact and water quality of the lake. Elizabeth Plant of Summer Magic Estate Corporation, addressed the Electoral Area Services Committee and provided information

on the application. She stated the addition, which would be hidden by trees, would be on the second level of the home and that flooding wouldn't be an issue if water levels rose. Vice-Chair McGregor offered empathy to their situation, but would uphold the APC's recommendation.

Moved: Director Gee

Seconded: Director Worley

That the Development Variance Permit application submitted by Summer Magic Estate Corp., to allow for a reduction in the required setback from the natural boundary of Christina Lake from 7.5m to 2.69m, a variance of 4.81m, to construct a 26m<sup>2</sup> addition on the existing cabin on the property legally described as Lot A, DL 1181s, SDYD, Plan 28414, Electoral Area C/Christina Lake, be presented to the Regional District of Kootenay Boundary Board of Directors for consideration, with a recommendation to deny.

Carried.

**Cervantes Capital Corp**

**RE: Industrial Development Permit Amendment**

775 Highway 395, Electoral Area C/Christina Lake

RDKB File: C-312-02632.315

Moved: Director Grieve

Seconded: Director Worley

That the staff report regarding the Development Permit Amendment application, submitted by Jason Taylor of Christina Lake Cannabis Corp. on behalf of Cervantes Capital Corp., to amend the cannabis cultivation area from 6 hectares to 9 hectares on the parcel legally described as Lot 2, District Lot 312, Plan KAP39263, SDYD, Except Plan KAP60786, KAP 80226, Electoral Area C/Christina Lake, be received.

Carried.

**Kathleen O'Malley and Dave & Mary Durand**

**RE: MOTI Subdivision**

2300 & 2325 Fife Road, Electoral Area C/Christina Lake

RDKB File: C-2885-06921.000

Moved: Director Grieve

Seconded: Director Gee

That the staff report regarding the Ministry of Transportation and Infrastructure referral for a proposed subdivision, for the parcels legally described as Lot 2, DL 2885, SDYD,

*Page 3 of 5  
Electoral Area Services  
March 12, 2020*

Plan 31857 and Plan KAP3520B, SDYD, Except Plan B5795, Electoral Area C/Christina Lake, be received.

Carried.

**DMG Subco. (1141559 BC Ltd)**

**RE: OCP and Zoning Amendments**

795 Highway 395, Electoral Area C/Christina Lake

RDKB File: C-312-02632.415

Donna Dean, Manager of Planning and Development, provided some background information on this application. There was discussion about noise level and a more definitive description being required. Also discussed was the definition of what fully enclosed entails. Sheldon Bennett and Craig Boruck from DMG Blockchain spoke to the application and provided additional information regarding the design of the building. He suggested that staff and directors tour the facility to better understand the design. Vice-Chair McGregor suggested this application be deferred to a future meeting.

Moved: Director Worley

Seconded: Director Grieve

That the application submitted by DMG Subco., to amend Electoral Area C/Christina Lake Zoning Bylaw No. 1300 to modify the definition of warehouse for partially enclosed structures be deferred to a future meeting.

Carried.

**Grant in Aid Report**

Moved: Director Worley

Seconded: Director Grieve

That the Grant in Aid report be received.

Carried.

**Gas Tax Report**

Moved: Director Gee

Seconded: Director McGregor

That the Gas Tax Report be received.

Carried.

**LATE (EMERGENT) ITEMS**

There were no late/emergent items.

**DISCUSSION OF ITEMS FOR FUTURE AGENDAS**

There was no discussion of items for future agendas.

**CLOSED (IN CAMERA) SESSION**

A closed/in camera meeting was not required.

**ADJOURNMENT**

There being no further business to discuss, Vice-Chair McGregor adjourned the meeting at 4:11 p.m.



## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Development Permit – Waneta Expansion Power Corp.		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	A-205A-00944.000 (647-20D)
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received an application for a development permit from Columbia Power Corp., on behalf of Waneta Expansion Power Corp., for land remedial works in Electoral Area A (see attachments).

The purpose of this report is to provide information on the interim flood mitigation works that have already begun prior to the issuance of a development permit. At the time of writing this report the applicant estimates that the interim works are approximately 75% complete. The works are being undertaken to ensure the subject properties do not contribute to flooding in the Columbia Gardens Industrial Park this spring.

Property Information	
<b>Owner(s):</b>	Waneta Expansion Power Corporation
<b>Agent:</b>	Columbia Power Corporation c/o Matthew Tonner
<b>Location:</b>	Highway 22A
<b>Electoral Area:</b>	Electoral Area A
<b>Legal Description(s):</b>	Lot 6A and Lot 7A, DL 205A, KD Plan 800, Except part included in SRW Plan 15510 and EPP60444
<b>Area:</b>	11.8ha (29.2acr)
<b>Current Use(s):</b>	Vacant
Land Use Bylaws	
<b>OCP Bylaw No.: 1410</b>	Industrial
<b>DP Area:</b>	Industrial and Columbia Gardens Aquifer
<b>Zoning Bylaw No.: 1460</b>	Industrial 2 (IN2)
Other	
<b>Waterfront / Floodplain:</b>	Sayward Creek
<b>ALR:</b>	NA
<b>Service Area:</b>	Columbia Gardens Industrial Park Water
<b>Planning Agreement Area:</b>	Montrose Planning Agreement Area

## History / Background Information

The subject properties, Lot 6A and 7A HWY 22A, were used as the field headquarters for the Waneta Expansion Project on the Pend d'Orielle River from 2010 to 2015. They were used for site offices, a carpentry shop, warehousing, parking for approximately 400 employees, and a laydown area for the materials used for the dam's expansion.

Prior to the properties' utilization for the Waneta Expansion Project, they were used for agricultural purposes. Sayward Creek enters the properties at the northeast, utilizing much of their area for surface infiltration. Similarly, Langford Creek utilizes the retention pond on the property to the south (Lot 8A) for drainage during high flows.

It is thought that when the Columbia Gardens Industrial Park was developed in the 1980s, the natural drainage pattern of Langford Creek was altered. Sayward Creek's natural drainage pattern was altered as a result of the creation of the laydown area for the expansion project.

The "Industrial and Columbia Gardens Aquifer" Development Permit Area (DPA) was created to protect the water quality and quantity of the aquifer in the Columbia Gardens Industrial Park. The aquifer is a water source for the Industrial Park's water system. This water system is owned and operated by the RDKB.

### Original Development Permit Approval

Rehabilitation measures to reclaim the disturbed sites were a condition of the initial development permit approval in 2010. However, it appears there was limited rehabilitation and the soils remained compacted, in turn limiting the ability for water to be naturally filtered back into the aquifer through the properties. As a result, the ability for the properties to act as a natural drainage basin for Sayward Creek was substantially diminished.

In 2017, significant runoff and rain events coupled with Lots 6A and 7A's limited ability to absorb water resulted in significantly more water travelling to the retention pond on Lot 8A to the south, which eventually spilled its banks. As a result, properties on the east side of the Columbia Gardens Industrial Park flooded. The flooding event resulted in an investigation by the Environmental Assessment Office (EAO) at the Province.

Conditions 1 and 16 of the Environmental Assessment Certificate issued for the project required:

- implementation of the project in an environmentally sensitive manner; and,
- the restoration of all site drainage features and facilities or designing and installing new facilities.

The EAO Compliance and Enforcement Branch conducted site inspections on the properties in fall and winter of 2018 and determined that the Certificate Holder (Columbia Power Corporation) was non-compliant with Conditions 1 and 16. As such, an Order of Non-Compliance was issued ordering the Certificate Holder to:

1. Develop and implement an interim Sayward Creek Flow Emergency Response Plan to prevent further flood events in Columbia Gardens Industrial Park;

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2. Develop a Sayward Creek Drainage Management Plan to fully and permanently restore the drainage function of the Sayward Creek alluvial fan; and,
3. Implement the long-term Sayward Creek Drainage Management Plan.

The properties are located within the "Industrial and Columbia Gardens Aquifer" DPA. As such, land remedial works, such as those required by the Order of Non-Compliance, also require development permit approval from us.

### **Proposal**

Currently, earthworks are taking place on the parcels to create a new retention pond on Lot 7A (see attached Site Plan and Typical Cross Section) to mitigate the risk of flooding in the Industrial Park until the flood risk is low again at the end of spring.

The applicant is requesting development permit approval to permit land remedial works to reclaim the natural drainage patterns on the parcels as part of their long-term solution; however, we have not yet received the Sayward Creek Drainage Management Plan, which would be considered their long term solution.

### **Implications**

The proposal is a requirement of the EAO and the interim works covered in the Emergency Response Plan (ERP)<sup>1</sup> do not meet our DPA guidelines; however, the applicant states they were necessary to mitigate flood risks this spring in the Columbia Gardens Industrial Park. The applicant is currently working toward the completion of the Sayward Creek Drainage Management Plan for consideration by the EAO in order to fulfil requirements #2 and #3 of the Order of Non-Compliance.

The applicant's long-term solution, the Sayward Creek Drainage Management, will be required to meet all DPA guidelines prior to the issuance of a development permit. The applicant is aware that the current works do not meet the DPA guidelines and that we expect their long-term solution to meet the guidelines.

Once we have received the Sayward Creek Drainage Management Plan, it will be forwarded to the APC with a new staff report for consideration.

### **Advisory Planning Commission (APC)**

The application was forwarded to the Electoral Area A APC for information and general comments. They considered the application at their April 7, 2020 meeting and provided the following comments:

"RDKB staff and Director Grieve provided information and answered questions in regard to the permit application. The committee unanimously agreed that they are pleased to see a drainage plan implemented and are looking forward to seeing the final plan."

The APC provided a recommendation of support for the application.

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<sup>1</sup> The Emergency Response Plan (ERP) has not been attached to this report, as the applicant has requested that it remain confidential. A copy of the Report may be made available to members of the EAS Committee upon request.

### **Recommendation**

That the staff report regarding the Development Permit application submitted by Columbia Power Corp., on behalf of Waneta Expansion Power Corp., outlining their interim flood mitigation works in the Industrial and Columbia Gardens Aquifer Development Permit Area, on the parcels legally described as Lot 6A and Lot 7A, DL 205A, KD Plan 800, Except part included in SRW Plan 15510 and EPP60444, Electoral Area A, be received.

### **Attachments**

Site Location Map  
Subject Property Map  
Applicant Submission



Regional District of  
Kootenay Boundary

Date: 2020-03-25

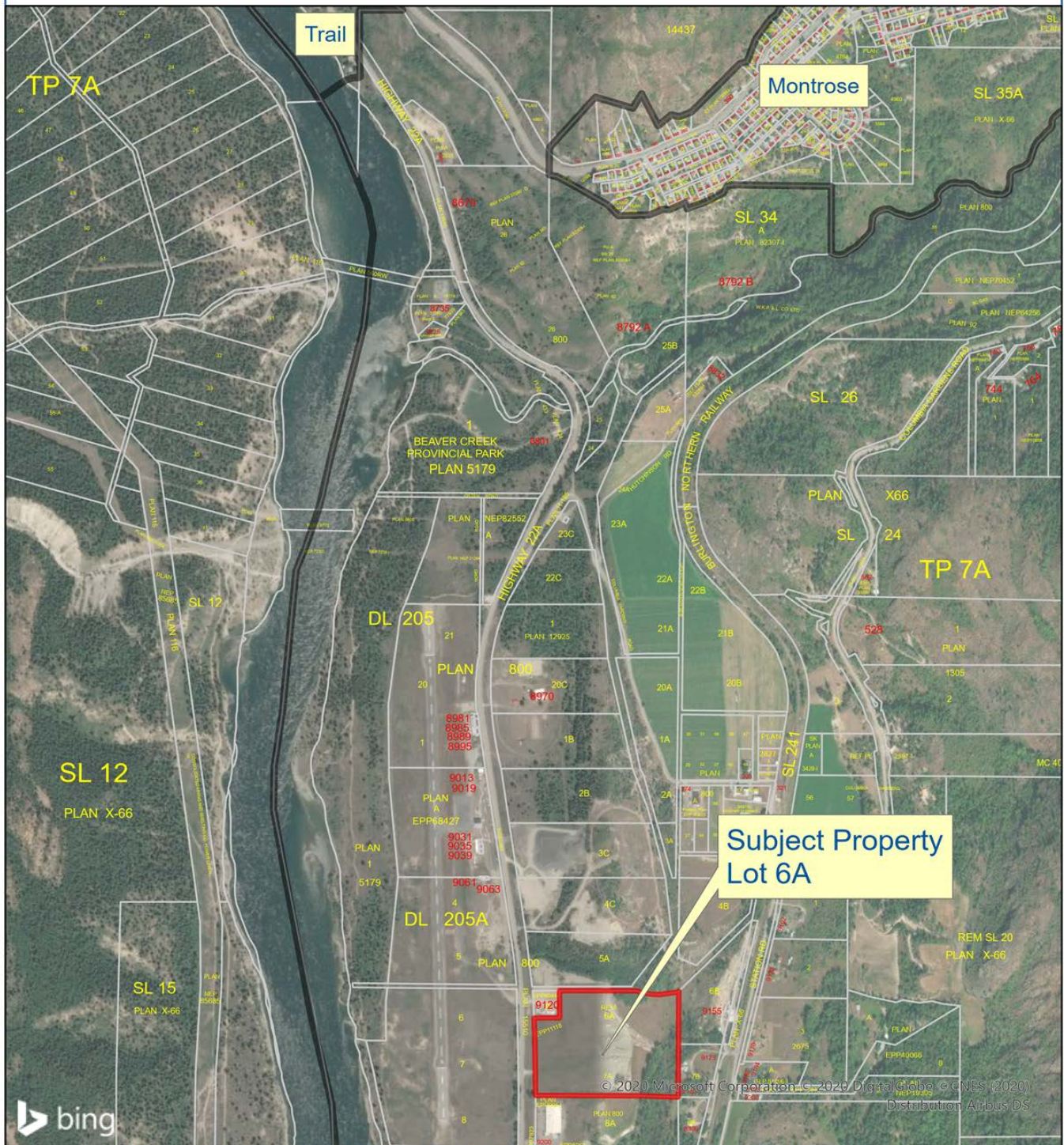
# Site Location Map

Lot 6A,  
Plan NEP800, DL 205A,  
KLD



0 100 200 300 400  
Meters

1:15,000



202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com

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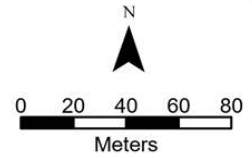


Regional District of  
Kootenay Boundary

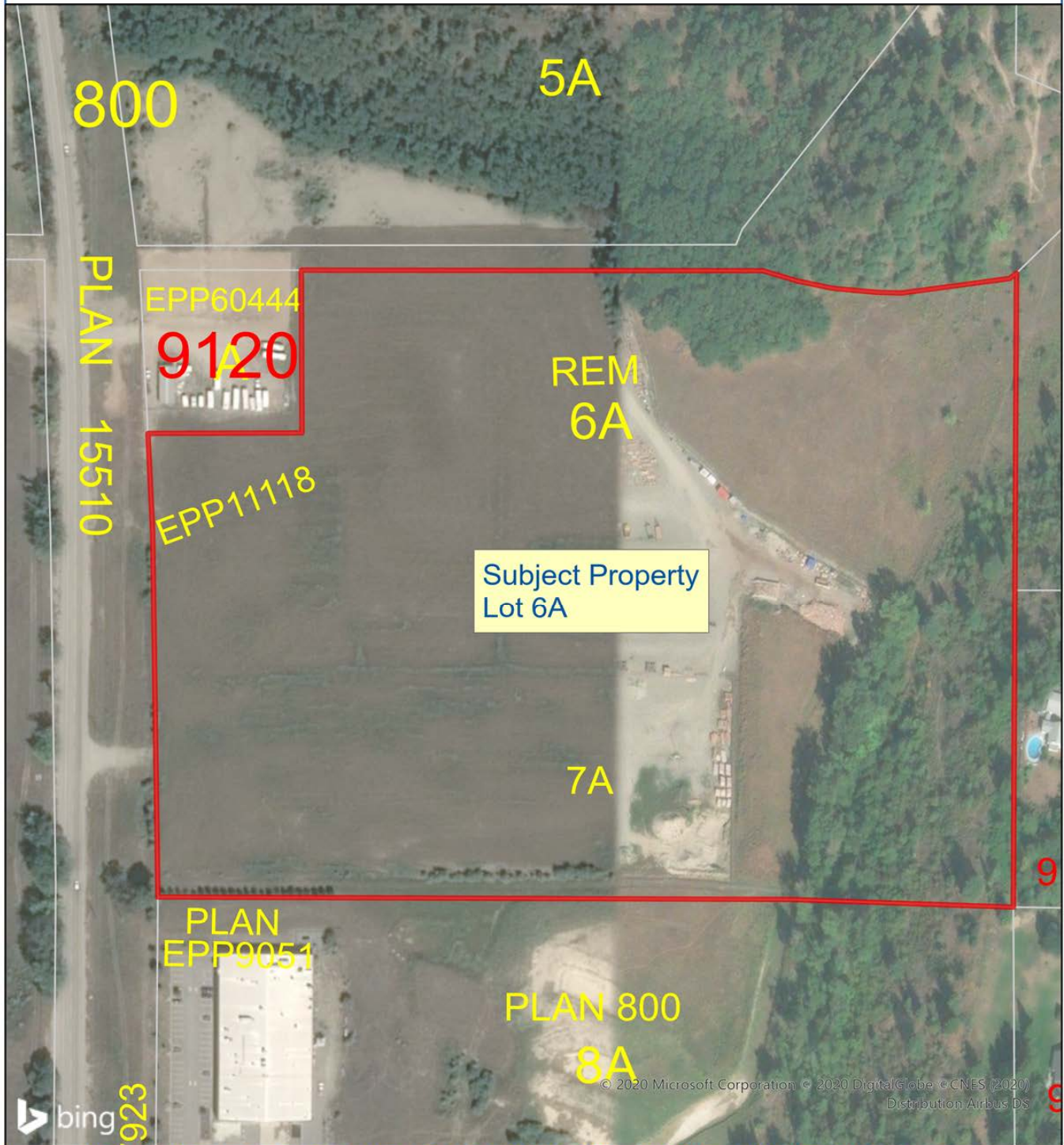
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# Subject Property Map

Lot 6A,  
Plan NEP800, DL 205A,  
KLD



1:2,500



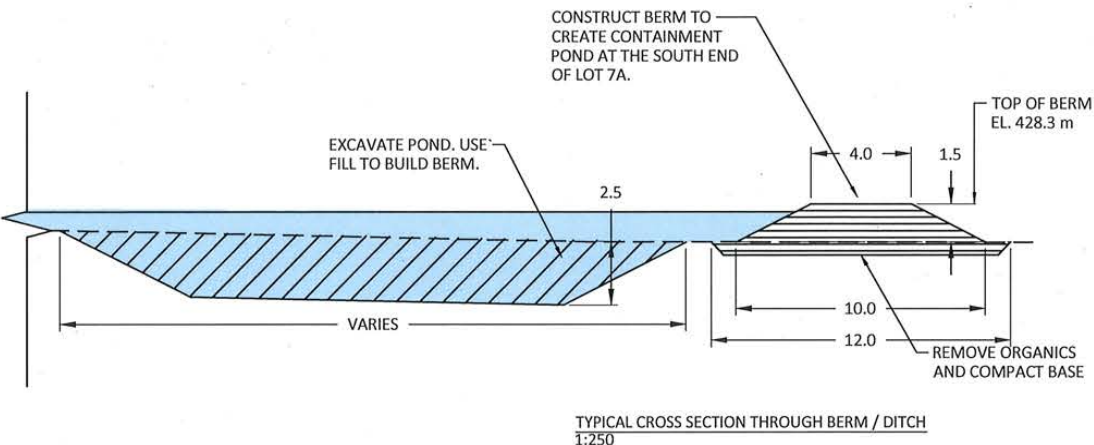
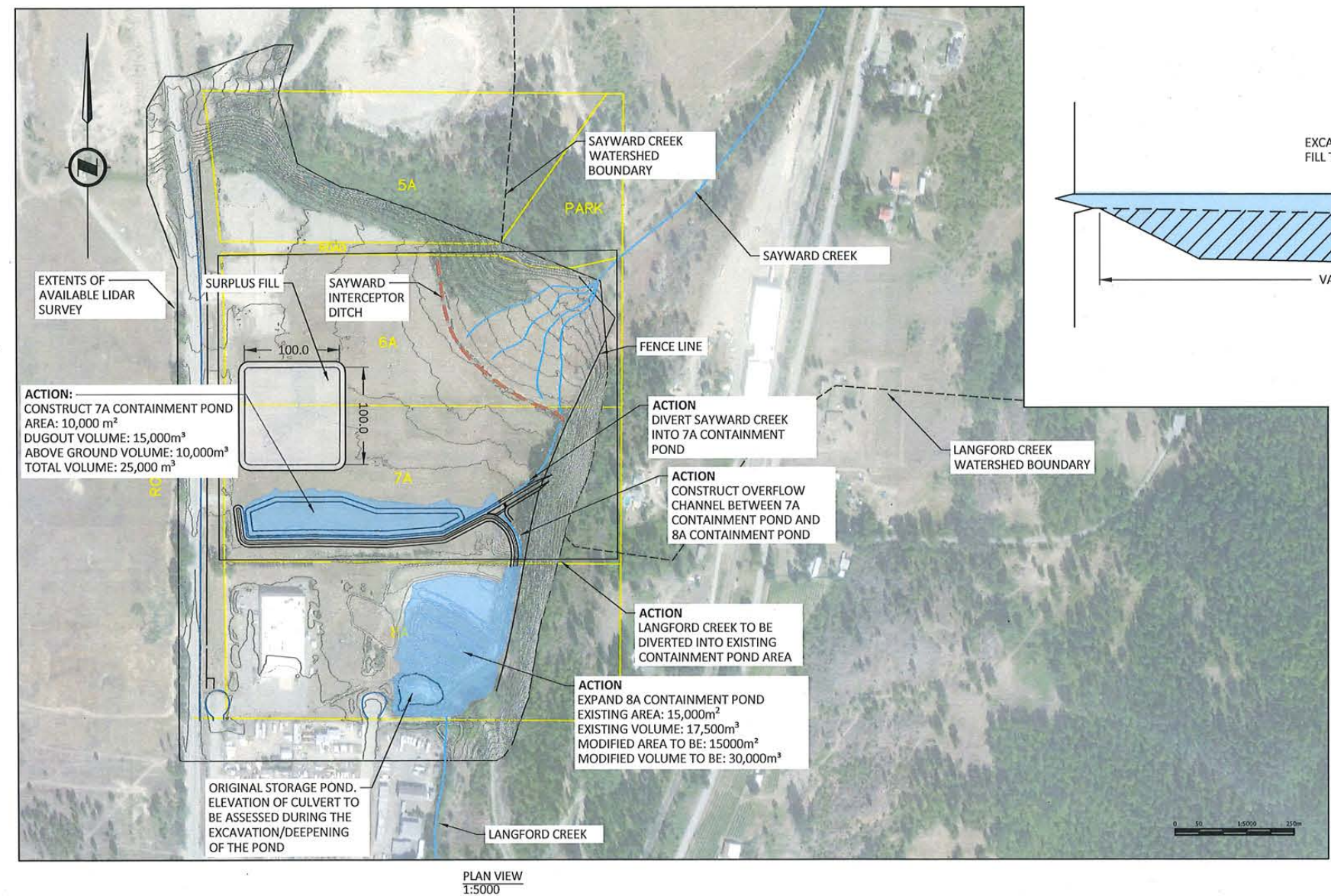
202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | [rdkb.com](http://rdkb.com)

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# COLUMBIA POWER CORPORATION

## COLUMBIA GARDENS - EMERGENCY RESPONSE PLAN



- NOTES:**
1. ORTHOPHOTO FROM ESRI IMAGE DATABASE, TAKEN AUGUST 2017
  2. GROUND CONTOURS ARE GENERATED FROM LIDAR SURVEY PROVIDED TO NHC BY CPC. MAJOR CONTOURS ARE 1m INTERVAL, MINOR CONTOURS ARE 0.5m INTERVAL.
  3. LOT NAME AND BOUNDARIES PROVIDED BY CPC.

**EARTHWORK QUANTITIES:**

SAYWARD CREEK POND (LOT 7a)  
POND EXCAVATION = 15,000 m<sup>3</sup>

SAYWARD CREEK POND BERM (LOT 7a)  
FOOTPRINT EXCAVATION = 2200 m<sup>3</sup>  
BERM FILL = 4000 m<sup>3</sup>

LANGFORD CREEK POND (LOT 8a)  
POND EXCAVATION = 17500 m<sup>3</sup>

TOTAL EXCAVATION = 34,700 m<sup>3</sup>  
TOTAL FILL = 4000 m<sup>3</sup>  
FILL SURPLUS = 30,700 m<sup>3</sup>



**nhc**  
northwest hydraulic consultants

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REVISIONS			DRAWING INFORMATION	
A	14 FEB 2020	ISSUED WITH ERP	DATE	27 Feb 2020
B	27 FEB 2020	ISSUED WITH REVISED ERP	DESIGNED BY	NRA
			DRAWN BY	NRA
			CHECKED BY	DPM
			SHEET SIZE	B (11" x 17")

**COLUMBIA GARDENS DRAINAGE  
EMERGENCY RESPONSE PLAN**

DRAINAGE AND FLOOD MITIGATION ACTIONS  
SITE PLAN AND TYPICAL SECTION

PROJECT NUMBER	3005476
DRAWING NUMBER	3005476-001
SHEET NUMBER	1
REVISION	B



## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Development Variance Permit – Hammond		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	C-969-04329.000
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received an application for a development variance permit from WSA Engineering (2012) Ltd., on behalf of Darryl and Heather Hammond, for the reconstruction of an existing deck and retaining wall in Electoral Area C/Christina Lake (see attachments).

Property Information	
<b>Owner(s):</b>	Darryl and Heather Hammond
<b>Agent:</b>	WSA Engineering (2012) Ltd.
<b>Location:</b>	141 Brown Road
<b>Electoral Area:</b>	Electoral Area C/Christina Lake
<b>Legal Description(s):</b>	Lot 10, DL 969, SDYD, Plan 9357
<b>Area:</b>	279m <sup>2</sup> (0.07acr)
<b>Current Use(s):</b>	Single family dwelling
Land Use Bylaws	
<b>OCP Bylaw 1250:</b>	Waterfront Residential
<b>DP Area:</b>	Waterfront Environmentally Sensitive
<b>Zoning Bylaw 1300:</b>	Waterfront Residential 2
Other	
<b>ALR:</b>	N/A
<b>Waterfront / Floodplain:</b>	Partial
<b>Service Area:</b>	NA

### History / Background Information

The subject property (Lot 10 – 141 Brown Road) is located along the east side of Christina Lake in Electoral Area C/Christina Lake. It has a "Waterfront Residential" Official Community Plan (OCP) land use designation and is zoned "Waterfront Residential 2". Christina Lake abuts the southern boundary of the property. As such, it is within the floodplain as well as the Environmentally Sensitive Waterfront

Development Permit Area. Additionally, the Christina Lake Foreshore Inventory Mapping shows the area adjacent to the property as a known Kokanee spawning habitat.

The parcel was originally created by subdivision in 1958. The single family dwelling was constructed sometime thereafter; however there is no building permit in our records for its original construction. It's possible that the construction took place prior to the first zoning bylaw or floodplain bylaw being in place. Both the main part of the house and the deck encroach into the required 7.5m setback from the natural boundary of Christina Lake.

In addition, the building and two-tiered deck were constructed partially encroaching on the neighbouring property to the west (Lot 11 – 143 Brown Road), which is shown on the attached plans.

A variance was issued in 2008 to reduce the front parcel boundary from 4.5m to 0m for an accessory structure (carport) that was constructed without permit.

A flooding event in 2018 caused damages to the two-tiered deck as well as two retaining walls, one of which appears to extend below the natural boundary of Christina Lake.

The applicant may be required to remove their deck in order to remove the existing retaining walls and construct a new one. As the deck's location is entirely non-conforming to our Zoning Bylaw regulations, there is uncertainty in whether reconstruction of the deck will be permitted should the Province grant approval for reconstructing the retaining wall.

A new septic system was installed on the subject property in 2019 although no building modifications took place. The system was filed with Interior Health in order to meet the requirements of the *Sewerage System Regulation*. A Waterfront Environmentally Sensitive Development Permit was not required in 2019 nor is it required at this time since no additional habitable area was or is planned.

## Proposal

The applicant has submitted a design brief that describes the proposal (see attachments). The applicant is proposing to reconstruct the portion of the existing approximately 40m<sup>2</sup> (450ft<sup>2</sup>) deck. The new deck would be the same size as what is existing on the subject property. The portion of the deck that is encroaching on Lot 11 would be removed completely. The deck's reconstruction will require the removal of two retaining walls, and replacement by one single retaining wall at the property line (see attachments).

The applicant is requesting to vary the following for the deck's reconstruction:

1. the interior side parcel boundary setback from 1.5m to 0m, a variance of 1.5m; and,
2. the setback from the natural boundary of Christina Lake from 7.5m to 2.2m, a variance of 5.3m, for the deck, which is attached to the house.

Because the deck is located within the 7.5 m floodplain setback from Christina Lake (Floodplain Bylaw No. 677, 1995), a site-specific exemption to the Floodplain Bylaw is also required. That application is discussed in a separate report.

## **Implications**

For Development Variance Permit applications, the RDKB considers whether the proposed variance will:

- a) Resolve a hardship;
- b) Improve the development;
- c) Cause negative impacts to the neighbouring properties.

The proposal will remove encroaching portions of the deck from the neighbouring property. In order to remove encroaching portions of the deck from Lot 11, the owner of Lot 10 must have authorization from the owners of Lot 11. The owners of Lot 10 have been notified of this requirement.

In the consulting engineer's opinion, the proposal would be an improvement over what is existing, as the deck and retaining walls are not considered to be safe for long-term use.

Approval of the requested variances does not address the encroachment of the remaining portion of the single family dwelling on Lot 11 (see attachments). The encroachment is a trespass and is an issue for private parties to resolve.

The property is approximately 19.5m deep. The Zoning Bylaw requires a 4.5m front parcel setback for principal buildings and a 7.5m setback from the natural boundary of Christina Lake. If the property were to meet the required setbacks, approximately 7.5m would remain for a building footprint.

### Retaining Walls

There are two retaining walls in disrepair that will be affected by the proposal. The applicant proposes to remove these two walls and is requesting to replace them with a single retaining wall at the rear parcel boundary, adjacent to Christina Lake (see attachments).

Retaining walls are considered to be landscape structures and do not require Building Permits. As such, there is no trigger from a permitting perspective to ensure they meet siting requirements. The applicant has been referred to FrontCounter BC and directed to apply to for a *Water Sustainability Act* approval. Approval of the variance could be subject to the necessary Provincial permitting being in place.

## **Advisory Planning Commission (APC)**

The Electoral Area C/Christina Lake APC considered the application at their February 4, 2020 meeting. Upon discussion of the application and hearing from the applicants, consideration was deferred pending receipt of more information on the deck's design. We have since received:

- an updated Geotechnical Report that addresses our feedback from the first submission;
- detailed design drawings with additional notes for clarity; and,
- site photos to provide additional context.

The APC reconsidered the application at their April 7, 2020 meeting and provided the following recommendation:

"It was moved, seconded and resolved that the APC recommend to the Regional District that the application be: not supported, due to the encroachment on a shore spawning beach. It was discussed that as there are alternatives to rebuilding the decks as they are currently constructed and options that might allow the wall to require less of a variance to the Lake boundary. Vote was 5 opposed, 4 in favor."

### **Staff Comments**

Reconstruction of the retaining wall at the natural boundary of Christina Lake is a matter that is left up to the authority of the Province through an application to FrountCounter BC for a *Water Sustainability Act* approval. As the Province's process for works "in and about a stream" more thoroughly addresses potential impacts to the natural environment and fish habitat, it may be more appropriate for the applicant to first seek Provincial approval for the retaining wall prior to finalizing the plans for the reconstruction of their deck.

### **Recommendation**

That the Development Variance Permit application submitted by WSA Engineering (2012) Ltd., on behalf of Darryl and Heather Hammond, for the reconstruction of an existing deck and retaining wall on the property legally described as Lot 10, DL 969, SDYD, Plan 9357, Electoral Area C/Christina Lake, be deferred until a Provincial approval for the reconstruction of the retaining wall has been issued and the applicant has had an opportunity to present a modified variance request.

### **Attachments**

Site Location Map

Subject Property Map

Applicant Submission: January 22, 2020 WSA letter and February 14 WSA letter

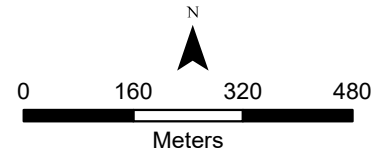


Regional District of  
Kootenay Boundary

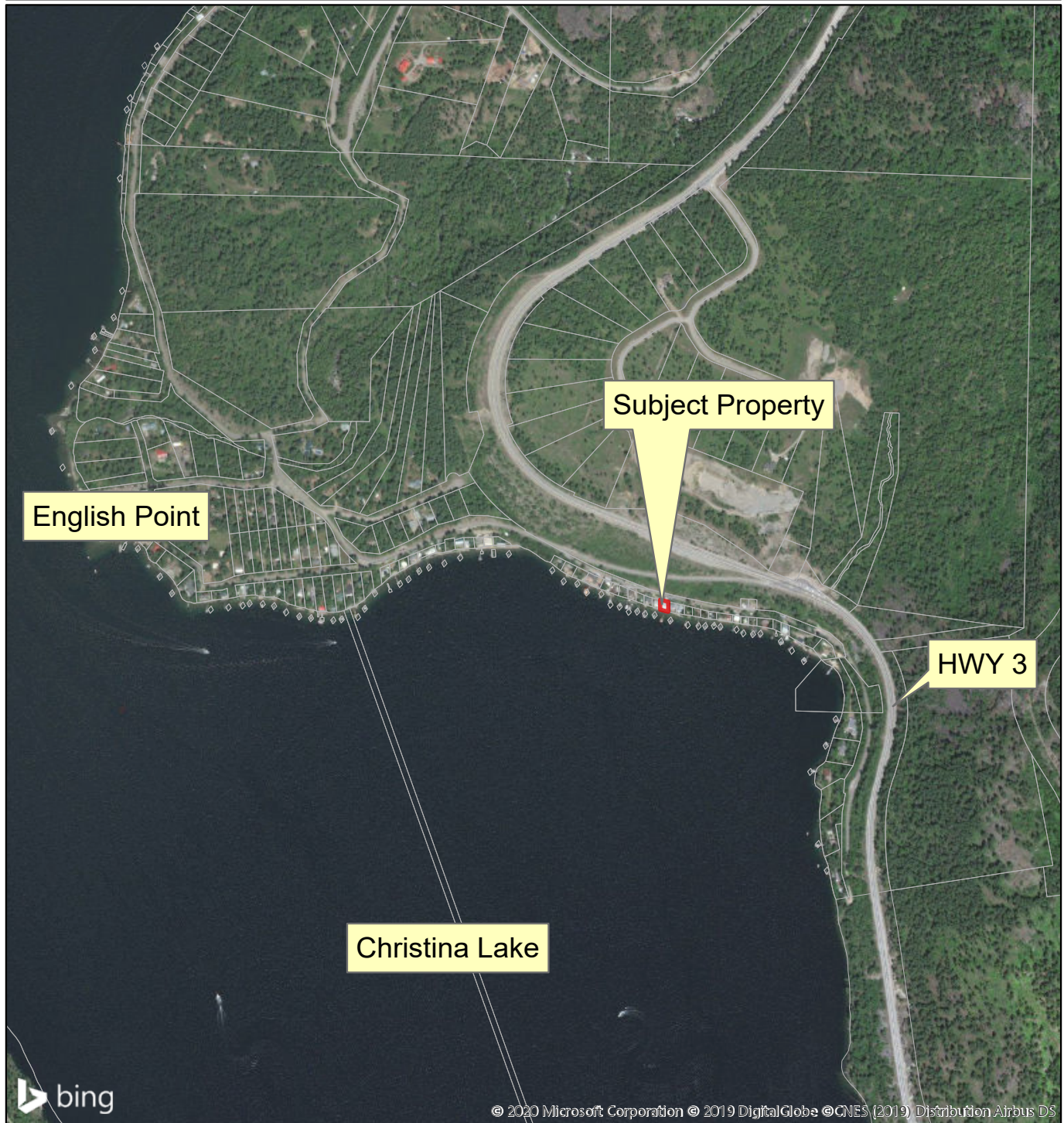
Date: 23-Jan-2020

## Site Location Map

Lot 10, DL 969,  
SDYD, Plan 9357



1:9,600



Document Path: P:\PD\EA\_C\IC-969-04329.000 Hammond\Feb 2020 DVP & Flood Plain Exemption\2020 - Mapping\2020-02-04\_Hammond\_SLM-SPM.aprx

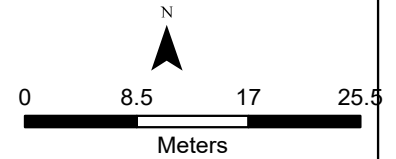


Regional District of  
Kootenay Boundary

Date: 23-Jan-2020

## Subject Property Map

Lot 10, DL 969,  
SDYD, Plan 9357



1:500



Document Path: P:\PD\EA\_C\IC-969-04329.000 Hammond\Feb 2020 DVP & Flood Plain Exemption\2020 - Mapping\2020-02-04\_Hammond\_SLM-SPM.aprx



**ENGINEERING (2012) LTD**  
2248 Columbia Avenue Castlegar, BC V1N 2X1

Tel 1-888-617-6927  
e-mail: [mail@wsaeng.ca](mailto:mail@wsaeng.ca)

January 22, 2020

Project Number: C19001 – 081R2

RDKB  
843 Rossland Avenue  
Trail, BC  
V1R 4S8

Attn: Corey Scott

***RE: HAMMOMD – 141 BROWN ROAD –  
DEVELOPMENT VARIANCE PERMIT APPLICATION – R2***

The following is reference to the Development Permit Application for 141 Brown Road, Christina Lake, BC. Legally described as Lot 10, DL 969, SDYD Plan 9357.

The subject lot is comprised of an existing home, carport, and retaining walls. The southwest corner of the home and deck both encroach onto the neighbouring property to the West (see attached site plan prepared by Hango Land Surveys).

All attempts to resolve the encroachment have been met with resistance from the neighbour. The homeowners are prepared to modify the layout of the deck so that it no longer encroaches onto the neighbour's lot. This will remove the majority of the trespass. However, modification of the house to remove the remaining 50mm of encroachment is not practical. Thus, it will remain unresolved for now.

To resolve the above the homeowners are requesting a variance to allow reconstruction of the deck off the neighbouring property but still within the side yard setback. Please see attached site plan.

In addition, the remainder of the deck and retaining wall on the lake side of the house are in need of repair. These encroach into the 7.5m back yard setback and thus this application also includes a request for a variance to permit reconstruction of the deck within the back yard setback. There is no intention to increase the nonconformance of the deck, simply to replace what is there with new material.

The Hammonds are requesting a variance to reduce the side yard setback to 0m and the rear yard setback to 2.2m (a variance of 5.3m).

This application is accompanied with a Geotechnical Engineering Report in support of a Site Specific Exemption to the Flood Plain Set Back.

The septic system has recently been upgraded under the direction of a Professional Engineering. The design was filed with IHA and a Letter of Certification prepared by the Project Engineer.

We trust that you find the documentation in order. Please call with any questions. We are also prepared to attend a review meeting with you in the Trail Office if you feel that would be helpful.

Sincerely,

**WSA ENGINEERING LTD.**

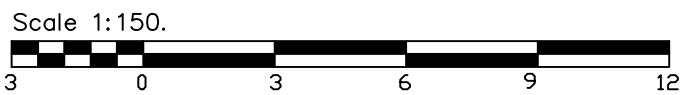
A handwritten signature in black ink, appearing to read 'Dan Sahlstrom', with a stylized, cursive script.

Dan Sahlstrom, P.Eng

DS: aj

Encl. DVP Application  
Site Specific Flood Plain Setback Exemption Report  
Survey Plot Plan  
Proposed Variance Boundaries Sketch

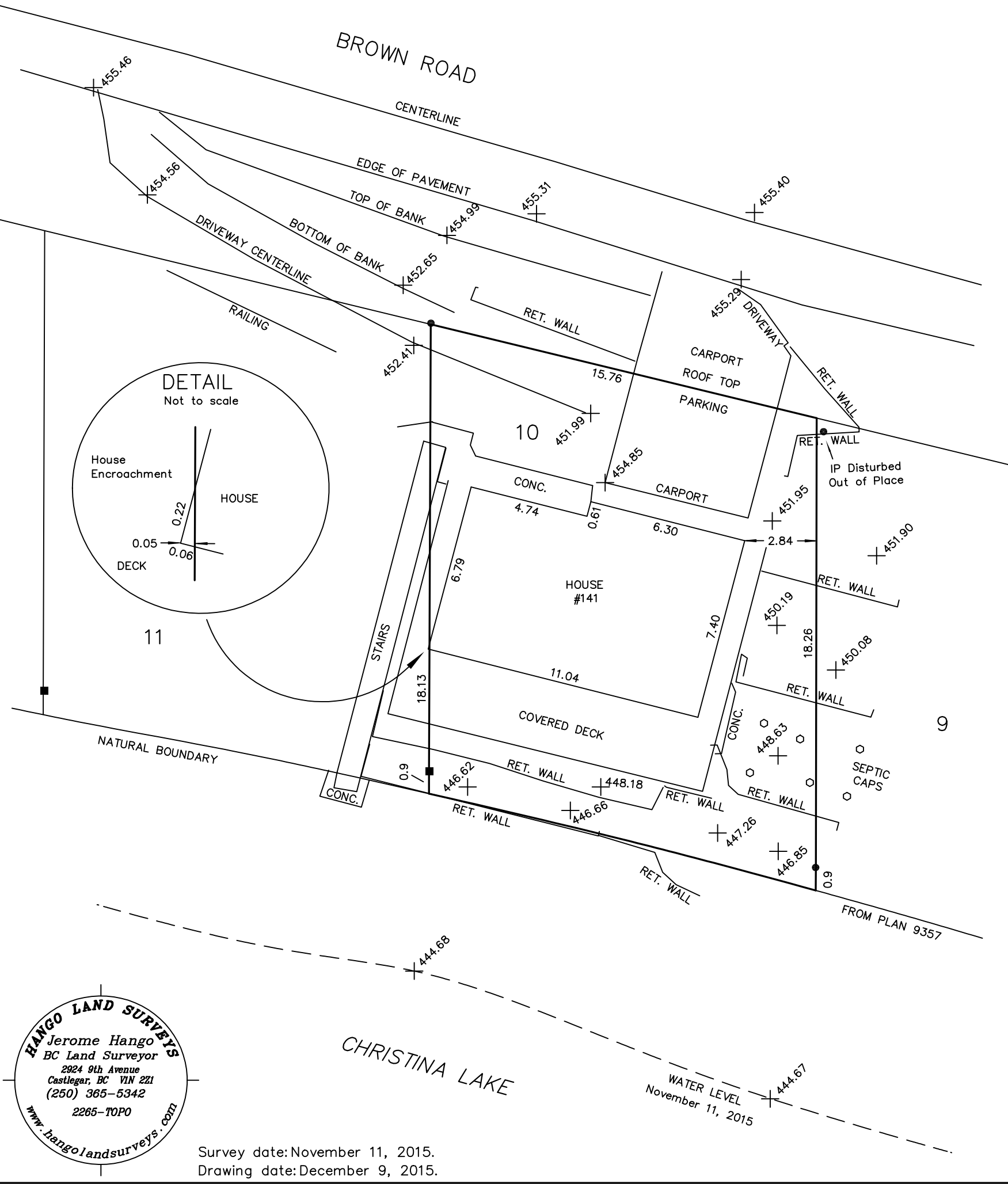
SITE PLAN SHOWING SELECT FEATURES  
ON AND AROUND LOT 10 DL 969  
SDYD PLAN 9357.



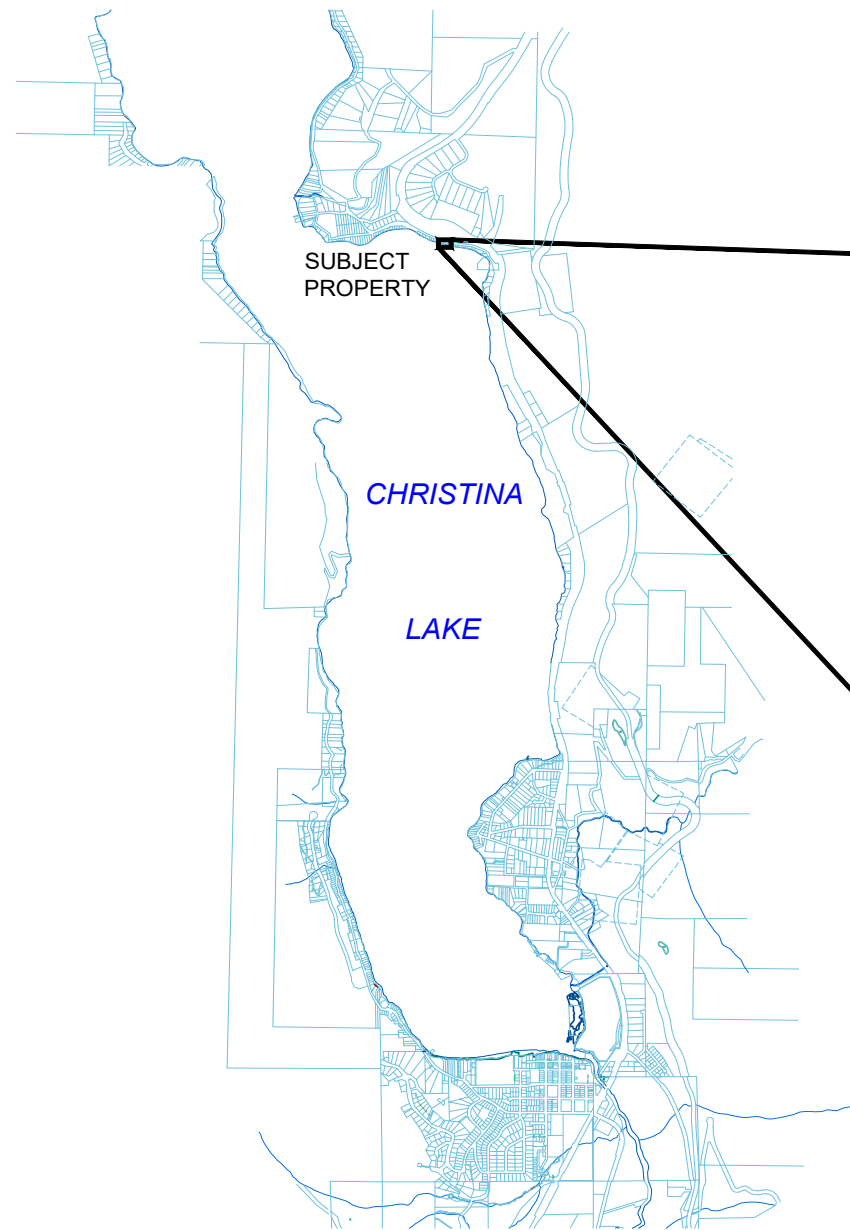
LEGEND

Dimension are derived from Plan 9357.  
Elevations are derived from PPP GNSS observations.  
All distances in metres.  
+323.65 Spot elevation.

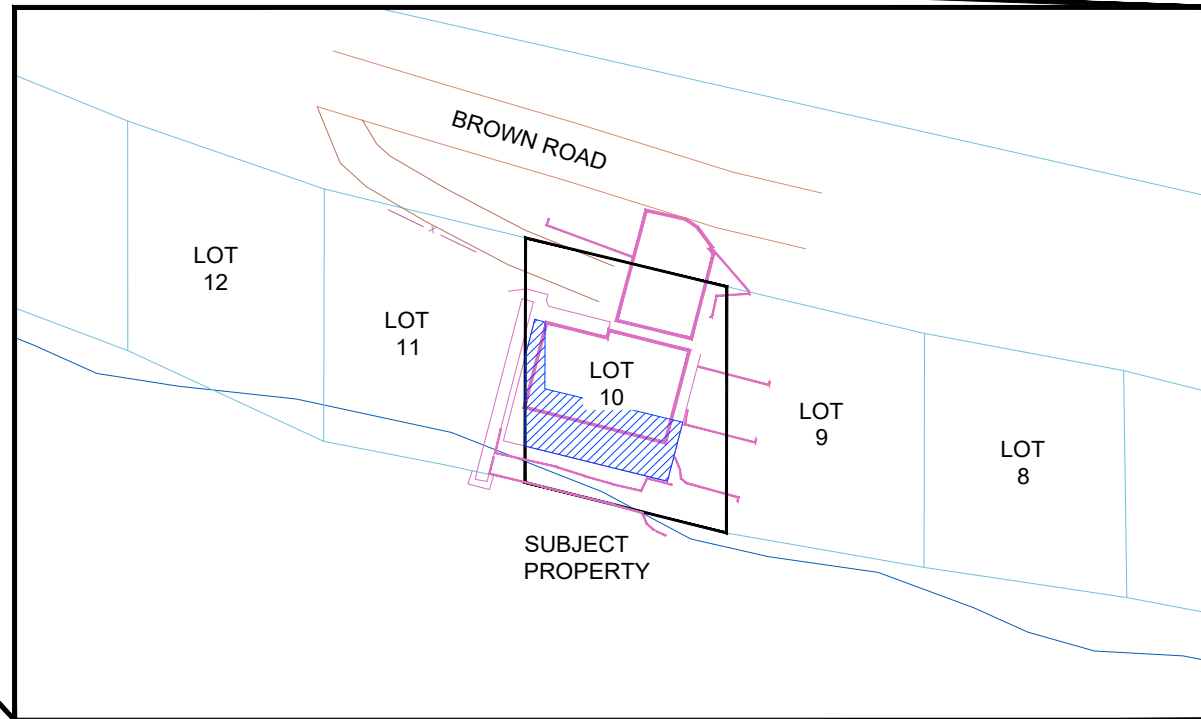
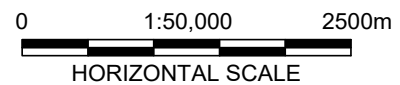
- Found
- Standard iron post
  - Standard lead plug



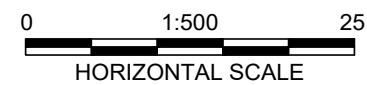
Survey date: November 11, 2015.  
Drawing date: December 9, 2015.



CHRISTINA LAKE - PARTIAL PLAN



LOT 10 DISTRICT LOT 969 S.D.Y.D. PLAN 9357



A	15/11/2019	SC	FIGURE TO ACCOMPANY DVP APPLICATION	DS
	DD/MM/YYYY	BY	ISSUES	ENG.

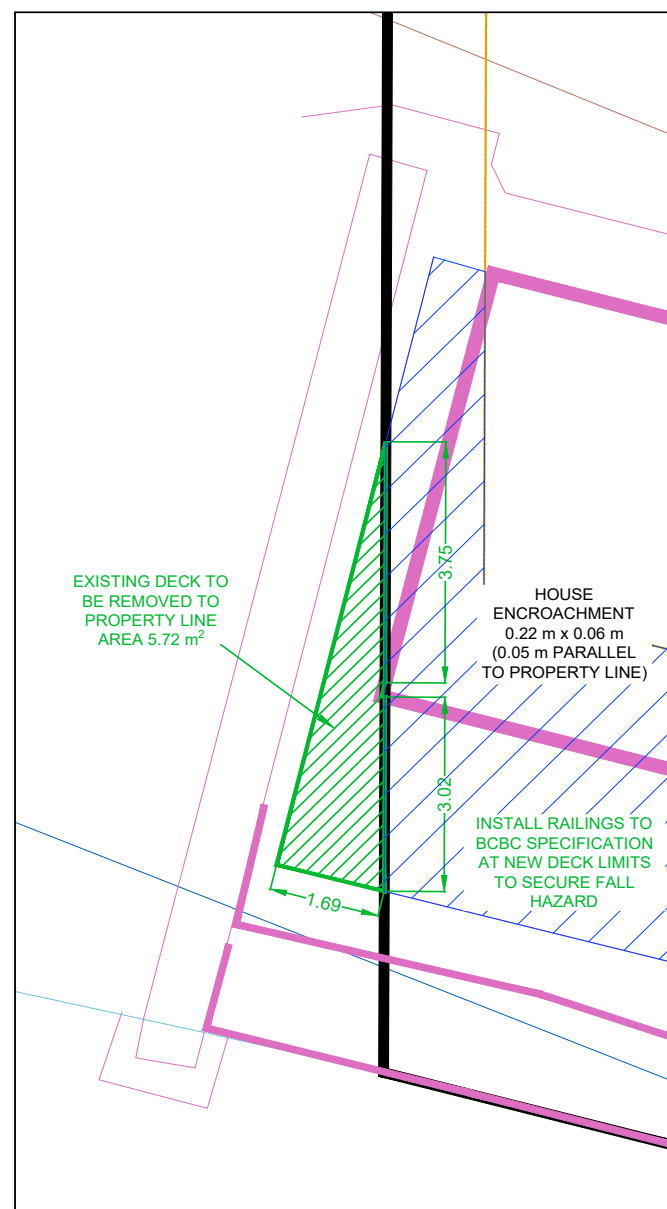
**WSEA ENGINEERING (2012) LTD.**  
Civil and Structural Engineering  
2248 Columbia Ave. Castlegar, B.C. V1N 2X1 Pk: 1-888-617-6927

DESIGN BY	DATE
SC	15/11/2019
DRAWN BY	DATE
SC	15/11/2019
CHECKED BY	DATE
DS	15/11/2019
APPROVED BY	DATE
DS	15/11/2019

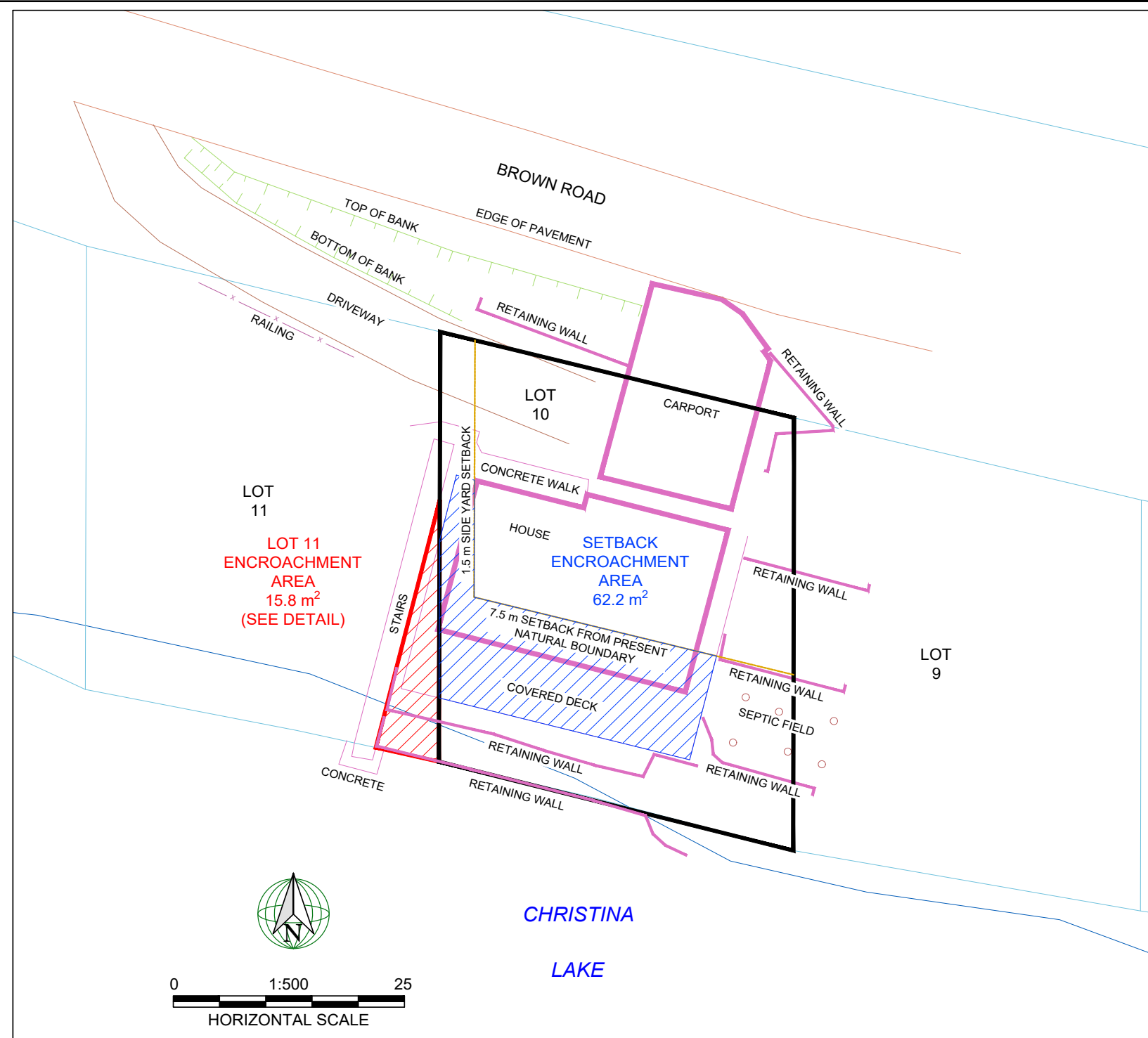
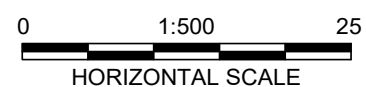
**HAMMOND RETAINING WALL AND DECK**  
141 BROWN ROAD, CHRISTINA LAKE  
LOT 10 DISTRICT LOT 969 S.D.Y.D. PLAN 9357

**LOCATION PLAN**

HOR. SCALE	AS SHOWN	VERT. SCALE
PROJECT FILE No.	C19001-081	
FIGURE	1	



LOT 11 ENCROACHMENT AREA DETAIL



A	15/11/2019	SC	FIGURE TO ACCOMPANY DVP APPLICATION	DS
	DD/MM/YYYY	BY	ISSUES	ENG.

**WISA ENGINEERING (2012) LTD.**  
Civil and Structural Engineering  
2248 Columbia Ave. Castlegar, B.C. V1N 2X1 Ph: 1-888-617-6927

DESIGN BY	DATE
SC	15/11/2019
DRAWN BY	DATE
SC	15/11/2019
CHECKED BY	DATE
DS	15/11/2019
APPROVED BY	DATE
DS	15/11/2019

**HAMMOND RETAINING WALL AND DECK**  
141 BROWN ROAD, CHRISTINA LAKE  
LOT 10 DISTRICT LOT 969 S.D.Y.D. PLAN 9357  
**SITE PLAN**

HOR. SCALE	AS SHOWN	VERT. SCALE
PROJECT FILE No.	C19001-081	
FIGURE	2	



**ENGINEERING (2012) LTD**  
2248 Columbia Avenue Castlegar, BC V1N 2X1

Tel 1-888-617-6927  
e-mail: [mail@wsaeng.ca](mailto:mail@wsaeng.ca)

February 14, 2020

Project Number: C19001 – 081

RDKB  
843 Rossland Avenue  
Trail, BC  
V1R 4S8

Attn: Corey Scott

***RE: HAMMOND – 141 BROWN ROAD – SITE PHOTOS***



Figure 1: Hammond Residence



Figure 2: Hammond Residence – Corner of house that encroaches (house with satellite)



Figure 3: Beach Adjacent to Hammond Residence (looking East)

# HAMMOND RETAINING WALL

## 141 BROWN ROAD

## CHRISTINA LAKE B.C.

### GENERAL NOTES:

- ALL WORK TO CONFORM TO THE BRITISH COLUMBIA BUILDING CODE LATEST EDITION, LOCAL CODES AND BY-LAWS OF AUTHORITIES HAVING JURISDICTION.
- ALL WORK TO BE PERFORMED WITH RESPECT TO GOOD BUILDING PRACTICES.
- CONTRACTOR TO CAREFULLY INSPECT THE SITE OF WORK AND BE FULLY INFORMED OF EXISTING CONDITIONS AND LIMITATIONS
- NO WORK TO COMMENCE WITHOUT PROPER PERMITS AND LICENSES.
- MEASUREMENTS, GRADES AND LEVELS ARE TO BE VERIFIED AT THE SITE BEFORE CONSTRUCTION.
- CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS, ELEVATIONS, DRAWINGS, DETAILS AND SPECIFICATIONS AND REPORT ALL ERRORS OR DISCREPANCIES TO THE OWNER PRIOR TO PROCEEDING WITH THE WORK.
- CONTRACTOR TO VERIFY LOCATIONS AND DETAILS OF ALL CONCEALED SERVICES, PROTECT AND RELOCATE WHERE INDICATED ALL SERVICES FROM DAMAGE DURING CONSTRUCTION PERIOD..
- CONTRACTOR TO MAKE GOOD AND REPAIR ALL EXISTING PARTS AND SURFACES DAMAGED BY DEMOLITION OR NEW CONSTRUCTION, REFINISH TO MATCH SURROUNDING AREA BETWEEN CORNERS OR ABUTMENTS COMPLETE.
- DEMOLISH WHERE NOTED, AND REMOVE DEBRIS FROM SITE, MINIMIZE DISRUPTION TO NEIGHBOURS. ALL SALVAGE MATERIAL (TO BE CONFIRMED BY OWNER) REMAIN THE PROPERTY OF THE OWNER UNLESS OTHERWISE NOTED.
- VERIFY LOCATION OF ALL UNDERGROUND LINES WITHIN THE AREA OF CONSTRUCTION PRIOR TO COMMENCING EXCAVATION. NOTIFY OWNER AT TIME OF EXCAVATION.
- DETERMINE LOCATION OF PARTITIONS NOT DIMENSIONED BY THEIR RELATION TO COLUMN FACE OR CENTRE, WINDOW JAMB OR MULLION, OR OTHER SIMILAR FIXED ITEM.
- DO NOT DRILL OR CUT FLOOR JOISTS, BEAMS, COLUMNS OR OTHER STRUCTURAL ELEMENTS UNLESS SPECIFICALLY INDICATED. DRILL SLABS WHERE APPROVED. CORE DRILL CIRCULAR OPENINGS THROUGH SLABS. LINE DRILL OR SAW CUT RECTANGULAR OPENINGS.
- PROVIDE BLOCKING FOR SOLID BACKING BEHIND ALL WALL AND CEILING MOUNTED DOOR HARDWARE, ACCESSORIES, MILLWORK, PLY EDGES, MISC. METAL ITEMS, GYPSUM BOARD EDGES ETC.
- TAPE, FILL AND SAND ALL NEW G.W.B.
- INSTALL CARBON MONOXIDE DETECTORS TO SATISFY B.C.B.C. 2006 (9.32.4.2 'CARBON MONOXIDE ALARMS')
- INTERIOR GARAGE WALLS SEPARATING THE GARAGE FROM THE HOUSE SHALL HAVE 6 MIL U.V. POLY VAPOUR BARRIER INSTALLED ON THE HOUSE SIDE OF THE WALL. ALL AREAS AROUND DOORS, SWITCHES & OUTLETS SHALL BE PROPERLY TAPED & SEALED.
- ALL FLASHING TO BE PREFINISHED TO SUIT OWNERS COLOUR SCHEME, FLASHING TO BE INSTALLED AT ALL CHANGES IN HORIZONTAL EXTERIOR FINISHES AND OVER ALL UNPROTECTED EXTERIOR OPENINGS. CAULKING TO BE INSTALLED AROUND ALL UNFLASHED EXTERIOR OPENINGS. FLASHING TO BE INSTALLED AT ALL PENETRATIONS IN THE ROOF SYSTEM AND AT ALL CHANGES IN THE ROOF PLANE.
- VAPOUR BARRIER TO MIN. 6 MIL. SEAL ALL JOINTS AND HOLES TO PREVENT LEAKAGE. PROVIDE ALSO 12" WIDE LAPS BELOW SLAB ON GRADE.
- A FREE VENT AREA OF 1/300 OF THE INSULATED ATTIC AREA SHALL BE PROVIDED AT THE ROOF, APPROXIMATELY HALF FROM THE EAVES AND HALF FROM THE TOP (WITH NOT LESS THAN 25% OF THE OPENINGS AT THE TOP OF THE SPACE & NOT LESS THAN 25% OF THE OPENINGS AT THE BOTTOM OF THE SPACE. SEE B.C.B.C 9.19 ROOF SPACES)
- PROVIDE GASKET TO U/S OF SILL PLATES. (POLYETHYLENE FILM OR TYPE S ROLL ROOFING)
- SILL PLATES TO BE PRESSURE TREATED, LEVELLED AND FASTENED TO FOUNDATION WALL WITH 1/2"x3" ANCHOR BOLTS (UNLESS NOTED OTHERWISE) EMBEDDED MIN. 4" @ 6'-0" o.c. MAX. (OR IF SHEAR WALL AS PER DETAIL) WITH MIN. 2 IN EACH SILL.
- ALL TRUSSES TO ENGINEERED AND INSTALLED TO MANUFACTURERS SPECS. PROVIDE ALL GIRDERS, HANGERS, SUPPORTS, HARDWARE, BRACING, ETC. AS REQUIRED. MANUFACTURER TO BRING TO THE ATTENTION OF OWNER/CONTRACTOR ANY FURTHER BEARING REQUIRED FOR TRUSSES PROVIDED.
- TRUSS/JOIST MANUFACTURER TO PROVIDE ALL PERTINENT DRAWINGS AND DESIGN INFORMATION INCLUDING MEMBER REACTIONS TO STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
- ALL BEARING COLUMNS OF GIRDER TRUSSES TO AND SUPPORT BEAMS ARE TO BE POSTED TO FOUNDATION.
- ALL FOOTINGS TO BE TAKEN TO SOLID BEARING (MIN. 30" BELOW GRADE)
- ALL LINTELS TO EXTERIOR OR BEARING WALLS TO BE 3 - 2"x10" U.N.O.
- HEADER JOISTS EMBEDDED IN CONCRETE TO BE TREATED.
- PROVIDE JOIST HANGERS AT FLUSH FRAMED WOOD MEMBERS.
- DOUBLE OR TRIPLE STUD UNDER LINTELS AND BEAMS, AS REQUIRED OR UNLESS OTHERWISE NOTED.
- GRADE AND SPECIES OF FRAMING AS FOLLOWS. (UNLESS NOTED OTHERWISE ON DRAWING)
  - BEAMS, POSTS, COLUMNS, HEADERS, LEDGERS, JOISTS, etc. (No. 1 & 2 OR BETTER, DOUGLAS FIR LARCH OR S.P.F.)
  - STUDS (No. 1 & 2 OR BETTER SPRUCE)
  - EXTERIOR WALL SHEATHING TO BE 1/2" O.S.B. OR 1/2" PLYWOOD
  - ROOF SHEATHING TO BE MIN. 5/8" PLYWOOD UNLESS OTHERWISE NOTED.
  - ALL SUBFLOORING TO BE MIN. 3/4" T&G PLYWOOD UNLESS OTHERWISE NOTED.
- FLOOR JOISTS TO BE RESTRAINED FROM TWISTING WITH CROSS BRIDGING, SOLID BLOCKING OR EQUIV.
- SOLID BLOCKING TO BE INSTALLED FOR ADEQUATE SUPPORT OF TOWEL BARS, CURTAIN AND CLOSET RODS, SHELVES, GRAB BARS AND SIMILAR FIXTURES WHERE REQUIRED.
- MULTI-PLY LVL'S SHALL BE CONNECTED AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.

### CONCRETE:

- PROVIDE CONCRETE AND PERFORM WORK TO CSA-A23.3.
- MINIMUM 28 DAY COMPRESSIVE STRENGTHS AS INDICATED BELOW. ALL CONCRETE NORMAL WEIGHT - 150 PCF, TYPE 10 CEMENT, TYPE F FLYASH, MAXIMUM 3/4" AGGREGATE FOR ALL CONCRETE EXCEPT 1 1/4" MAXIMUM AGGREGATE FOR CHUTE PLACED SLABS ON GRADE. SUBMIT PROPOSED MIX DESIGN TO THE ENGINEER FOR APPROVAL:

#### INDUSTRIAL/COMMERCIAL

LOCATIONS	STRENGTH MPa (PSI)	AIR %	SLUMP +20mm	EXPOS. CLASS
FOOTINGS	25 (3600)	1-4	70	-
SUSPENDED SLABS & BEAMS	25 (3600)	4-7	70	F2
RETAINING WALL	25 (3600)	4-7	70	F2
INTERIOR S.O.G.	25 (3600)	1-4	60	-
EXPOSED S.O.G.	32 (4640)	4-8	60	C2
WALLS & COLUMNS	25 (3600)	1-4	70	-
	30 (4350)	4-7	70	F2

- DO NOT USE ADMIXTURES OTHER THAN AIR ENTRAINMENT, STANDARD WATER REDUCERS OR SUPER PLASTICIZERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- REJECT ALL CONCRETE WHEN TIME BETWEEN BATCHING AND PLACING EXCEEDS 2 HOURS.
- DO NOT ADD WATER TO THE CONCRETE ON SITE UNLESS AUTHORIZED BY THE ENGINEER.
- CONSOLIDATE ALL CONCRETE USING MECHANICAL VIBRATORS.
- CONTROL JOINTS FOR SLAB-ON-GRADE: SAWCUT TO A DEPTH OF 25% OF SLAB THICKNESS AS SOON AS POSSIBLE AND NO LATER THAN 20 HOURS AFTER POURING AT MAXIMUM 6.1m SPACING OR AT LOCATIONS SHOWN ON THE DRAWINGS.
- CONSTRUCTION JOINTS: AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.
- PROTECT CONCRETE FROM ADVERSE WEATHER CONDITIONS IN ACCORDANCE WITH CSA A23.1, A23.3
- CONSTRUCT FORMWORK IN ACCORDANCE WITH WCB REGULATIONS AND CSA S269.3. FORMWORK DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR.

### REINFORCING:

- NEW DEFORMED BARS TO CSA G30.18 GRADE 400 (60 KSI), WELDED WIRE FABRIC TO CSA G30.5, ANCHOR BOLTS TO ASTM A307.
- PLACE REINFORCING BARS TO CSA A23.1. TIE ALL BARS SECURELY IN PLACE TO PREVENT DISPLACEMENT. SUPPORT SLAB REINFORCING ON SUITABLE CHAIRS OR SUPPORTS AT MAXIMUM 4 FT. CENTRES. PROVIDE CORNER BARS TO MATCH HORIZONTAL WALL REBAR.

BEAMS	2"
COLUMNS	2" TO MAIN STEEL
WALLS	1 1/2"
SLABS ON GRADE	1 1/2"
- PROVIDE CLEAR CONCRETE COVER FOR REBAR AS FOLLOWS:

SURFACE POURED AGAINST GROUND	3"
FORMED SURFACE EXPOSED TO GROUND OR WEATHER	2"
BEAMS	2" TO MAIN STEEL
COLUMNS	2" TO MAIN STEEL
WALLS	1 1/2"
SLABS ON GRADE	1 1/2"
- SPLICE REBAR AS FOLLOWS (UNLESS OTHERWISE NOTED):

BAR SIZE-	25M	20M	30M	15M	10M
LAP SPLICE-	51"	31"	71"	25"	18"
- MINIMUM 2-15M REINFORCING AROUND OPENING LARGER THAN 12" AT EACH SIDE OF OPENING. EXTEND 2'-0" PAST CORNER.
- CONTRACTOR TO PROVIDE 24 HOURS NOTICE FOR REBAR INSPECTION.
- WHERE SUSPENDED SLAB DRAWINGS ONLY SHOW PRINCIPAL REINFORCING IN ONE DIRECTION, PROVIDE SHRINKAGE AND TEMPERATURE REINFORCING PERPENDICULAR TO PRINCIPAL REINFORCING AND LOCATE BETWEEN MAIN TOP AND BOTTOM REINFORCING, PER PLANS.
- PROVIDE CORNER BARS FOR ALL HORIZONTAL WALL REINFORCING
- PLACE REINFORCING BARS UNIFORMLY AND SYMMETRICALLY, U.N.O.
- WHERE NEW CONCRETE POUR MEETS ABUTTING CONCRETE, DRILL AND GROUT ALL LONGITUDINAL REINFORCING E.N.O. DRILLING AND GROUTING OF REINFORCING SHALL BE WITH HILTI HY-150 SYSTEM OR APPROVED EQUAL
- NO WELDING OF ANY CONCRETE REINFORCING STEEL IS PERMITTED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

### FIELD REVIEW:

- WSA ENGINEERING LTD. PROVIDES FIELD REVIEW FOR THE WORK SHOWN ON THE STRUCTURAL DRAWINGS PREPARED BY WSA ENGINEERING LTD. THIS REVIEW IS A PERIODIC REVIEW AT THE PROFESSIONAL JUDGEMENT OF WSA ENGINEERING LTD. THE PURPOSE IS TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY WSA ENGINEERING LTD. AND TO FULFILL THE REQUIREMENTS FOR THE COMPLETION OF LETTERS OF ASSURANCE REQUIRED BY THE APPLICABLE BUILDING CODE.
- ALL NON-CONFORMING WORKS THAT REQUIRE REMEDIAL ACTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY EXTRA TIME OR COST INCURRED TO WSA ENGINEERING LTD. TO ASSIST OR ADVISE THE CONTRACTOR IN RECTIFYING THE WORK SHALL BE BORNE BY THE CONTRACTOR.
- ENSURE THAT WORK TO BE INSPECTED IS COMPLETE AT THE TIME OF INSPECTION AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ADDITIONAL INSPECTIONS REQUIRED DUE TO INCOMPLETE WORK OR POORLY EXECUTED WORK, AS JUDGED BY WSA ENGINEERING LTD. AS WELL AS ADDITIONAL DESIGN OR REMEDIAL WORK CAUSED BY DEVIATIONS FROM THESE DRAWINGS, MAY BE CHARGED TO THE GENERAL CONTRACTOR AT THE DISCRETION OF WSA ENGINEERING LTD.
- A MINIMUM OF 24 HOURS NOTICE SHALL BE GIVEN BY THE CONTRACTOR FOR ANY INSPECTION TO BE CARRIED OUT BY WSA ENGINEERING LTD.. INSPECTIONS ARE REQUIRED PRIOR TO CONCEALING ANY STRUCTURAL WORK SHOWN ON THESE DRAWINGS.

### FOUNDATIONS:

- FOUNDATION CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE B.C. BUILDING CODE AND THE GEOTECHNICAL REPORT PREPARED BY THE GEOTECHNICAL ENGINEER ON RECORD.
- BEAR ALL FOOTINGS ON UNDISTURBED SOIL (OR APPROVED ENGINEERED FILL) NOTWITHSTANDING THE ELEVATIONS INDICATED ON THE DRAWINGS. PROVIDE FROST COVER TO ALL FOOTINGS IN ACCORDANCE WITH LOCAL REGULATIONS.
- REMOVE ALL ORGANIC MATERIAL AND UNSUITABLE FILL FROM THE BUILDING AREA.
- PROTECT EXCAVATIONS FOR FOOTINGS FROM RAIN, SNOW, FREEZING TEMPERATURES, STANDING WATER, AND DRYING.
- SHORE AND UNDERPIN EXCAVATIONS TO PREVENT DISTURBANCE TO ADJACENT STRUCTURES, STREETS, SIDEWALKS, AND UTILITIES.
- DO NOT BACKFILL RETAINING WALLS, INCLUDING PERIMETER BASEMENT WALLS, BEFORE THEY ARE ADEQUATELY SUPPORTED BY THE SUPPORTING FLOOR(S). ALL CONCRETE SUPPORTING FLOORS MUST HAVE CURED FOR A MINIMUM 7 DAYS AND ATTAINED MINIMUM 75% OR THEIR 28 DAY STRENGTH. ALL BACKFILLING IS TO COMPLY WITH THE REQUIREMENTS PROVIDED BY THE GEOTECHNICAL ENGINEER.
- STRIPPING AND SHORING NOTES: DO NOT REMOVE FORMS AND SHORING BEFORE THE CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO ENSURE THE SAFETY OF THE STRUCTURE AND NOT BEFORE THE FOLLOWING MINIMUM AND LONG TERM PERFORMANCE PERIODS OF TIME AFTER PLACING CONCRETE.
  - 24 HOURS- COLUMNS, WALLS, FOOTINGS, AND BEAM SIDES
  - 28 DAYS- BEAM SOFFITS, SLABS AND OTHER STRUCTURAL MEMBERS

### NON-STRUCTURAL COMPONENTS:

- NON-STRUCTURAL COMPONENTS ARE NOT THE RESPONSIBILITY OF WSA ENGINEERING LTD. BUT ARE DESIGNED, DETAILED, SPECIFIED AND REVIEWED IN THE FIELD BY OTHERS. LETTERS OF CERTIFICATION OF ADEQUACY, INSTALLATION, ETC. OF SUCH COMPONENTS ARE BY OTHERS.
- MANUFACTURERS OF NON-STRUCTURAL COMPONENTS WHICH AFFECT THE STRUCTURAL FRAMING SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND WSA ENGINEERING LTD. FOR REVIEW. THE SHOP DRAWINGS SHALL CLEARLY INDICATE THE LOAD IMPOSED ON THE STRUCTURE. REVIEW WILL BE LIMITED TO THE EFFECT OF THE COMPONENTS ON THE STRUCTURAL FRAMING.
- EXAMPLES OF NON-STRUCTURAL COMPONENTS INCLUDE BUT ARE NOT LIMITED TO:
  - ARCHITECTURAL COMPONENTS SUCH AS HANDRAILS, GUARDRAILS, RAILINGS, FLAG POST, REMOVABLE CANOPIES, CEILINGS, VEHICLE PROTECTION SYSTEMS, ORNAMENTAL COMPONENTS
  - ARCHITECTURAL PRECAST CONCRETE AND ITS ATTACHMENTS
  - ARCHITECTURAL GLASS BLOCKS AND THEIR ATTACHMENTS
  - BRICK AND BLOCK VANEERS, REINFORCING, AND TIES
  - LANDSCAPING COMPONENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS
  - CURTAIN WALL SYSTEMS, CLADDING, SKYLIGHT, WINDOW MULLIONS
  - INTERIOR AND EXTERIOR NON-LOADING STEEL STUD WALLS
  - SUPPORT AND BRACINGS OF MECHANICAL AND ELECTRICAL SYSTEMS AND EQUIPMENT FOR NON-GRAVITY AND SEISMIC LOADS
  - WINDOW WASHING EQUIPMENT AND ITS ATTACHMENTS
  - ELEVATORS, ESCALATORS, AND OTHER CONVEYING SYSTEMS, INCLUDING PROPRIETARY SUPPORT BEAMS AND ATTACHMENTS
  - NON-STRUCTURAL MASONRY

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### DESIGN LOADS (CHRISTINA LAKE) PER BCBC 2018:

- SPECIFIED DEAD LOADS:
    - ROOF 15 PSF (0.72 kPa)
    - FLOOR 15 PSF (0.72 kPa)
  - SPECIFIED LIVE LOADS:
    - FLOOR 40 PSF (4.2 kPa)
  - CLIMATIC DATA:
    - GROUND SNOW (Sg) 69 PSF (3.3 kPa)
    - ROOF SNOW (S) 88.6 PSF (4.24 kPa)
    - RAIN (Sr) 2.0 PSF (0.10 kPa)
- WIND LOADS:  
(110) 5.4 PSF (0.26 kPa)  
(150) 8.6 PSF (0.41 kPa)
- SEISMIC LOADS:  
Sa(0.2) = 0.133  
Sa(0.5) = 0.108  
Sa(1.0) = 0.082  
PGA = 0.061

### DRAWING INDEX

SHEET S1.0 - SITE PLAN  
SHEET S2.0 - EXISTING BUILDING  
SHEET S3.0 - PROPOSED NEW



ENGINEERING (2012) LIMITED

Civil • Structural  
2248 Columbia Ave. Castlegar, B.C. V1N 2X1 Ph: (888) 617-6927

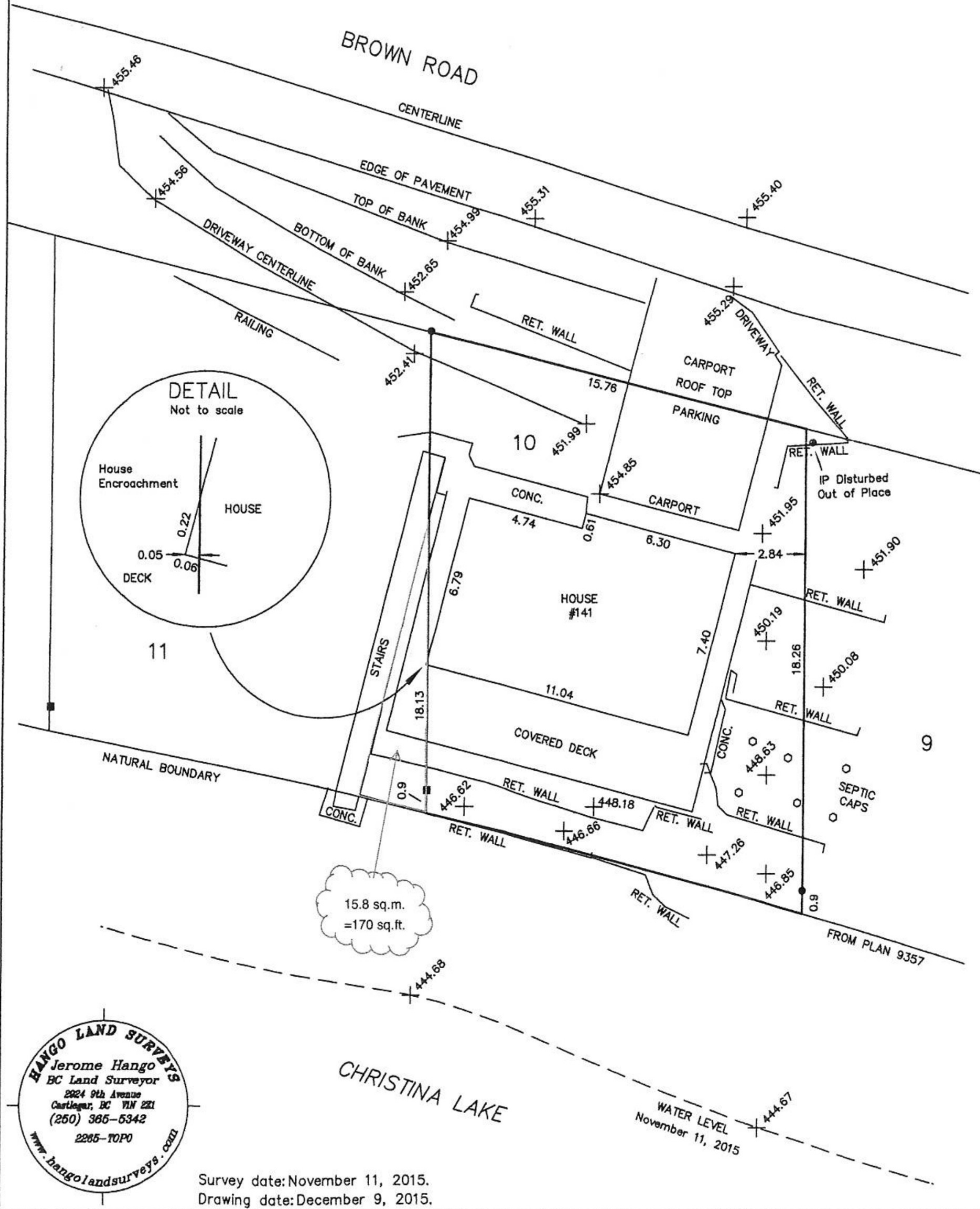
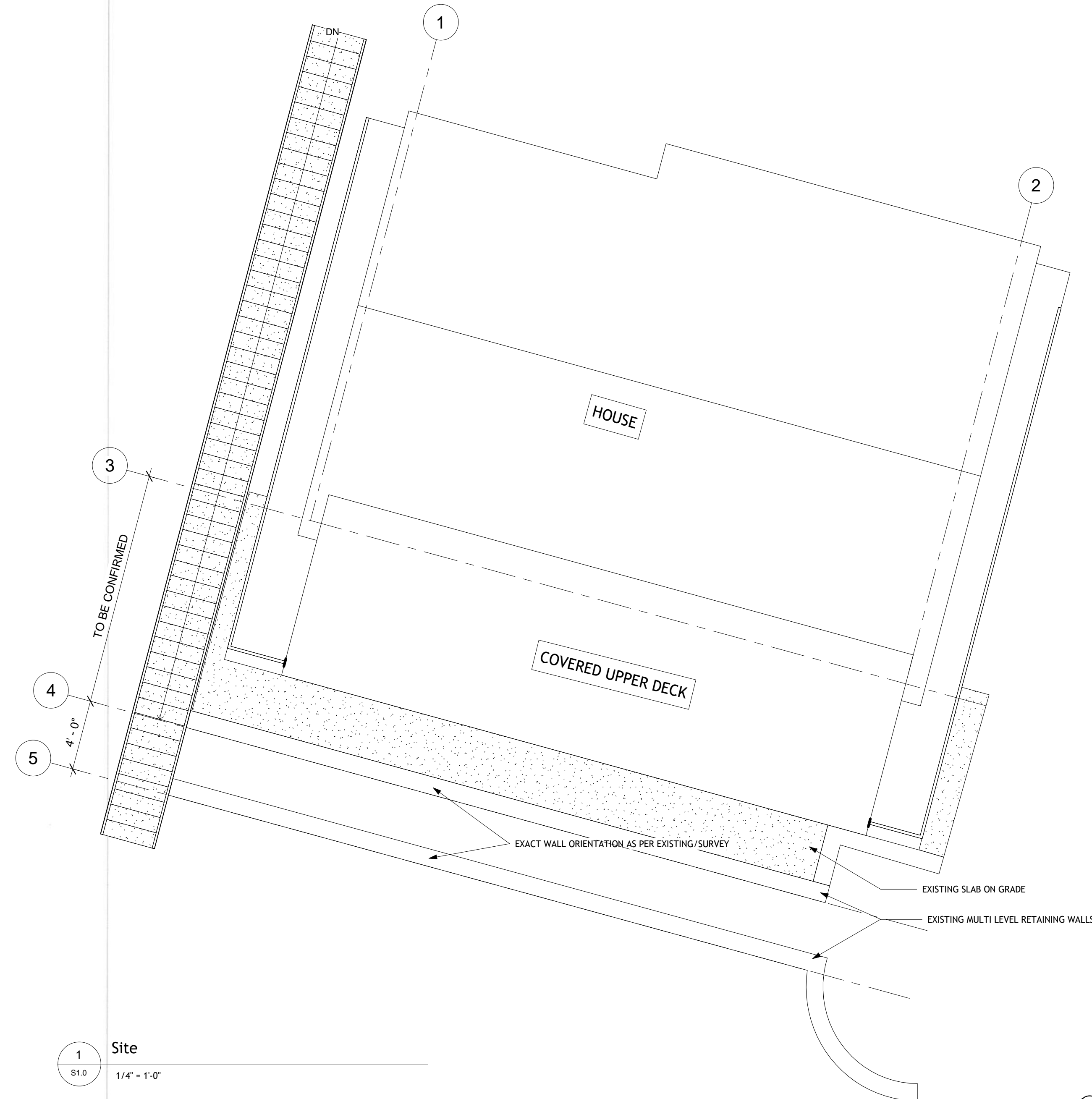
C19001 - 081  
HAMMOND RETAINING WALL  
141 BROWN ROAD  
CHRISTINA LAKE, B.C.

Scale 1:150.

A horizontal scale bar with alternating black and white segments. Below the bar are numerical markings: 3, 0, 3, 6, 9, and 12. The bar is divided into segments of 3 units each, with the first segment starting at 3, followed by 0, 3, 6, 9, and ending at 12.

Dimension are derived from Plan  
9357.  
Elevations are derived from PPP GNSS  
observations.  
All distances in metres.  
+423.65 Spot elevation.

- Standard iron post
- Standard lead plug

 $1/4" = 1'-0"$ 

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141 BROWN ROAD  
CHRISTINA LAKE, BC

Drawing  
SITE PLAN

Date	10/06/19	Project No.	C19001-081
Designed	RS	Drawing File	C19001-081 A1
Drawn	RS	Scale	1/4" = 1'-0"
Checked	AJ	Sheet No.	Issue/Rev.
Approved	DS	S1.0	A

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Dimensions to Face of Foundation or Framing Stud UNO.

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No.	Date	Issue/Revision

Professional Engineer Stamp:



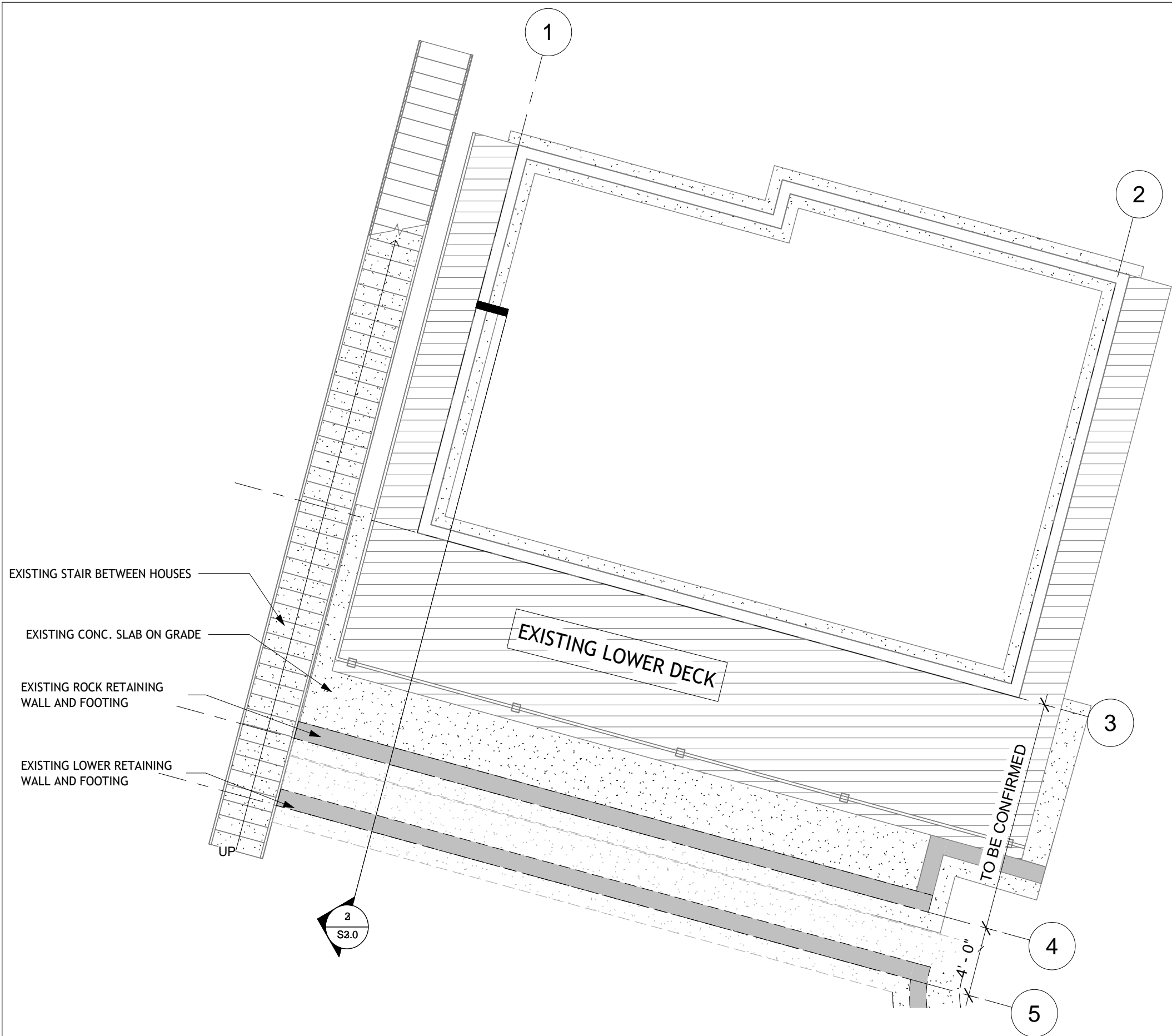
Project  
HAMMOND RETAINING WALL

141 BROWN ROAD  
CHRISTINA LAKE, BC

Drawing  
EXISTING BUILDING

Date	10/06/19	Project No.	C19001-081
Designed	RS	Drawing File	C19001-081 A1
Drawn	RS	Scale	As indicated
Checked	AJ	Sheet No.	S2.0
Approved	DS	OF 3	A

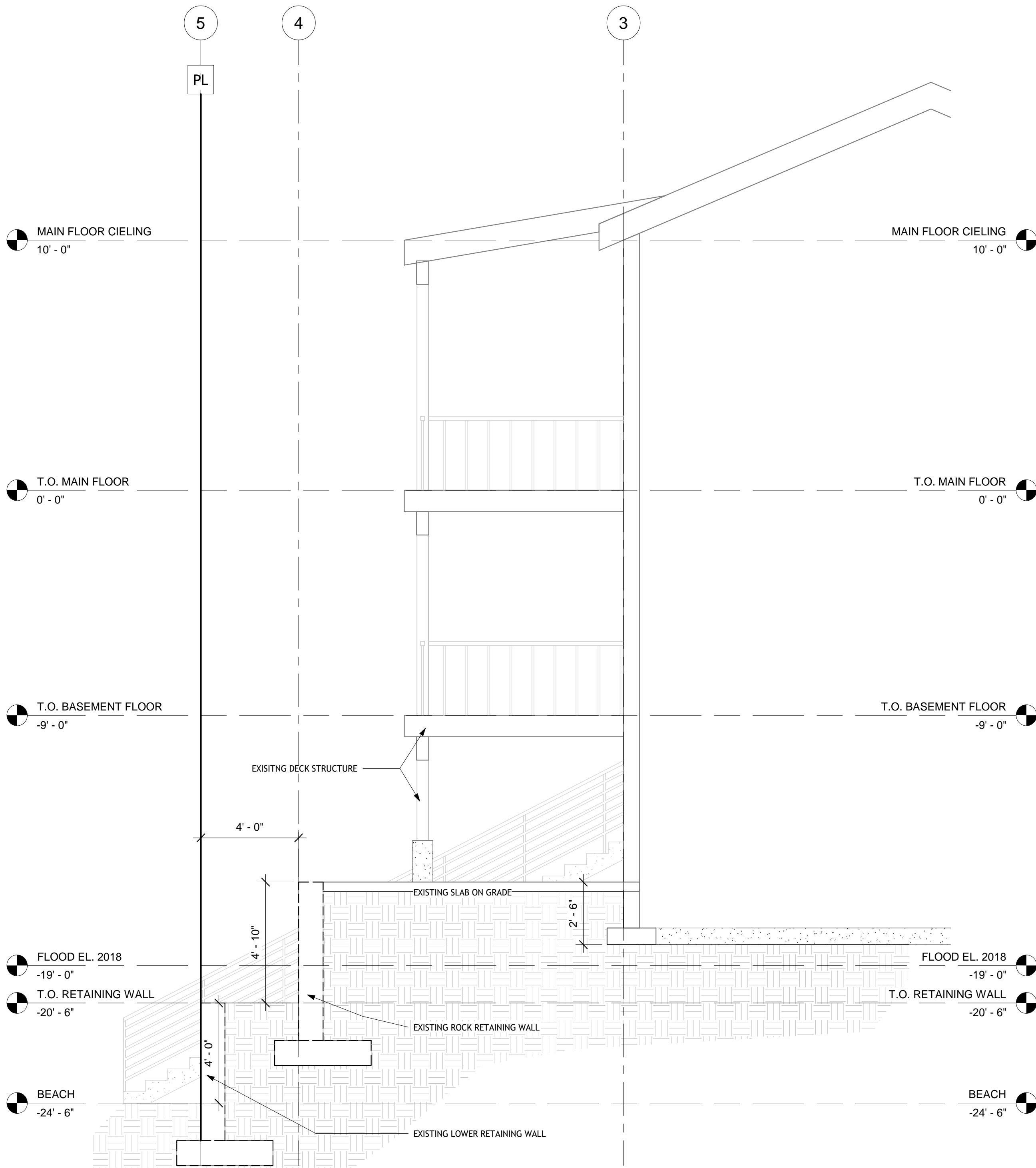
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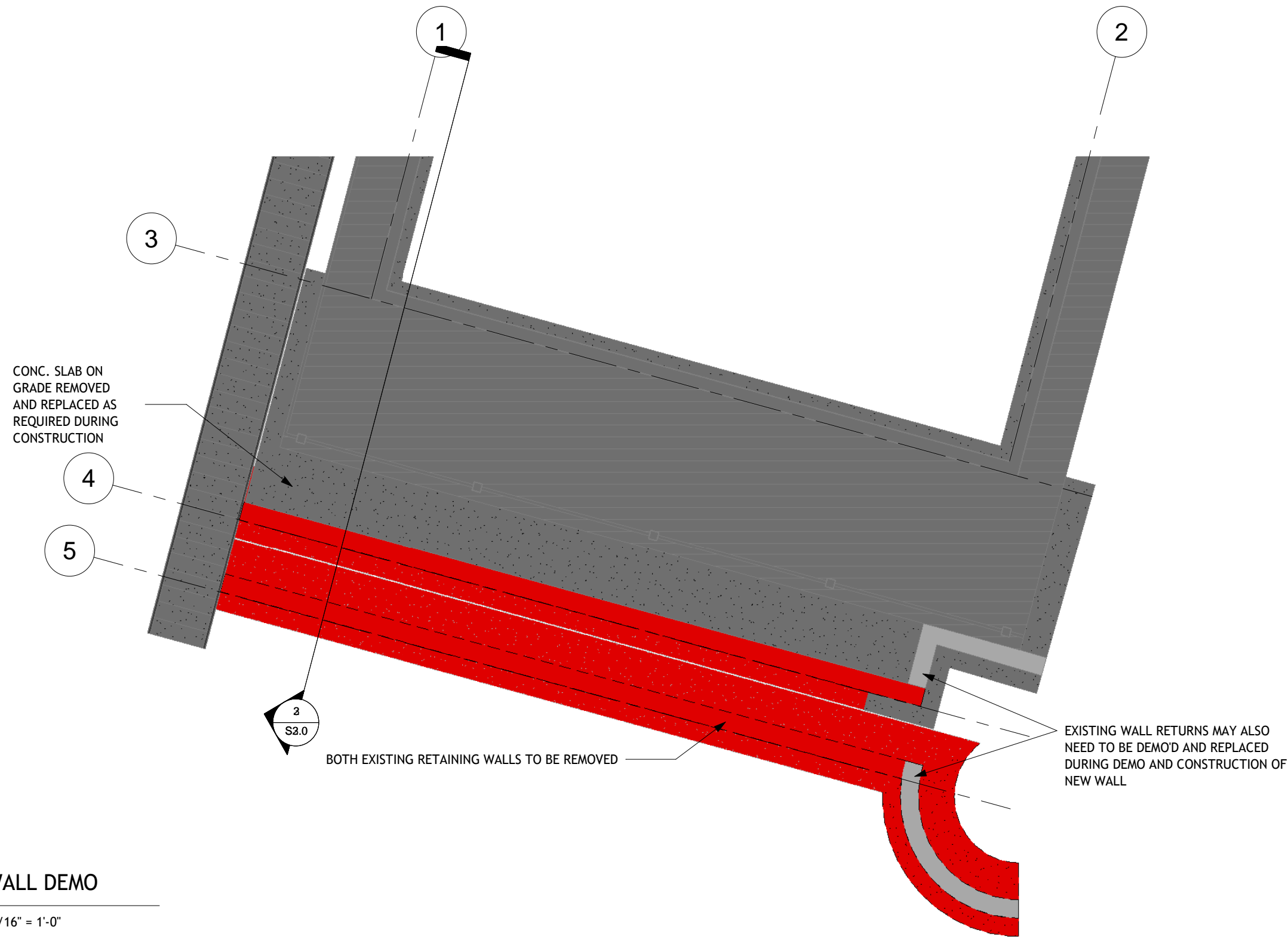
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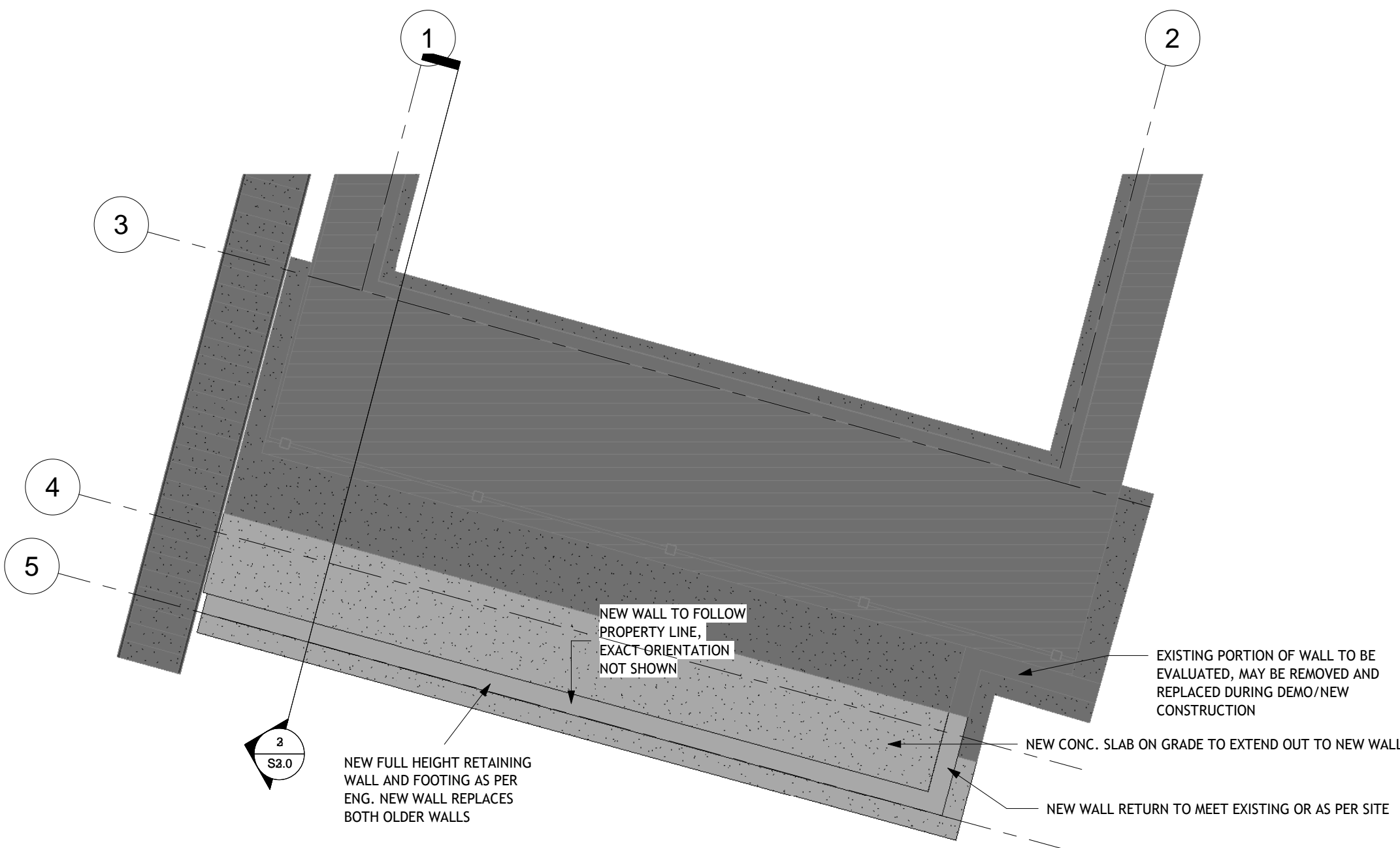
3 South  
S2.0 3/16" = 1'-0"



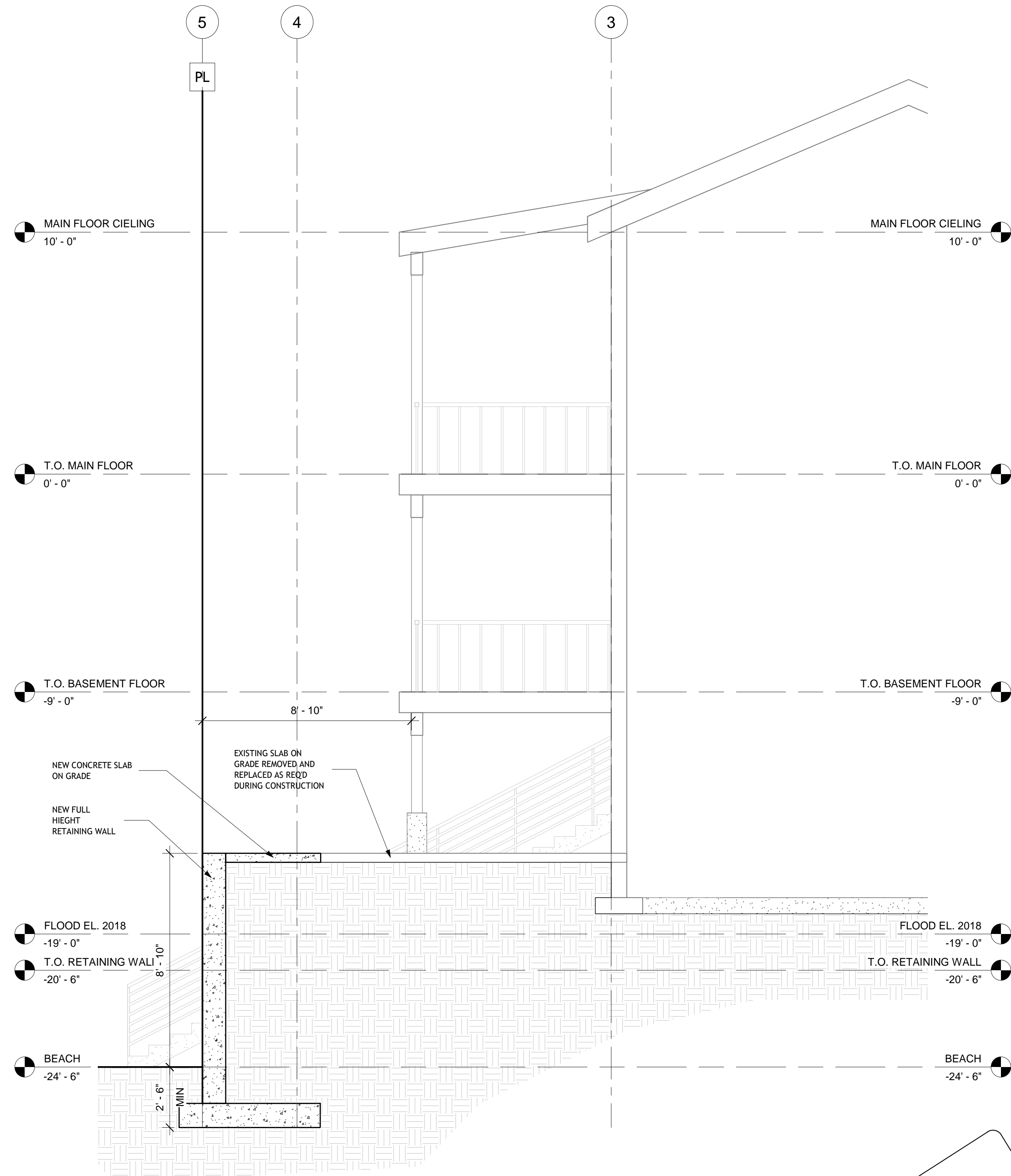
2 Section 1  
S2.0 3/8" = 1'-0"



1 WALL DEMO  
S3.0 3/16" = 1'-0"



2 NEW WALL CONSTRUCTION  
S3.0 3/16" = 1'-0"



3 Section 2  
S3.0 3/8" = 1'-0"

Dimensions to Face of Foundation or Framing Stud UNO.

This plan and design is the property of WSA Engineering (2012) Ltd. and is solely for the use of the client with which WSA Engineering (2012) Ltd. has entered into agreement with, and cannot be used in whole or in part without the written consent of WSA Engineering (2012) Ltd.

DO NOT SCALE DRAWINGS  
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All dimensions to be verified on site by the contractor/builder. Report all errors or additions to the owner or designer prior to proceeding with the work

A	Feb 19/20	ISSUED FOR VARIANCE APPLICATION
No.	Date	Issue/Revision

Professional Engineer Stamp:

WSA ENGINEERING (2012) LTD.  
Civil - Structural  
2248 Columbia Ave. Cambridge, BC V2Y 2X3 PH: (604) 847-0477

Project  
HAMMOND RETAINING WALL  
141 BROWN ROAD  
CHRISTINA LAKE, BC  
Drawing  
PROPOSED NEW

Date	10/06/19	Project No.	C19001-081
Designed	RS	Drawing File	C19001-081 A1
Drawn	RS	Scale	As indicated
Checked	AJ	Sheet No.	S3.0
Approved	DS	OF 3	A

ISSUED FOR  
VARIANCE APPLICATION



## Electoral Area C/Christina Lake Advisory Planning Commission (APC) Staff Report

<b>RE:</b>	Site-specific Exemption to Floodplain Bylaw – Hammond		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	C-969-04329.000
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received an application for a site-specific exemption to the Floodplain Bylaw from WSA Engineering (2012) Ltd. for the reconstruction of an existing deck in Electoral Area C/Christina Lake (see attachments).

Property Information	
<b>Owner(s):</b>	Darryl and Heather Hammond
<b>Agent:</b>	WSA Engineering (2012) Ltd.
<b>Location:</b>	141 Brown Road
<b>Electoral Area:</b>	Electoral Area C/Christina Lake
<b>Legal Description(s):</b>	Lot 10, DL 969, SDYD, Plan 9357
<b>Area:</b>	279m <sup>2</sup> (0.07acr)
<b>Current Use(s):</b>	Single family dwelling
Land Use Bylaws	
<b>OCP Bylaw 1250:</b>	Waterfront Residential
<b>DP Area:</b>	Waterfront Environmentally Sensitive
<b>Zoning Bylaw 1300:</b>	Waterfront Residential 2
Other	
<b>Waterfront / Floodplain:</b>	Partial
<b>Service Area:</b>	NA
<b>Planning Agreement Area:</b>	NA

### History / Background Information

The subject property (Lot 10 – 141 Brown Road) is located along the east side of Christina Lake in Electoral Area C/Christina Lake. It has a "Waterfront Residential" Official Community Plan (OCP) land use designation and is zoned "Waterfront Residential 2". Christina Lake abuts the southern boundary of the property. As such, it is within the floodplain as well as the Environmentally Sensitive Waterfront Development Permit Area. Additionally, the Christina Lake Foreshore Inventory Mapping shows the area adjacent to the property as a known Kokanee spawning habitat.

The parcel was originally created by subdivision in 1958. The single family dwelling was constructed sometime thereafter; however there is no building permit in our records for its original construction. It's possible that the construction took place prior to the first zoning bylaw or floodplain bylaw being in place. Both the main part of the house and the deck encroach into the required 7.5m setback.

In addition the building and two-tiered deck were constructed partially encroaching on the neighbouring property to the west (Lot 11 – 143 Brown Road), which is shown on the attached plans.

A variance was issued in 2008 to reduce the front parcel boundary from 4.5m to 0m for an accessory structure (carport) that was constructed without permit.

A flooding event in 2018 caused damages to the two-tiered deck as well as two retaining walls, one of which appears to extend below the natural boundary of Christina Lake.

The applicant may be required to remove their deck in order to remove the existing retaining walls and construct a new one. As the deck's location is entirely non-conforming to our Zoning Bylaw regulations, there is uncertainty in whether reconstruction of the deck will be permitted should the Province grant approval for reconstructing the retaining wall.

A new septic system was installed on the subject property in 2019 although no building modifications took place. The system was filed with Interior Health in order to meet the requirements of the *Sewerage System Regulation*. A Waterfront Environmentally Sensitive Development Permit was not required in 2019 nor is it required at this time since no additional habitable area was or is planned.

## Proposal

The applicant has submitted a design brief that describes the proposal to replace the existing  $\pm 40\text{m}^2$  ( $\pm 450\text{ft}^2$ ) deck and replace two of the retaining walls with one single retaining wall at the property line (see attachments). The new deck would be the same size as what is existing. The deck would be affixed to the dwelling unit and would be an extension of the existing floor system, resulting in the requirement for the exemption. However, the deck would not include any rooms used for dwelling purposes, business, or the storage of goods susceptible to damage by floodwater, which are the major concerns when designating lands as floodplains to prevent construction within them.

The portion of the deck that is encroaching on Lot 11 would be removed completely.

The following site-specific exemption to Floodplain Bylaw No. 677, 1995 is requested:

- Reduce the setback from the natural boundary of Christina Lake from 7.5m to 2.2m, a variance of 5.3m, for the deck and house.

A Development Variance Permit is also required, which is discussed in a separate report.

## Implications

The *Local Government Act* (LGA) states that a person may be exempted from the requirements of a floodplain bylaw in relation to a building or structure on the parcel of land, if the local government considers it advisable and either considers that the exemption is consistent with Provincial guidelines, or that the applicant has received a report from a professional engineer or geoscientist stating that the land may be used safely for the intended use.

We have received an updated report from Ground Up Geotechnical that provides an analysis of the site-specific floodplain considerations on the property (see attachments). The engineering consultant revised the report to:

- more accurately reflect that approval of a variance and floodplain exemption would not legitimize the house encroachment on Lot 11; and,
- confirm the correct flood construction level (FCL) and 2018 maximum lake level.

The engineer states that:

“Based upon our observations and flood hazard assessment, it is our professional opinion that the existing home site and structure, as well as the proposed replacement deck, would be sufficiently free from flood hazards with return periods of 200 years or less once the proposed replacement lakefront wall is constructed. Further, given adherence to our recommendations contained herein, we believe permanent encroachment of the existing home structure and the proposed replacement deck into the floodplain setback is geotechnically acceptable.”

Approval of the requested floodplain exemption would not address the encroachment of the remaining portion of the single family dwelling on Lot 11 (see attachments). The encroachment is a trespass and is an issue for private parties to resolve. In order to remove encroaching portions of the deck from Lot 11, the owner of Lot 10 must have authorization from the owners of Lot 11. The owners of Lot 10 have been notified of this requirement.

## Advisory Planning Commission (APC)

The Electoral Area C/Christina Lake APC considered the application at their February 4, 2020 meeting. Upon discussion of the application and hearing from the applicants, consideration was deferred pending receipt of more information on the deck's design. We have since received:

- an updated Geotechnical Report that addresses our feedback from the first submission;
- detailed design drawings with additional notes for clarity; and,
- site photos to provide additional context.

The APC reconsidered the application, along with the development variance permit application, at their April 7, 2020 meeting and provided the following recommendation:

"It was moved, seconded and resolved that the APC recommend to the Regional District that the application be: not supported, due to the encroachment on a shore spawning beach. It was discussed that as there are alternatives to rebuilding the decks as they are currently constructed and options that might allow the wall to require less of a variance to the Lake boundary. Vote was 5 opposed, 4 in favor."

### **Staff Comments**

Reconstruction of the retaining wall at the natural boundary of Christina Lake is a matter that is left up to the authority of the Province through an application to FrountCounter BC for a *Water Sustainability Act* approval. As the Province's process for works "in and about a stream" more thoroughly addresses potential impacts to the natural environment and fish habitat, it may be more appropriate for the applicant to first seek Provincial approval for the retaining wall prior to finalizing the plans for the reconstruction of their deck.

### **Recommendation**

That the application for a Site-Specific Exemption to the Floodplain Bylaw submitted by WSA Engineering (2012) Ltd., on behalf of Darryl and Heather Hammond, in order to reconstruct an existing deck and retaining wall within the required floodplain setback on the property legally described as Lot 10, DL 969, SDYD, Plan 9357, Electoral Area C/Christina Lake, be deferred until a Provincial approval for the reconstruction of the retaining wall has been issued.

### **Attachments**

Site Location Map

Subject Property Map

Applicant Submission: February 7, 2020 report by Ground Up Geotechnical

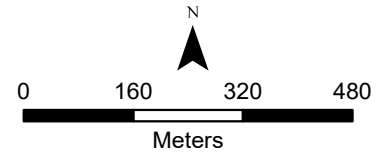


Regional District of  
Kootenay Boundary

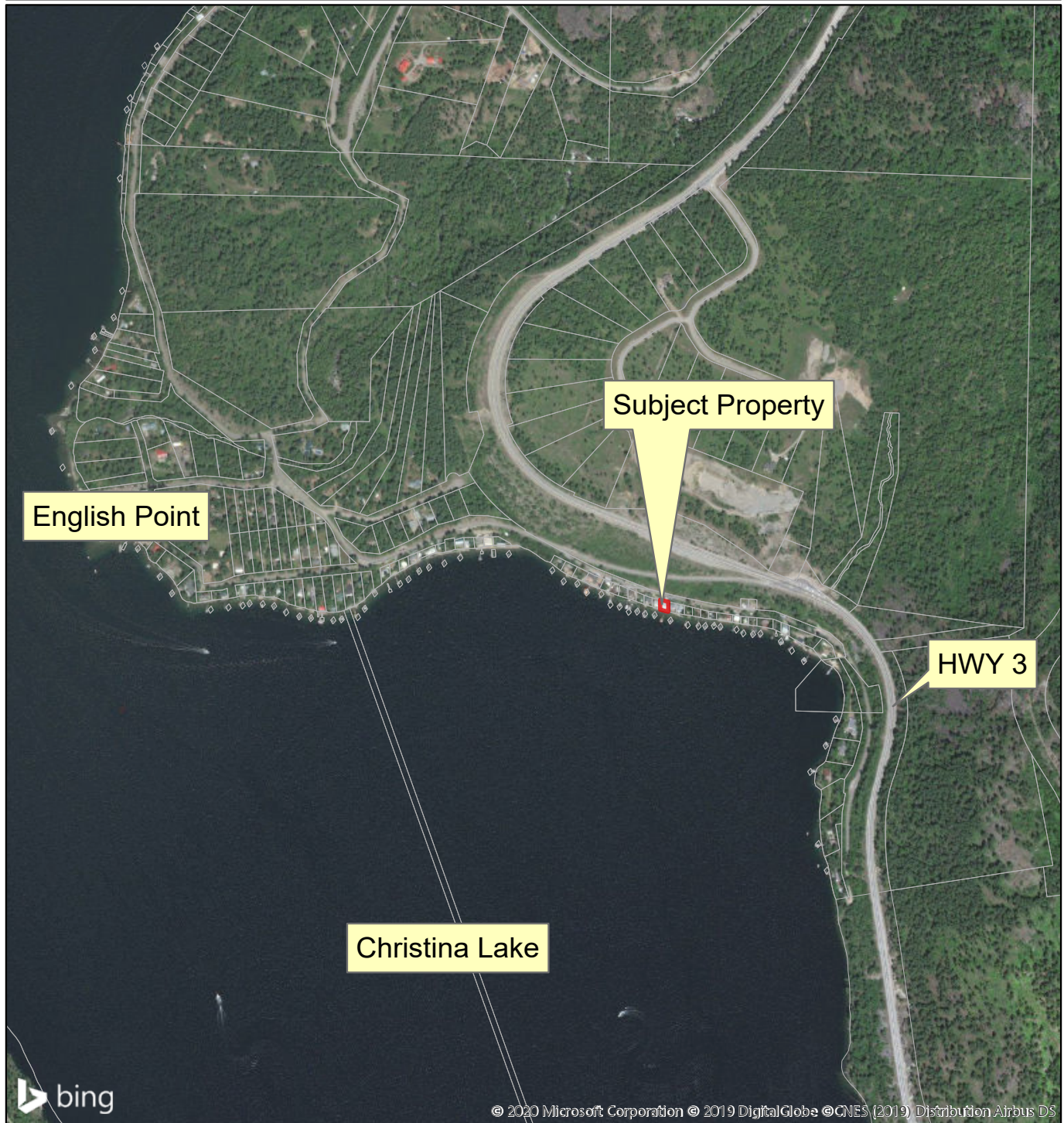
Date: 23-Jan-2020

## Site Location Map

Lot 10, DL 969,  
SDYD, Plan 9357



1:9,600



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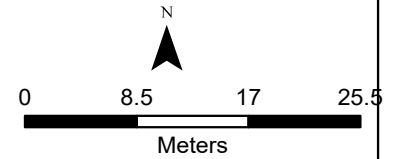


Regional District of  
Kootenay Boundary

Date: 23-Jan-2020

## Subject Property Map

Lot 10, DL 969,  
SDYD, Plan 9357



1:500



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Document Path: P:\PD\EA\_C\IC-969-04329.000 Hammond\Feb 2020 DVP & Flood Plain Exemption\2020 - Mapping\2020-02-04\_Hammond\_SLM-SPM.aprx


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 Box 151 Garibaldi Highlands, Squamish BC V0N 1T0

February 7, 2020  
 Project #: GUG 19-145-1

Darryl Hammond  
 c/o WSA Engineering (2012) Ltd.  
 2248 Columbia Avenue  
 Castlegar BC  
 BY EMAIL: [dans@wsaeng.ca](mailto:dans@wsaeng.ca)

**Attention: Dan Sahlstrom, P.Eng.**

Re: Flood Hazard Assessment Report  
 141 Brown Road, Christina Lake – Regional District of Kootenay Boundary, BC  
 Lot 10, DL 969, SDYD Plan 9357

## 1.0 INTRODUCTION

We have completed our Flood Hazard Assessment at the above property for support of a Site-Specific Floodplain Exemption application (completed by others). The Exemption is to allow encroachment of the existing home structure as well as a proposed replacement deck into the floodplain setback of Christina Lake. Construction of a replacement lakefront retaining wall is also included in the work. The existing single family dwelling and lakefront retaining walls were constructed decades prior to the creation of the '*Regional District of Kootenay Boundary Floodplain Management Bylaw No. 677, 1994.*' (Floodplain Bylaw) and the home structure encroaches into the prescribed 7.5m setback by approximately 1.5m. According to the Floodplain Bylaw, encroachment into the floodplain setback is not permitted without a Site-Specific Floodplain Exemption. The existing lakefront retaining walls are damaged beyond repair and are no longer functioning properly. We understand that WSA Engineering (2102) Ltd. (civil/structural engineering consultant) has been engaged by the landowner, Darryl Hammond, to apply for the Site-Specific Floodplain Exemption as well as design the new replacement lakefront retaining wall and replacement deck at the subject property. Ground Up Geotechnical Ltd. has been engaged by Darryl Hammond to complete a Flood Hazard Assessment to determine if the existing and proposed encroachment into the floodplain setback is feasible and safe, and also to provide geotechnical engineering design for the proposed replacement lakefront retaining wall.

On November 22, 2019 we met with Darryl Hammond and Dan Sahlstrom (WSA Engineering) to complete our field reconnaissance at the subject property. This report summarizes our flood hazard assessment while also providing conditions and design recommendations to allow for safe encroachment into the floodplain setback at the subject property. Our services and this report have been provided in accordance with, and are subject to, the attached Terms of Engagement.

Darryl Hammond  
141 Brown Road, Christina Lake, BC

February 7, 2020

Our work has also included review of current aerial imagery from the RDKB WebMap, the '*Regional District of Kootenay Boundary Floodplain Management Bylaw No. 677, 1994.*' (the Floodplain Bylaw), the '*BC Ministry of Environment's Floodplain Mapping for Christina Lake – DWG # 89-1-3*' dated September 30, 1991, an '*Encroachment Site Plan*' (Encroachment Plan) prepared by WSA Engineering and dated November 15, 2019 (attached), as well as a '*Surveyors Site Plan*' (Site Plan) prepared by Hango Land Surveys and dated November 11, 2015 (attached).

## 2.0 EXISTING CONDITIONS & OBSERVATIONS

As shown on the attached Location Plan Map, the subject property is situated on the eastern shore of Christina Lake, and is bordered by similar lakefront residential properties to the west and east, and Brown Road to the north. As shown on the attached Site Plan, the property is trapezoidal shaped, with approximate dimensions of 18m north south, and 16m east west. An existing two storey home, concrete carport, and timber deck cover most of the lot. A new onsite sewerage system is present on the grassed terraces just east of the existing home. The property's terrain slopes steeply down from Brown Road towards Christina Lake at an overall angle of between 15 to 20 degrees, with a total relief of approximately 10m between Brown Road and the Natural Boundary of Christina Lake. The grade transition is achieved by terraced retaining walls along the east and west sides of the existing home.

The lakeshore consists of a gently sloping coarse sand and gravel beach which extends across multiple neighboring properties to the east and west. On November 22, 2019, the lake level was approximately 0.5m below the base of the lowermost lakefront retaining wall.

An existing concrete retaining wall is present along the Natural Boundary of the lakeshore and spans nearly the entire length of the property's waterfront. The wall is vertical and varies in height between 1 and 1.2m. The wall continues along the Natural Boundary onto the neighboring property to the west. The wall transitions into boulder rip rap and shrubs near the eastern end of the property's waterfront. The wall face has several major cracks/joints and large voids where sand and gravel backfill material is actively eroding out from behind the wall and onto the beach. A 1m wide concrete slab covers the backfill zone of the wall. The slab is severely fractured and jointed with several large voids visible below. Setback approximately 1m from the top of the lakeshore wall is the base of another retaining wall, this one also vertical and about 1.5m tall but constructed of rounded rocks and mortar. Some cracking of the wall face was noted, and large voids were detected within the backfill zone. The deck's shallow concrete sonotube type foundations (5 piers) rest within this wall's backfill zone, setback approximately 1m behind the top of the rock and mortar retaining wall. Structural distress, likely associated with foundation settlement, was visibly apparent in the deck structure. The existing home structure's concrete foundation wall is setback approximately 3.5 to 4m behind the top of the rock and mortar wall at an unknown depth.

From our discussions with the property owner, we understand the existing lakefront retaining walls were severely damaged during the spring flooding of 2018. Apparently, lake levels reached a maximum elevation of 447.2m geodetic during the spring flooding of 2018, a level approximately



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Page 2

Darryl Hammond  
141 Brown Road, Christina Lake, BC

February 7, 2020

0.54m above the crest of the lowest retaining wall according to the attached Site Plan. We understand that prior to the flooding, the walls were still functional.

As shown on the attached Site Plan & Encroachment Plan, the existing deck and home structure are setback approximately 3m and 6m respectively from the Natural Boundary of Christina Lake. From the Floodplain Bylaw, the minimum allowable setback from the Natural Boundary of a lake is 7.5m: this equates to an existing encroachment of approximately 4.5m and 1.5m for the deck and home structure respectively. The deck and lower floor of the existing home are situated at an approximate elevation of 449.3m geodetic.

### 3.0 FLOOD HAZARD ASSESSMENT

The prescribed Flood Construction Level (FCL) for Christina Lake from the 'BC Ministry of Environment's Floodplain Mapping for Christina Lake – DWG # 89-1-3' is 448.2m geodetic. The deck and lower floor of the existing home are situated at an approximate elevation of 449.3m geodetic.

While the lower floor of the existing home is elevated approximately 1.1m above the prescribed FCL and approximately 2.1m above the reported flood height of the 2018 spring flood, given the current condition of the existing lakefront retaining walls we believe the existing home structure's foundations may be at risk of lake flooding caused erosion and scour. Erosion and scour would likely lead to foundation settlement and structural damage. The existing lakefront retaining walls appear to have historically provided sufficient protection from floodwaters to prevent foundation erosion and scour, however, the walls are now in desperate need of replacement. It is our professional opinion that once these lakefront retaining walls are replaced with a properly engineered reinforced concrete retaining wall, the risk of lake flooding caused foundation erosion and scour will be reduced to an acceptable level.

### 4.0 CONCLUSIONS

Based upon our observations and flood hazard assessment, it is our professional opinion that the existing home site and structure, as well as the proposed replacement deck, would be sufficiently free from flooding hazards with return periods of 200 years or less once the proposed replacement lakefront wall is constructed. Further, given adherence to our recommendations contained herein, we believe permanent encroachment of the existing home structure and the proposed replacement deck into the floodplain setback is geotechnically acceptable.

As required by Section 56 of BC's Community Charter, it is our professional opinion that the existing home site and proposed replacement deck site (the 'land') may be used safely for the use intended, that being permanent residential habitation, if the land is used in accordance with the recommendations and conditions provided in this report. Our definition of 'safe use' in the context of our assessment and this report means that inhabitants of the existing home and proposed replacement deck, if constructed in accordance with the BC Building Code and the recommendations and conditions within this report, would be safe from naturally caused flooding hazards with return periods of 200 years or less.



**GROUND UP GEOTECHNICAL**  
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Page 3

Darryl Hammond  
141 Brown Road, Christina Lake, BC

February 7, 2020

## 5.0 RECOMMENDATIONS

In order to provide adequate flood protection to the existing home and proposed replacement deck, the two existing lakefront retaining walls should be replaced with a properly engineered reinforced concrete retaining wall as soon as practically possible. The walls must be designed by a suitably qualified professional engineer. For preliminary design purposes, the replacement lakefront wall shall incorporate the following design elements: a minimum crest elevation of 448.5m geodetic, a base embedded below beach deposits to at least 0.45m below current beach elevation, backfill shall consist of clear stones between 5cm and 30cm in size, drainage weepholes elevated 0.3m above the beach surface, sufficient blending with neighboring walls or wall returns at property lines. These design recommendations are preliminary and may be subject to change.

We understand that WSA Engineering (2012) Ltd. has been engaged by the landowner (Darryl Hammond) to provide professional engineering design for the replacement lakefront retaining wall. Ground Up Geotechnical Ltd. has also been engaged by the landowner to provide supplementary geotechnical engineering design for the replacement wall. The conclusions and recommendations contained within this report rely on the assumption that the lakefront retaining walls will be replaced with a properly engineered wall, therefore, for our conclusions and recommendations to be valid, Ground Up Geotechnical Ltd. must approve the wall design, review the wall construction, and certify the adequacy of the completed wall.

The underside of the proposed replacement deck foundations must be setback below a 1 Horizontal to 1 Vertical (45 degree) projection line extending up and away from the toe of the replacement retaining wall, and upon a subgrade approved by a suitably qualified professional engineer.

Reconstruction of the lowest retaining wall will occur close to the lakeshore, therefore, as a minimum, we recommend adhering to the Best Management Practices (BMPs) in the attached document, *'Working Near the Water: Pollution & Sediment Control Best Management Practices'*. These BMPs are provided as a minimum requirement only; the approving authority, Province of BC or Federal Government may require implementation of further measures.

## 6.0 CLOSURE

This report was prepared in accordance with current geotechnical engineering practices and principles in British Columbia. This Flood Hazard Assessment has considered Engineers & Geoscientists BC's *'Professional Practice Guidelines – Legislated Flood Assessments in a Changing Climate in BC'* as well as *'Flood Hazard Area Land Use Management Guidelines'* prepared by the Ministry of Water, Land and Air Protection - Province of British Columbia. Our completed *'Appendix J: Flood Hazard and Risk Assurance Statement'* is attached.

The conclusions and recommendations in this report are provided on the assumption that structures will be designed and constructed in accordance with the *BC Building Code* and local bylaws as applicable and that all contractors will be suitably qualified and experienced.



**GROUND UP GEOTECHNICAL**  
SOIL | FOUNDATIONS | ROCK | WATER

Page 4

Darryl Hammond  
141 Brown Road, Christina Lake, BC

February 7, 2020

This report has been prepared to support applications on behalf of the property owner to the Regional District of Kootenay Boundary as a pre-condition to the issuance of a Site-Specific Floodplain Exemption from the provisions of the '*Regional District of Kootenay Boundary Floodplain Management Bylaw No. 677, 1994*' under Section 910 of the *Local Government Act*.

This report has been prepared exclusively for our client(s), their agents, and their design and construction team, yet remains the property of Ground Up Geotechnical Ltd. The Regional District of Kootenay Boundary and the BC Ministry of Transportation and Infrastructure are considered authorized users of this report.

Any use of this report by third parties, or any reliance on or decisions made based on it, are the responsibility of such third parties. Ground Up Geotechnical Ltd. does not accept responsibility for damages suffered, if any, by a third party as a result of their use of or reliance on this report.

This report has been prepared for and at the expense of the owner of the subject property and Ground Up Geotechnical has not acted for or as an agent of the Regional District of Kootenay Boundary in the preparation of this report.

We trust that this report provides you with the information you require at this time, please do not hesitate to contact us if you have any questions or require anything further.

Sincerely,  
Ground Up Geotechnical Ltd.



Patrick Sails, P.Eng.  
Geotechnical Engineer

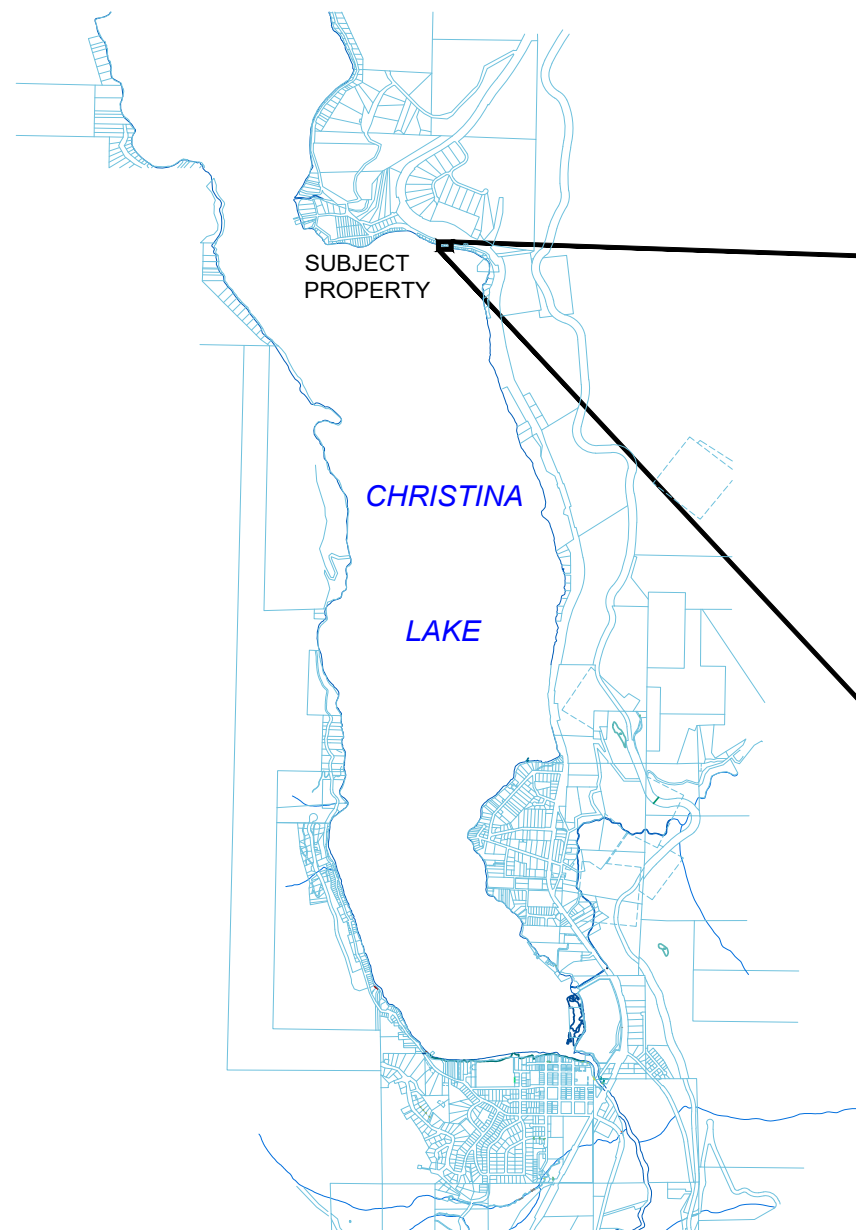
Attachments - Terms of Engagement  
Location Plan Map  
Encroachment Plan  
Site Plan  
EGBC APPENDIX J: Flood Hazard & Risk Assurance Statement  
*Working Near the Water: Pollution & Sediment Control Best Management Practices*  
Ground Up Geotechnical Ltd. Certificate of Insurance

cc. Darryl Hammond - ckhd@live.ca

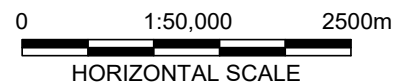


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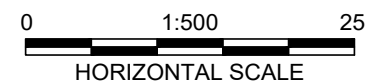
Page 5




CHRISTINA LAKE - PARTIAL PLAN



LOT 10 DISTRICT LOT 969 S.D.Y.D. PLAN 9357



A	15/11/2019	SC	FIGURE TO ACCOMPANY DVP APPLICATION	DS
	DD/MM/YYYY	BY	ISSUES	ENG.



**ENGINEERING (2012) LTD.**

Civil and Structural Engineering

2248 Columbia Ave. Castlegar, B.C. V1N 2X1 Pk: 1-888-617-6927

DESIGN BY	DATE
SC	15/11/2019
DRAWN BY	DATE
SC	15/11/2019
CHECKED BY	DATE
DS	15/11/2019
APPROVED BY	DATE
DS	15/11/2019

**HAMMOND RETAINING WALL AND DECK**

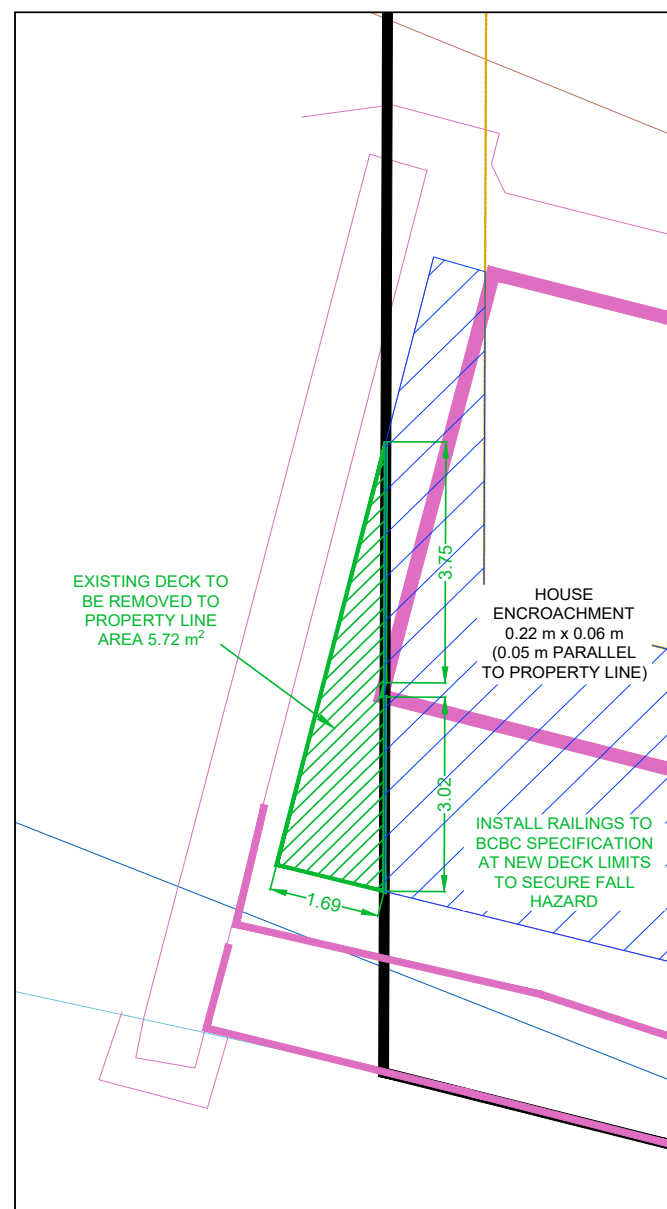
**141 BROWN ROAD, CHRISTINA LAKE**

LOT 10 DISTRICT LOT 969 S.D.Y.D. PLAN 9357

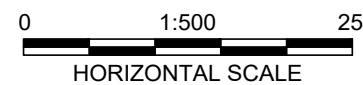
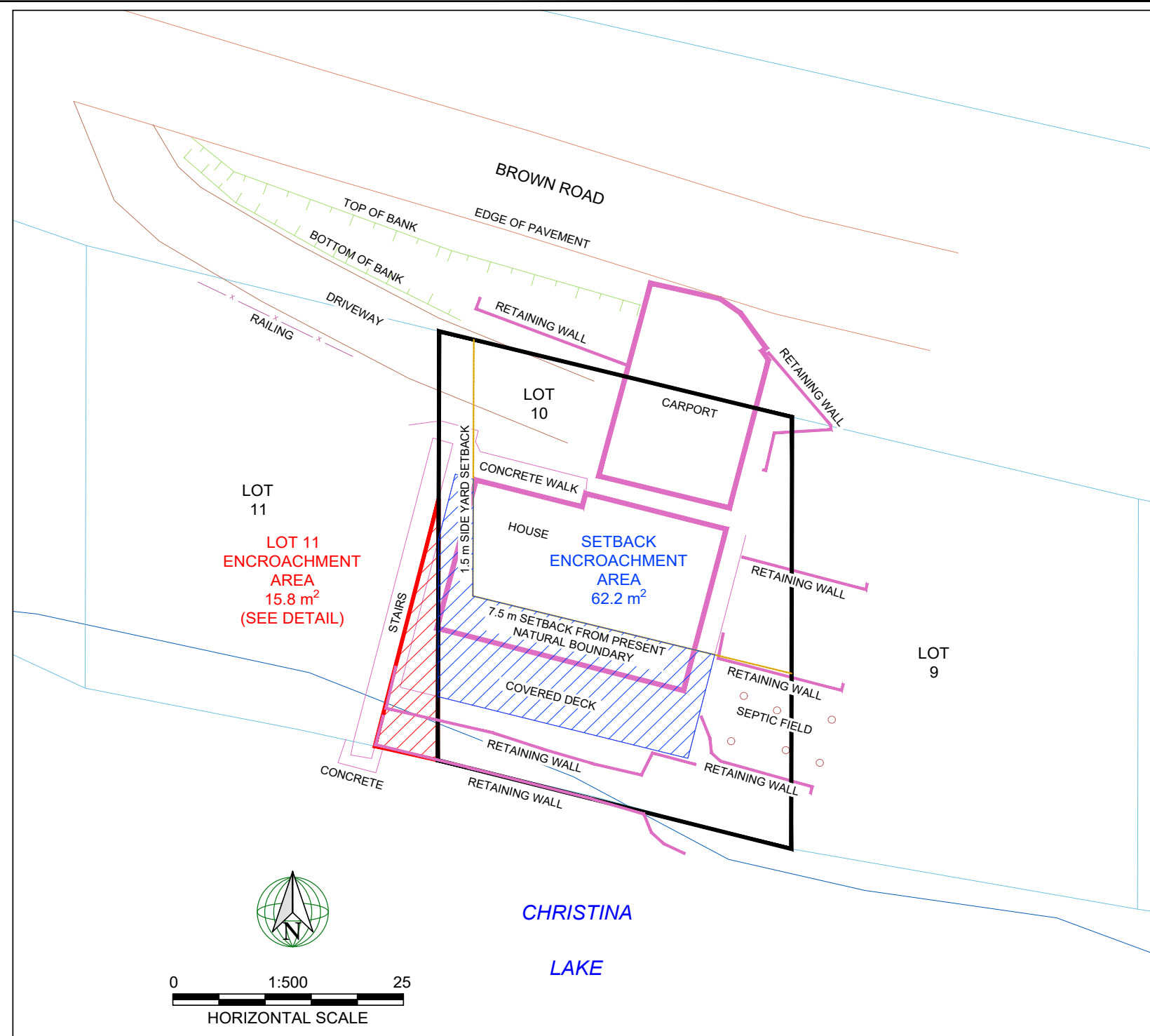
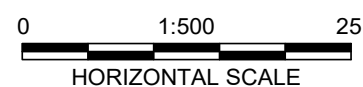
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**LOCATION PLAN**

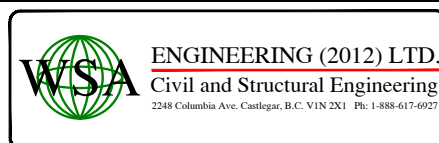
HOR. SCALE	AS SHOWN	VERT. SCALE
PROJECT FILE No.	<b>C19001-081</b>	
FIGURE	<b>1</b>	



LOT 11 ENCROACHMENT AREA DETAIL



A	15/11/2019	SC	FIGURE TO ACCOMPANY DVP APPLICATION	DS
	DD/MM/YYYY	BY	ISSUES	ENG.

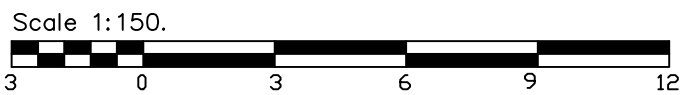


DESIGN BY	DATE
SC	15/11/2019
DRAWN BY	DATE
SC	15/11/2019
CHECKED BY	DATE
DS	15/11/2019
APPROVED BY	DATE
DS	15/11/2019

HAMMOND RETAINING WALL AND DECK
141 BROWN ROAD, CHRISTINA LAKE
LOT 10 DISTRICT LOT 969 S.D.Y.D. PLAN 9357
SITE PLAN

HOR. SCALE	AS SHOWN	VERT. SCALE
PROJECT	C19001-081	
FILE No.		
FIGURE	2	

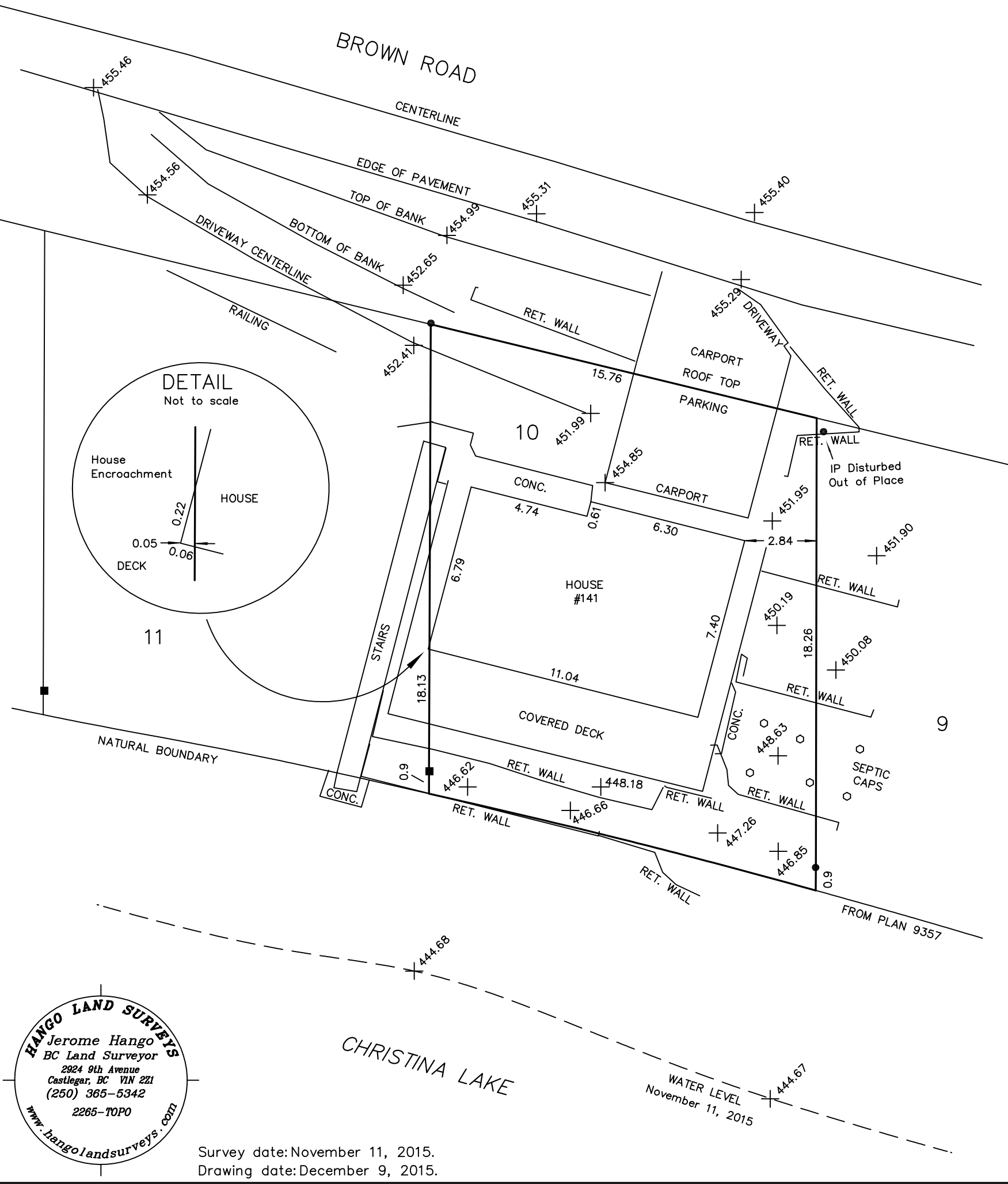
SITE PLAN SHOWING SELECT FEATURES  
ON AND AROUND LOT 10 DL 969  
SDYD PLAN 9357.



LEGEND

Dimension are derived from Plan 9357.  
Elevations are derived from PPP GNSS observations.  
All distances in metres.  
+323.65 Spot elevation.

- Found
- Standard iron post
  - Standard lead plug



**HANGO LAND SURVEYS**  
Jerome Hango  
BC Land Surveyor  
2924 9th Avenue  
Castlegar, BC V1N 2Z1  
(250) 365-5342  
2265-TOPO  
www.hangolandsurveys.com

Survey date: November 11, 2015.  
Drawing date: December 9, 2015.



## GROUND UP GEOTECHNICAL

SOIL | FOUNDATIONS | ROCK | WATER

Call: 778.678.7654 Email: [info@groundupgeo.ca](mailto:info@groundupgeo.ca) Visit: [www.groundupgeotechnical.ca](http://www.groundupgeotechnical.ca)  
Box 151 Garibaldi Highlands, Squamish BC V0N 1T0

### **Working Near the Water: Pollution & Sediment Control Best Management Practices (BMPs)**

#### ***Deleterious Substance Control/Spill Management***

- Prevent the release of silt, sediment or sediment-laden water, raw concrete or concrete leachate or any other deleterious substances into any ditch, watercourse, ravine or storm sewer system.
- Ensure that equipment and machinery is in good operating condition, clean (power washed offsite), and free of leaks, excess oil and grease. No equipment refuelling or servicing should be undertaken within thirty (30) metres of any watercourse or surface water drainage.
- Ensure that all hydraulic machinery to be used near to the shore uses environmentally sensitive hydraulic fluids which are non-toxic to aquatic life and which are readily or inherently biodegradable.
- Keep a spill containment kit readily accessible on-site in the event of a release of a deleterious substance to the environment and train on-site staff in its use. Immediately report any spill of a substance that is toxic, polluting or deleterious to aquatic life and of reportable quantities to the Provincial Emergency Program 24-hour phone line at **1-800-663-3456**. For definition of reportable amounts, please refer to the provincial Spill Reporting Regulation at <https://www2.gov.bc.ca/gov/content/environment/air-land-water/spills-environmental-emergencies/report-a-spill>.

#### ***Concrete Works***

- Ensure that all works involving the use of concrete, cement, mortars and other Portland cement or lime-containing construction materials will not deposit, directly or indirectly, sediments, debris, concrete, concrete fines, wash or contact water into or about any watercourse. Concrete materials cast in place must remain inside sealed formed structures. Concrete leachate is alkaline and highly toxic to fish and other aquatic life.
- A CO2 tank with regulator, hose and gas diffuser must be readily available during concrete work to neutralize pH levels should a spill occur and staff should be trained in its use.
- Provide containment facilities for the wash-down water from concrete delivery trucks, concrete pumping equipment and other tools and equipment.
- Report immediately any spills of sediments, debris, concrete fines, wash or contact water of reportable quantities to **1-800-663-3456**. Implement emergency mitigation and clean-up measures (such as use of CO2 and immediate removal of the material).
- Completely isolate all concrete work from any water within or entering into any watercourse or stormwater system
- Prevent any water that contacts uncured or partly cured concrete (during activities like exposed aggregate wash-off, wet curing or equipment washing) from directly or indirectly entering any watercourse or stormwater system.

#### ***Isolation of the Work Area***

- Isolate your work area from the water using a silt curtain or a silt fence as applicable.

**Minimise Disturbance**

- Only construction, modification or maintenance works required to meet design specifications should be undertaken below the high water mark. No foreshore filling or land reclamation should occur, nor should human or machine disturbance of foreshore and/or riparian vegetation occur during construction except as provided for by these BMPs.
- Beach substrates (e.g. rock, cobble, sand or gravel) should not be used as fill and/or backfill for proposed works near water.
- Upon completion of construction activities, all work areas below the high water mark should be left in a smooth condition free of any depressions.
- All works should be done in a manner that limits the amount of disturbed soils. Disturbed soils often increase the opportunity for invasive plants to establish.

**Sediment Control**

- Minimize the disturbance to existing vegetation on and adjacent to the lakeshore.
- Put sediment control measures in place before starting any works that may result in sediment mobilization.
- Ensure machinery is operated from above the high water mark and not on the foreshore to minimize impacts and to better enable mitigation of sedimentation.
- Remove excavated material and debris from the site or place it in a stable area above the high water mark or active floodplain and/or restrictive covenant or riparian area, and as far as possible from the shore. Protect this material and any remaining exposed soils within the work site from erosion and reintroduction to the lake by using mitigative measures including, but not limited to, covering the material with erosion blankets/tarps and/or seeding/planting with native vegetation.
- When material is moved off-site, dispose of it in such a manner as to prevent its entry into any watercourse, floodplain, ravine or storm sewer system.
- Where proposed for use, ensure that material such as rock, riprap or other materials placed on the shore or floodplain area are inert and free of silt, overburden, debris, or other substances deleterious to aquatic life. Imported rock material should also be durable, angular in shape and suitably graded and sized to resist erosion and movement by water action. In addition, to prevent future erosion, materials placed on the shore or floodplain area should have an adequately entrenched toe/base to prevent undercutting by wave action and be constructed and anchored (i.e., tied back) to prevent undercutting during storm or high water events.





**ENGINEERING (2012) LTD**  
2248 Columbia Avenue Castlegar, BC V1N 2X1

Tel 1-888-617-6927  
e-mail: [mail@wsaeng.ca](mailto:mail@wsaeng.ca)

February 14, 2020

Project Number: C19001 – 081

RDKB  
843 Rossland Avenue  
Trail, BC  
V1R 4S8

Attn: Corey Scott

***RE: HAMMOMD – 141 BROWN ROAD – SITE PHOTOS***



Figure 1: Hammond Residence



Figure 2: Hammond Residence – Corner of house that encroaches (house with satellite)



Figure 3: Beach Adjacent to Hammond Residence (looking East)

# HAMMOND RETAINING WALL

## 141 BROWN ROAD

## CHRISTINA LAKE B.C.

GENERAL NOTES:

- ALL WORK TO CONFORM TO THE BRITISH COLUMBIA BUILDING CODE LATEST EDITION, LOCAL CODES AND BY-LAWS OF AUTHORITIES HAVING JURISDICTION.
- ALL WORK TO BE PERFORMED WITH RESPECT TO GOOD BUILDING PRACTICES.
- CONTRACTOR TO CAREFULLY INSPECT THE SITE OF WORK AND BE FULLY INFORMED OF EXISTING CONDITIONS AND LIMITATIONS
- NO WORK TO COMMENCE WITHOUT PROPER PERMITS AND LICENSES.
- MEASUREMENTS, GRADES AND LEVELS ARE TO BE VERIFIED AT THE SITE BEFORE CONSTRUCTION.
- CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS, ELEVATIONS, DRAWINGS, DETAILS AND SPECIFICATIONS AND REPORT ALL ERRORS OR DISCREPANCIES TO THE OWNER PRIOR TO PROCEEDING WITH THE WORK.
- CONTRACTOR TO VERIFY LOCATIONS AND DETAILS OF ALL CONCEALED SERVICES. PROTECT AND RELOCATE WHERE INDICATED ALL SERVICES FROM DAMAGE DURING CONSTRUCTION PERIOD..
- CONTRACTOR TO MAKE GOOD AND REPAIR ALL EXISTING PARTS AND SURFACES DAMAGED BY DEMOLITION OR NEW CONSTRUCTION, REFINISH TO MATCH SURROUNDING AREA BETWEEN CORNERS OR ABUTMENTS COMPLETE.
- DEMOLISH WHERE NOTED, AND REMOVE DEBRIS FROM SITE. MINIMIZE DISRUPTION TO NEIGHBOURS. ALL SALVAGE MATERIAL (TO BE CONFIRMED BY OWNER) REMAIN THE PROPERTY OF THE OWNER UNLESS OTHERWISE NOTED.
- VERIFY LOCATION OF ALL UNDERGROUND LINES WITHIN THE AREA OF CONSTRUCTION PRIOR TO COMMENCING EXCAVATION. NOTIFY OWNER AT TIME OF EXCAVATION.
- DETERMINE LOCATION OF PARTITIONS NOT DIMENSIONED BY THEIR RELATION TO COLUMN FACE OR CENTRE, WINDOW JAMB OR MILLION, OR OTHER SIMILAR FIXED ITEM.
- DO NOT DRILL OR CUT FLOOR JOISTS, BEAMS, COLUMNS OR OTHER STRUCTURAL ELEMENTS UNLESS SPECIFICALLY INDICATED. DRILL SLABS WHERE APPROVED. CORE DRILL CIRCULAR OPENINGS THROUGH SLABS. LINE DRILL OR SAW CUT RECTANGULAR OPENINGS.
- PROVIDE BLOCKING FOR SOLID BACKING BEHIND ALL WALL AND CEILING MOUNTED DOOR HARDWARE, ACCESSORIES, MILLWORK, PLY EDGES, MISC. METAL ITEMS, GYPSUM BOARD EDGES ETC.
- TAPE, FILL AND SAND ALL NEW G.W.B.
- INSTALL CARBON MONOXIDE DETECTORS TO SATISFY B.C.B.C. 2006 (9.32.4.2 'CARBON MONOXIDE ALARMS')
- INTERIOR GARAGE WALLS SEPARATING THE GARAGE FROM THE HOUSE SHALL HAVE 6 MIL U.V. POLY VAPOUR BARRIER INSTALLED ON THE HOUSE SIDE OF THE WALL. ALL AREAS AROUND DOORS, SWITCHES & OUTLETS SHALL BE PROPERLY TAPED & SEALED.
- ALL FLASHING TO BE PREFINISHED TO SUIT OWNERS COLOUR SCHEME. FLASHING TO BE INSTALLED AT ALL CHANGES IN HORIZONTAL EXTERIOR FINISHES AND OVER ALL UNPROTECTED EXTERIOR OPENINGS. CAULKING TO BE INSTALLED AROUND ALL UNFLASHED EXTERIOR OPENINGS. FLASHING TO BE INSTALLED AT ALL PENETRATIONS IN THE ROOF SYSTEM AND AT ALL CHANGES IN THE ROOF PLANE.
- VAPOUR BARRIER TO MIN. 6 MIL. SEAL ALL JOINTS AND HOLES TO PREVENT LEAKAGE. PROVIDE ALSO 12" WIDE LAP'S BELOW SLAB ON GRADE.
- A FREE VENT AREA OF 1/300 OF THE INSULATED ATTIC AREA SHALL BE PROVIDED AT THE ROOF. APPROXIMATELY HALF FROM THE EAVES AND HALF FROM THE TOP. (WITH NOT LESS THAN 25% OF THE OPENINGS AT THE TOP OF THE SPACE & NOT LESS THAN 25% OF THE OPENINGS AT THE BOTTOM OF THE SPACE. SEE B.C.B.C 9.19 ROOF SPACES)
- PROVIDE GASKET TO U/S OF SILL PLATES. (POLYETHYLENE FILM OR TYPE S ROLL ROOFING)
- SILL PLATES TO BE PRESSURE TREATED, LEVELLED AND FASTENED TO FOUNDATION WALL WITH 1/2"Ø ANCHOR BOLTS (UNLESS NOTED OTHERWISE) EMBEDDED MIN. 4" @ 6'-0" o.c. MAX. (OR IF SHEAR WALL AS PER DETAIL) WITH MIN. 2 IN EACH SILL.
- ALL TRUSSES TO ENGINEERED AND INSTALLED TO MANUFACTURERS SPECS. PROVIDE ALL GIRDERS, HANGERS, SUPPORTS, HARDWARE, BRACING, ETC. AS REQUIRED. MANUFACTURER TO BRING TO THE ATTENTION OF OWNER/CONTRACTOR ANY FURTHER BEARING REQUIRED FOR TRUSSES PROVIDED.
- TRUSS/JOIST MANUFACTURER TO PROVIDE ALL PERTINENT DRAWINGS AND DESIGN INFORMATION INCLUDING MEMBER REACTIONS TO STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
- ALL BEARING COLUMNS OF GIRDER TRUSSES TO AND SUPPORT BEAMS ARE TO BE POSTED TO FOUNDATION.
- ALL FOOTINGS TO BE TAKEN TO SOLID BEARING (MIN. 30" BELOW GRADE)
- ALL LINTELS TO EXTERIOR OR BEARING WALLS TO BE 3 - 2"x10" U.N.O.
- HEADER JOISTS EMBEDDED IN CONCRETE TO BE TREATED.
- PROVIDE JOIST HANGERS AT FLUSH FRAMED WOOD MEMBERS.
- DOUBLE OR TRIPLE STUD UNDER LINTELS AND BEAMS, AS REQUIRED OR UNLESS OTHERWISE NOTED.
- GRADE AND SPECIES OF FRAMING AS FOLLOWS: (UNLESS NOTED OTHERWISE ON DRAWING)
  - BEAMS, POSTS, COLUMNS, HEADERS, LEDGERS, JOISTS, etc.
  - (No. 1 & 2 OR BETTER, DOUGLAS FIR LARCH OR S.P.F.)
  - STUDS (No. 1 & 2 OR BETTER SPRUCE)
  - EXTERIOR WALL SHEATHING TO BE 1/2" O.S.B. OR 1/2" PLYWOOD
  - ROOF SHEATHING TO BE MIN. 5/8" PLYWOOD UNLESS OTHERWISE NOTED.
  - ALL SUBFLOORING TO BE MIN. 3/4" T&G PLYWOOD UNLESS OTHERWISE NOTED.
- FLOOR JOISTS TO BE RESTRAINED FROM TWISTING WITH CROSS BRIDGING, SOLID BLOCKING OR EQUIV.
- SOLID BLOCKING TO BE INSTALLED FOR ADEQUATE SUPPORT OF TOWEL BARS, CURTAIN AND CLOSET RODS, SHELVES, GRAB BARS AND SIMILAR FIXTURES WHERE REQUIRED.
- MULTI-PLY LVL'S SHALL BE CONNECTED AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.

CONCRETE:

- PROVIDE CONCRETE AND PERFORM WORK TO CSA-A23.3.
- MINIMUM 28 DAY COMPRESSIVE STRENGTHS AS INDICATED BELOW. ALL CONCRETE NORMAL WEIGHT - 150 PCF, TYPE 10 CEMENT, TYPE F FLYASH, MAXIMUM 3/4" AGGREGATE FOR ALL CONCRETE EXCEPT 1 1/4" MAXIMUM AGGREGATE FOR CHUTE PLACED SLABS ON GRADE. SUBMIT PROPOSED MIX DESIGN TO THE ENGINEER FOR APPROVAL:

INDUSTRIAL/COMMERCIAL	LOCATIONS	STRENGTH MPa (PSI)	AIR %	SLUMP +20mm	EXPOS. CLASS
FOOTINGS	25 (3600)	1-4	70	-	
SUSPENDED SLABS & BEAMS	25 (3600)	4-7	70		F2
RETAINING WALL	25 (3600)	4-7	70		F2
INTERIOR S.O.G.	25 (3600)	1-4	60	-	
EXPOSED S.O.G.	32 (4640)	4-8	60		C2
WALLS & COLUMNS	25 (3600)	1-4	70	-	
	30 (4350)	4-7	70		F2
- DO NOT USE ADMIXTURES OTHER THAN AIR ENTRAINMENT, STANDARD WATER REDUCERS OR SUPER PLASTICIZERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- REJECT ALL CONCRETE WHEN TIME BETWEEN BATCHING AND PLACING EXCEEDS 2 HOURS.
- DO NOT ADD WATER TO THE CONCRETE ON SITE UNLESS AUTHORIZED BY THE ENGINEER.
- CONSOLIDATE ALL CONCRETE USING MECHANICAL VIBRATORS.
- CONTROL JOINTS FOR SLAB-ON-GRADE: SAWCUT TO A DEPTH OF 25% OF SLAB THICKNESS AS SOON AS POSSIBLE AND NO LATER THAN 20 HOURS AFTER POURING AT MAXIMUM 6.1m SPACING OR AT LOCATIONS SHOWN ON THE DRAWINGS.
- CONSTRUCTION JOINTS: AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.
- PROTECT CONCRETE FROM ADVERSE WEATHER CONDITIONS IN ACCORDANCE WITH CSA A23.1, A23.3
- CONSTRUCT FORMWORK IN ACCORDANCE WITH WCB REGULATIONS AND CSA S269.3. FORMWORK DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR.

REINFORCING:

- NEW DEFORMED BARS TO CSA G30.18 GRADE 400 (60 KSI), WELDED WIRE FABRIC TO CSA G30.5. ANCHOR BOLTS TO ASTM A307.
- PLACE REINFORCING BARS TO CSA A23.1. TIE ALL BARS SECURELY IN PLACE TO PREVENT DISPLACEMENT. SUPPORT SLAB REINFORCING ON SUITABLE CHAIRS OR SUPPORTS AT MAXIMUM 4 FT. CENTRES. PROVIDE CORNER BARS TO MATCH HORIZONTAL WALL REBAR.
- PROVIDE CLEAR CONCRETE COVER FOR REBAR AS FOLLOWS:

SURFACE	POURED AGAINST GROUND	FORMED SURFACE EXPOSED TO GROUND OR WEATHER
BEAMS	3"	2"
COLUMNS		2" TO MAIN STEEL
WALLS		1 1/2"
SLABS ON GRADE		1 1/2"
- SPLICE REBAR AS FOLLOWS (UNLESS OTHERWISE NOTED):

BAR SIZE:	25M	20M	30M	15M	10M
LAP SPLICE-	51"	31"	71"	25"	18"
- MINIMUM 2-15M REINFORCING AROUND OPENING LARGER THAN 12" AT EACH SIDE OF OPENING. EXTEND 2'-0" PAST CORNER.
- CONTRACTOR TO PROVIDE 24 HOURS NOTICE FOR REBAR INSPECTION.
- WHERE SUSPENDED SLAB DRAWINGS ONLY SHOW PRINCIPAL REINFORCING IN ONE DIRECTION, PROVIDE SHRINKAGE AND TEMPERATURE REINFORCING PERPENDICULAR TO PRINCIPAL REINFORCING AND LOCATE BETWEEN MAIN TOP AND BOTTOM REINFORCING, PER PLANS.
- PROVIDE CORNER BARS FOR ALL HORIZONTAL WALL REINFORCING
- PLACE REINFORCING BARS UNIFORMLY AND SYMMETRICALLY, U.N.O.
- WHERE NEW CONCRETE POUR MEETS ABUTTING CONCRETE, DRILL AND GROUT ALL LONGITUDINAL REINFORCING 6" I.N.O. DRILLING AND GROUTING OF REINFORCING SHALL BE WITH 'HILTI' HY-150 SYSTEM OR APPROVED EQUAL
- NO WELDING OF ANY CONCRETE REINFORCING STEEL IS PERMITTED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

FIELD REVIEW:

- WSA ENGINEERING LTD. PROVIDES FIELD REVIEW FOR THE WORK SHOWN ON THE STRUCTURAL DRAWINGS PREPARED BY WSA ENGINEERING LTD. THIS REVIEW IS A PERIODIC REVIEW AT THE PROFESSIONAL JUDGEMENT OF WSA ENGINEERING LTD. THE PURPOSE IS TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY WSA ENGINEERING LTD. AND TO FULFILL THE REQUIREMENTS FOR THE COMPLETION OF LETTERS OF ASSURANCE REQUIRED BY THE APPLICABLE BUILDING CODE.
- ALL NON-CONFORMING WORKS THAT REQUIRE REMEDIAL ACTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY EXTRA TIME OR COST INCURRED TO WSA ENGINEERING LTD. TO ASSIST OR ADVISE THE CONTRACTOR IN RECTIFYING THE WORK SHALL BE BORNE BY THE CONTRACTOR.
- ENSURE THAT WORK TO BE INSPECTED IS COMPLETE AT THE TIME OF INSPECTION AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ADDITIONAL INSPECTIONS REQUIRED DUE TO INCOMPLETE WORK OR POORLY EXECUTED WORK, AS JUDGED BY WSA ENGINEERING LTD. AS WELL AS ADDITIONAL DESIGN OR REMEDIAL WORK CAUSED BY DEVIATIONS FROM THESE DRAWINGS, MAY BE CHARGED TO THE GENERAL CONTRACTOR AT THE DISCRETION OF WSA ENGINEERING LTD.
- A MINIMUM OF 24 HOURS NOTICE SHALL BE GIVEN BY THE CONTRACTOR FOR ANY INSPECTION TO BE CARRIED OUT BY WSA ENGINEERING LTD.. INSPECTIONS ARE REQUIRED PRIOR TO CONCEALING ANY STRUCTURAL WORK SHOWN ON THESE DRAWINGS.

FOUNDATIONS:

- FOUNDATION CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE B.C. BUILDING CODE AND THE GEOTECHNICAL REPORT PREPARED BY THE GEOTECHNICAL ENGINEER ON RECORD.
- BEAR ALL FOOTINGS ON UNDISTURBED SOIL (OR APPROVED ENGINEERED FILL) NOTWITHSTANDING THE ELEVATIONS INDICATED ON THE DRAWINGS. PROVIDE FROST COVER TO ALL FOOTINGS IN ACCORDANCE WITH LOCAL REGULATIONS.
- REMOVE ALL ORGANIC MATERIAL AND UNSUITABLE FILL FROM THE BUILDING AREA.
- PROTECT EXCAVATIONS FOR FOOTINGS FROM RAIN, SNOW, FREEZING TEMPERATURES, STANDING WATER, AND DRYING.
- SHORE AND UNDERPIN EXCAVATIONS TO PREVENT DISTURBANCE TO ADJACENT STRUCTURES, STREETS, SIDEWALKS, AND UTILITIES.
- DO NOT BACKFILL RETAINING WALLS, INCLUDING PERIMETER BASEMENT WALLS, BEFORE THEY ARE ADEQUATELY SUPPORTED BY THE SUPPORTING FLOOR(S). ALL CONCRETE SUPPORTING FLOORS MUST HAVE CURED FOR A MINIMUM 7 DAYS AND ATTAINED MINIMUM 75% OF THEIR 28 DAY STRENGTH. ALL BACKFILLING IS TO COMPLY WITH THE REQUIREMENTS PROVIDED BY THE GEOTECHNICAL ENGINEER.
- STRIPPING AND SHORING NOTES: - DO NOT REMOVE FORMS AND SHORING BEFORE THE CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO ENSURE THE SAFETY OF THE STRUCTURE AND NOT BEFORE THE FOLLOWING MINIMUM AND LONG TERM PERFORMANCE PERIODS OF TIME AFTER PLACING CONCRETE:

24 HOURS - COLUMNS, WALLS, FOOTINGS, AND BEAM SIDES
28 DAYS - BEAM SOFFITS, SLABS AND OTHER STRUCTURAL MEMBERS

NON-STRUCTURAL COMPONENTS:

- NON-STRUCTURAL COMPONENTS ARE NOT THE RESPONSIBILITY OF WSA ENGINEERING LTD. BUT ARE DESIGNED, DETAILED, SPECIFIED AND REVIEWED IN THE FIELD BY OTHERS. LETTERS OF CERTIFICATION OF ADEQUACY, INSTALLATION, ETC. OF SUCH COMPONENTS ARE BY OTHERS.
- MANUFACTURERS OF NON-STRUCTURAL COMPONENTS WHICH AFFECT THE STRUCTURAL FRAMING SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND WSA ENGINEERING LTD. FOR REVIEW. THE SHOP DRAWINGS SHALL CLEARLY INDICATE THE LOAD IMPOSED ON THE STRUCTURE. REVIEW WILL BE LIMITED TO THE EFFECT OF THE COMPONENTS ON THE STRUCTURAL FRAMING.
- EXAMPLES OF NON-STRUCTURAL COMPONENTS INCLUDE BUT ARE NOT LIMITED TO:
  - ARCHITECTURAL COMPONENTS SUCH AS HANDRAILS, GUARDRAILS, RAILINGS, FLAG POST, REMOVABLE CANOPIES, CEILINGS, VEHICLE PROTECTION SYSTEMS, ORNAMENTAL COMPONENTS
  - ARCHITECTURAL PRECAST CONCRETE AND ITS ATTACHMENTS
  - ARCHITECTURAL GLASS BLOCKS AND THEIR ATTACHMENTS
  - BRICK AND BLOCK VANEERS, REINFORCING, AND TIES
  - LANDSCAPING COMPONENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS
  - CURTAIN WALL SYSTEMS, CLADDING, SKYLIGHT, WINDOW MULLIONS
  - INTERIOR AND EXTERIOR NON-LOADING STEEL STUD WALLS
  - SUPPORT AND BRACINGS OF MECHANICAL AND ELECTRICAL SYSTEMS AND EQUIPMENT FOR NON-GRAVITY AND SEISMIC LOADS
  - WINDOW WASHING EQUIPMENT AND ITS ATTACHMENTS
  - ELEVATORS, ESCALATORS, AND OTHER CONVEYING SYSTEMS, INCLUDING PROPRIETARY SUPPORT BEAMS AND ATTACHMENTS
  - NON-STRUCTURAL MASONRY

DESIGN LOADS (CHRISTINA LAKE) PER BCBC 2018:

- SPECIFIED DEAD LOADS:

ROOF	15 PSF (0.72 kPa)
FLOOR	15 PSF (0.72 kPa)
- SPECIFIED LIVE LOADS:

FLOOR	40 PSF (4.2 kPa)
-------	------------------
- CLIMATIC DATA:

GROUND SNOW (Sg)	69 PSF (3.3 kPa)
ROOF SNOW (S)	88.6 PSF (4.24 kPa)
RAIN (Sr)	2.0 PSF (0.10 kPa)
- WIND LOADS:

(1/10)	5.4 PSF (0.26 kPa)
(1/50)	8.6 PSF (0.41 kPa)
- SEISMIC LOADS:

Sa(0.2) = 0.133
Sa(0.5) = 0.108
Sa(1.0) = 0.082
PGA = 0.061

### DRAWING INDEX

SHEET S1.0 - SITE PLAN  
SHEET S2.0 - EXISTING BUILDING  
SHEET S3.0 - PROPOSED NEW

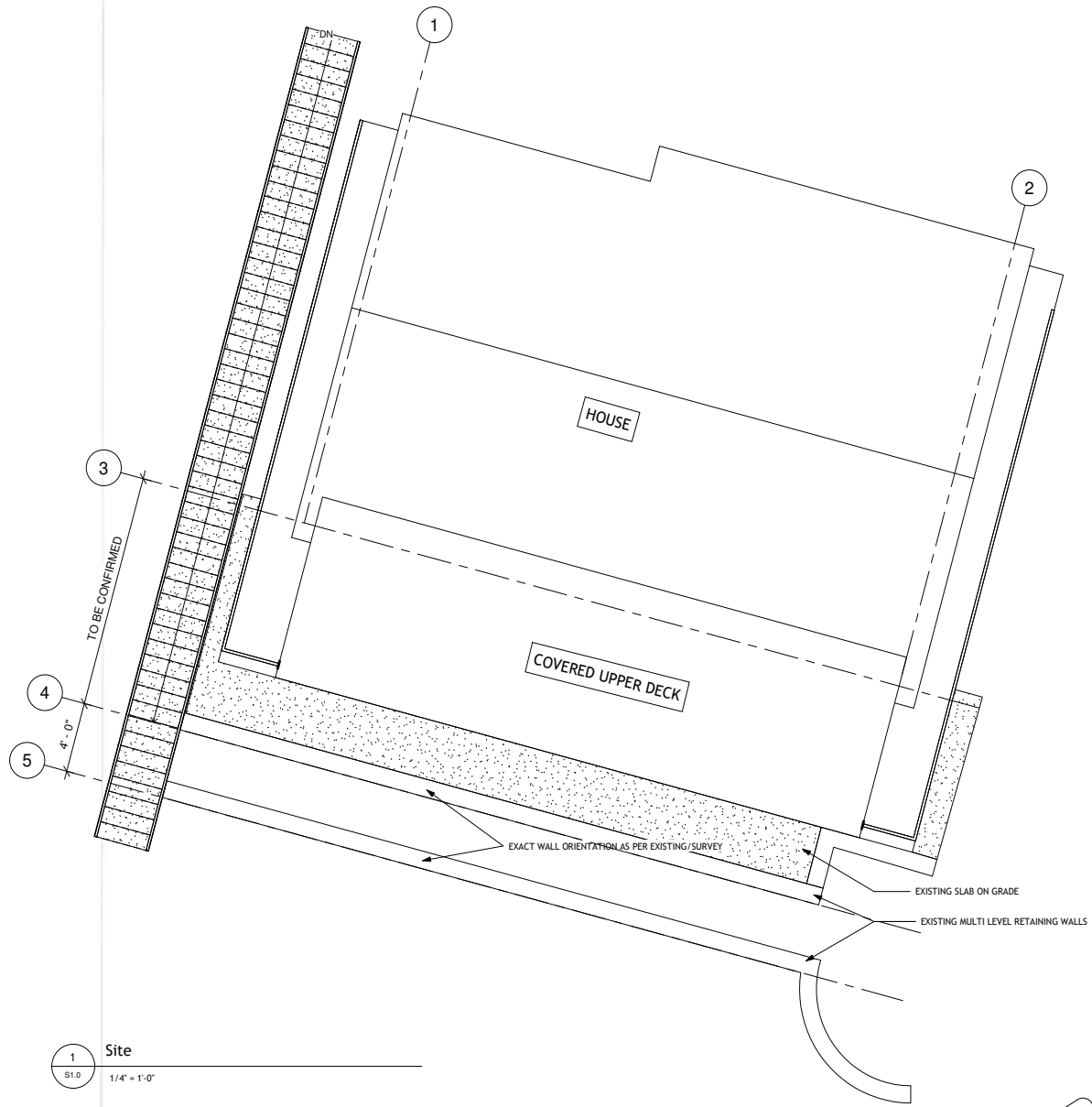
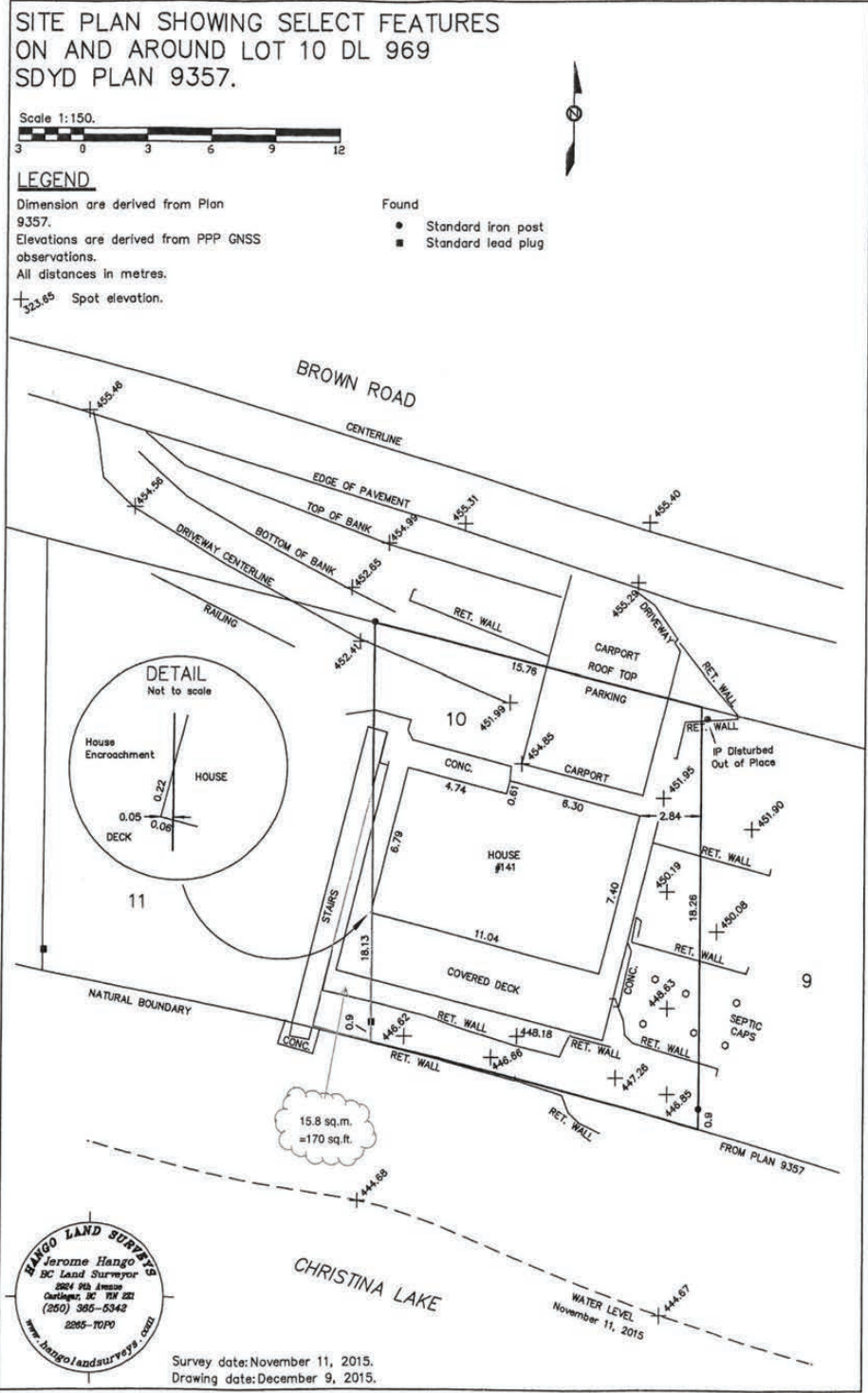


ENGINEERING (2012) LIMITED

Civil • Structural  
2248 Columbia Ave. Castlegar, B.C. V1N 2X1 P: (888) 617-6927

C19001 - 081  
HAMMOND RETAINING WALL  
141 BROWN ROAD  
CHRISTINA LAKE, B.C.





Dimensions to Face of Foundation or Framing Stud UNO.

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No.	Date	Issue/Revision
A	Feb 19/20	ISSUED FOR VARIANCE APPLICATION

Professional Engineer Stamp:



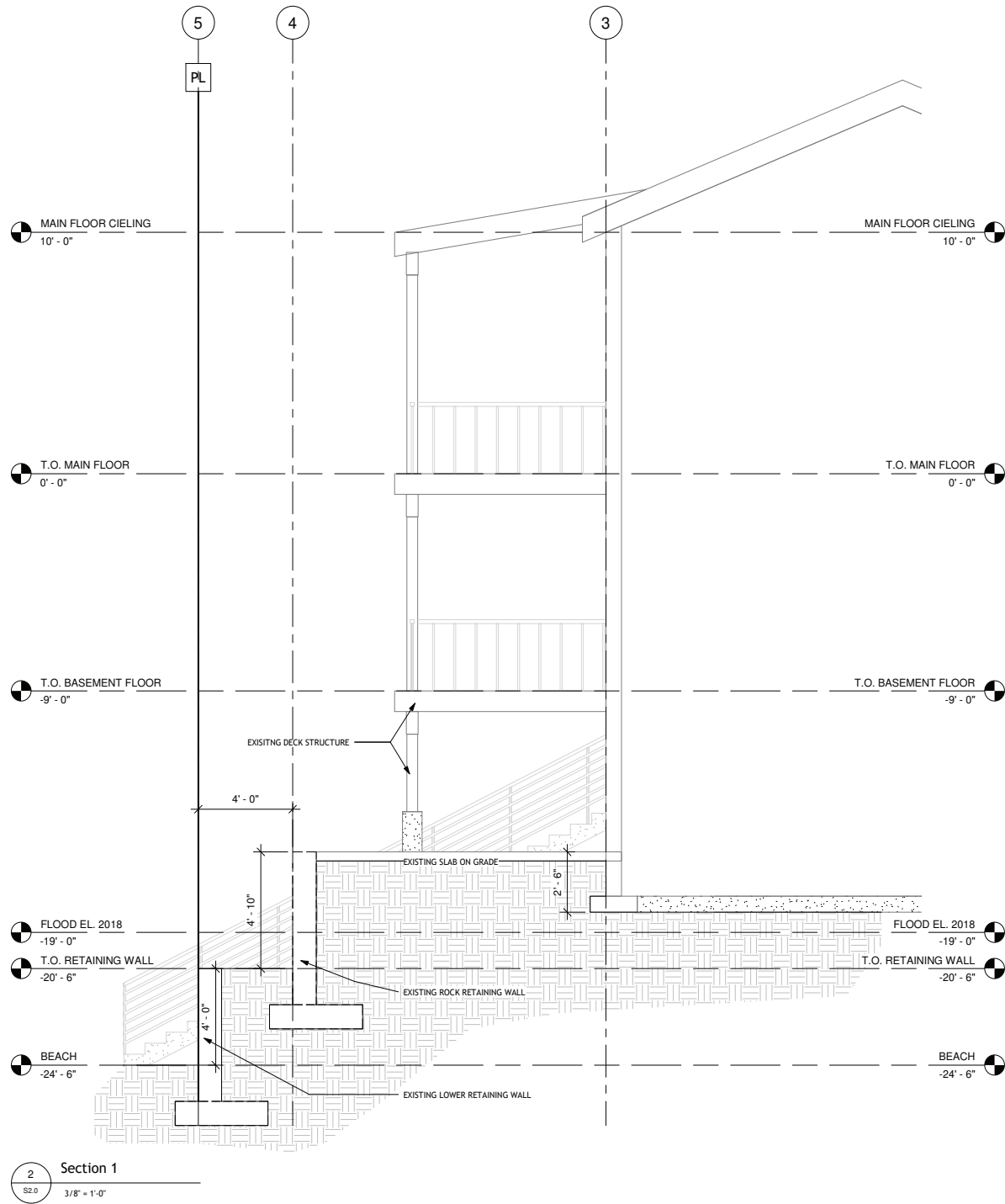
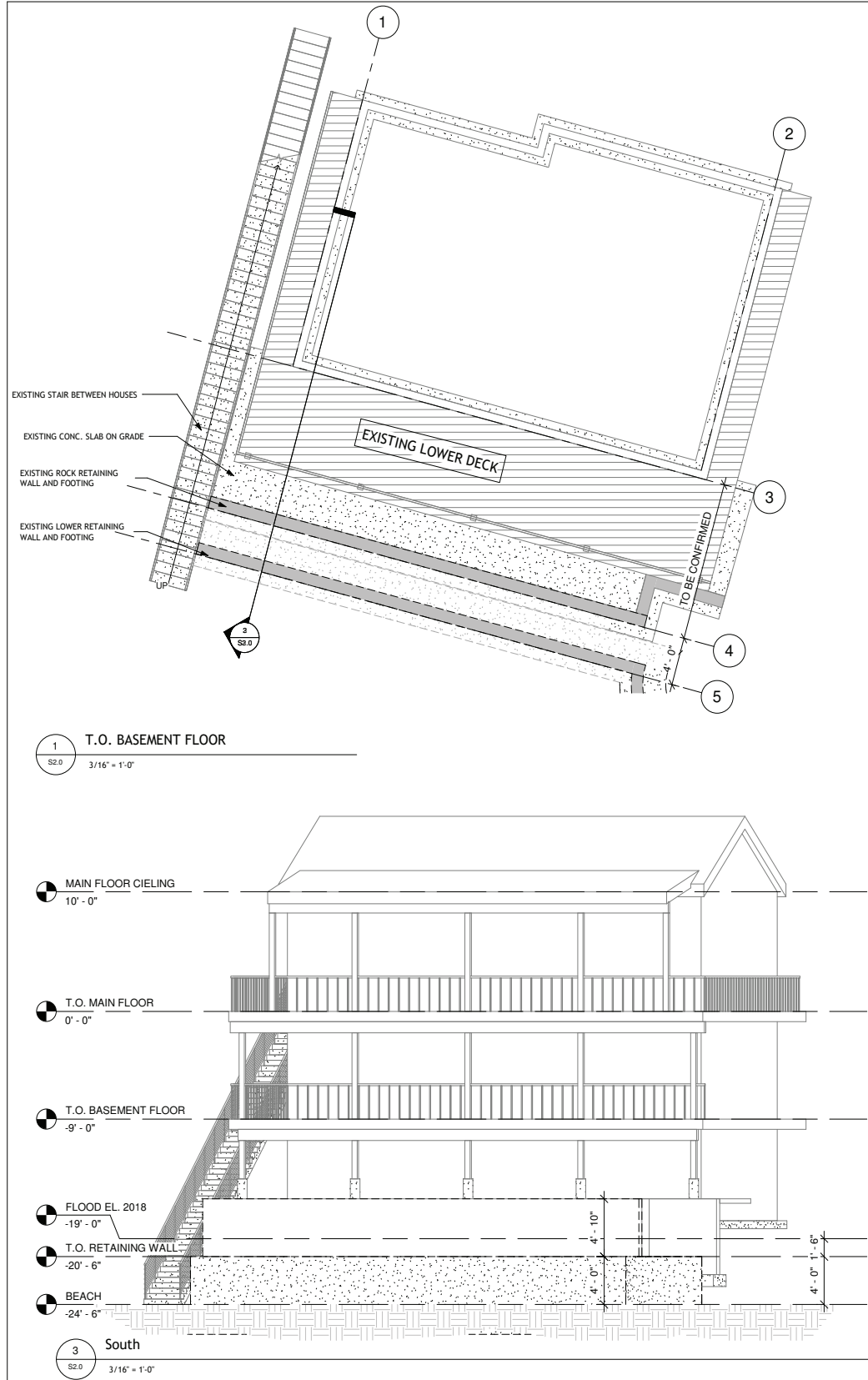
**Project**  
**HAMMOND RETAINING WALL**

**141 BROWN ROAD**  
**CHRISTINA LAKE, BC**

**Drawing**  
**SITE PLAN**

Date	10/06/19	Project No.	C19001-081
Designed	RS	Drawing File	C19001-081 A1
Drawn	RS	Scale	1/4" = 1'-0"
Checked	AJ	Sheet No.	S1.0
Approved	DS	Issue/Rev.	A

ISSUED FOR  
VARIANCE APPLICATION



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A	Feb 19/20	ISSUED FOR VARIANCE APPLICATION

Professional Engineer Stamp:



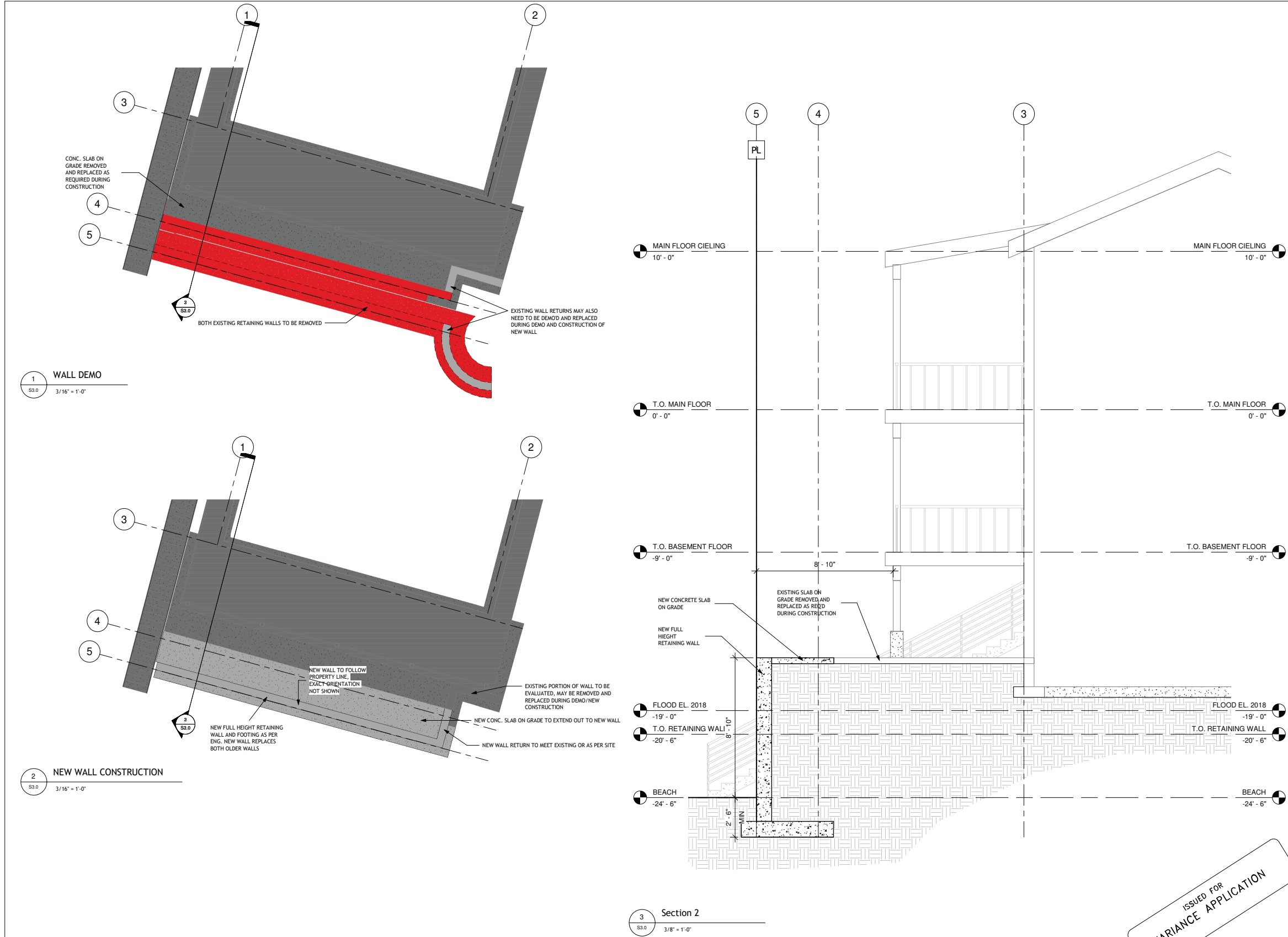
Project  
**HAMMOND RETAINING WALL**

141 BROWN ROAD  
CHRISTINA LAKE, BC

Drawing  
**EXISTING BUILDING**

Date	10/06/19	Project No.	C19001-081
Designed	RS	Drawing File	C19001-081 A1
Drawn	RS	Scale	As indicated
Checked	AJ	Sheet No.	S2.0 OF 3
Approved	DS	Issue/Rev.	A

ISSUED FOR  
VARIANCE APPLICATION



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No.	Date	Issue/Revision
A	Feb 19/20	ISSUED FOR VARIANCE APPLICATION

Professional Engineer Stamp:

**WSA ENGINEERING (2012) LTD.**  
Civil - Structural  
1288 Commercial Drive, Vancouver, B.C. V5Y 5Z5 Tel: (604) 681-4877

Project  
**HAMMOND RETAINING WALL**  
141 BROWN ROAD  
CHRISTINA LAKE, BC  
Drawing  
**PROPOSED NEW**

Date	10/06/19	Project No.	C19001-081
Designed	RS	Drawing File	C19001-081 A1
Drawn	RS	Scale	As indicated
Checked	AJ	Sheet No.	S3.0
Approved	DS	Issue/Rev.	A

ISSUED FOR  
VARIANCE APPLICATION



## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Development Variance Permit – Kalesnikoff		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	C-3063s-07052.000 (641-20V)
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received an application for a development variance permit from Peter Buchanan of North Architecture Studio Inc., on behalf of Elaine and Ken Kalesnikoff for the construction of a single family dwelling in Electoral Area C/Christina Lake (see attachments).

Property Information	
<b>Owner(s):</b>	Elaine and Ken Kalesnikoff
<b>Agent:</b>	Peter Buchanan (North Architecture Studio Inc.)
<b>Location:</b>	3273 East Lake Drive
<b>Electoral Area:</b>	Electoral Area C/Christina Lake
<b>Legal Description(s):</b>	Lot 25, DL 3063s, SDYD, Plan KAP1919
<b>Area:</b>	0.33ha (0.81acr)
<b>Current Use(s):</b>	Single family dwelling
Land Use Bylaws	
<b>OCP Bylaw 1250:</b>	Waterfront Residential
<b>DP Area:</b>	Waterfront Environmentally Sensitive
<b>Zoning Bylaw 1300:</b>	Waterfront Residential 2
Other	
<b>ALR:</b>	N/A
<b>Waterfront / Floodplain:</b>	Partial
<b>Service Area:</b>	NA

### History / Background Information

The subject property is located along East Lake Drive in Electoral Area C/Christina Lake. It is a hooked parcel with approximately 0.08ha (0.19acr) on the west side of the road and the remaining 0.25ha (0.62acr) on the east side. It has a "Waterfront Residential" Official Community Plan (OCP) land use designation and is zoned "Waterfront Residential 2". Christina Lake abuts the western boundary of the property. As such, it is

within the floodplain as well as the Environmentally Sensitive Waterfront Development Permit Area.

## **Proposal**

The applicant is proposing to demolish the existing cabin and construct a new one on the same building footprint. They are requesting to reduce the required minimum setback from the natural boundary of Christina Lake from 7.5m to 3.0m, a variance of 4.5m, for the construction of a new single family dwelling and deck.

The applicant has outlined their rationale for the requested variance in a separate package (see attachments). To summarize:

- the new dwelling will utilize the existing building footprint;
- the existing cabin is 4.2m from the natural boundary and the proposal will move it back another 2.3m so it would be located 6.5m from the natural boundary. The applicant is requesting to locate the proposed deck where the cabin is currently located;
- topography and bedrock limit the space available for a building platform;
- siting the structure closer to East Lake Drive would present great difficulties with respect to safety during construction; and,
- the proposed design is practical and accessible for older generations to age in place.

The applicant has also submitted an application for a site-specific exemption to the floodplain bylaw (floodplain exemption) and a development permit for the proposed development, which are discussed in separate reports.

## **Implications**

### Lawful Non-conforming ('Grandfathered') Status

It is not currently known if the structure is lawfully non-conforming. There is no building permit on record for the initial construction of the cabin. A copy of the original building permit, if it exists, or evidence to confirm the date of construction would typically be required to determine whether the cabin is lawfully non-conforming. However, because the entire structure is being demolished, the cabin's status as lawfully non-conforming or non-conforming is not relevant; the following information is for reference only.

When structural alterations are made to buildings and structures that are lawfully non-conforming, they lose their non-conforming status with respect to the siting requirements of the Zoning Bylaw. Only minor repairs and renovations that do not involve an increase in height, size or modification of structural components can be completed on portions of the structure that extend into a setback area.

The proposal would constitute a new build on the property and, if the existing building was constructed lawfully, the siting would no longer be considered lawfully non-conforming. The proposal would still require a development variance permit, as well as a floodplain exemption, to account for the non-conforming siting of the current building.

Page 2 of 4

P:\PD\EA\_'C'\3063s-07052.000 Kalesnikoff\2020-03-DP-DVP\_Floodplain\EAS\DVP\2020-04-16\_Kalesnikoff\_DVP\_EAS.docx

### Variance Considerations

For Development Variance Permit applications, the RDKB considers whether the proposed variance will:

- a) Resolve a hardship;
- b) Improve the development;
- c) Cause negative impacts to the neighbouring properties.

The topography and presence of bedrock on the site limit the ability to achieve the desired design in a manner that meets the siting requirements. More details the applicant feels should be considered as grounds for hardship have been included in their rationale (see attachments).

The lake side of the parcel is approximately 21m deep where the variance is being requested. The required setbacks from Christina Lake's natural boundary and East Lake Drive are 7.5m and 4.5m, respectively. If the requirements of the Zoning Bylaw are met, approximately 9m (29.5ft) remains for the building footprint.

### OCP Considerations

One of the goals for lands designated for residential use by the OCP states "protection of lake water quality and the natural environment are paramount in residential and rural development." The following points were raised with respect to the OCP goal stated above in our discussion of the proposal with the applicant:

- the engineering consultants noted that the existing cabin and rock retaining structures (revetments) were unaffected by the flooding event in 2018. They add that no modifications to the existing revetments are required for the proposed dwelling;
- limits of disturbance, such as sediment control measures, could be required as a condition of the variance to further address lake water quality in the construction of the dwelling, if the applications were to receive approval from the Board of Directors; and,
- siting the dwelling across East Lake Drive would be a challenge given the steep topography and would disturb the natural environment.

### **Advisory Planning Commission (APC)**

The Electoral Area C/Christina Lake APC considered the application at their April 7, 2020 meeting. The APC provided a recommendation of support for the application.

## Recommendation

That the Development Variance Permit application submitted by Peter Buchanan of North Architecture Studio Inc., on behalf of Ken and Elaine Kalesnikoff, to reduce the required minimum setback from the Natural Boundary of Christina Lake from 7.5m to 3.0m, a variance of 4.5m, for the construction of a new single family dwelling and deck on the parcel legally described as Lot 25, DL 3063s, SDYD, Plan KAP1919, Electoral Area C/Christina Lake, be presented to the Regional District of Kootenay Boundary Board of Directors for consideration, with a recommendation of support.

## Attachments

Site Location Map

Subject Property Map

Applicant Submission<sup>1</sup>

- a) Hardship Proposal Letter
- b) Site Plan
- c) Architectural Drawings

---

<sup>1</sup> The Applicant Submission also includes professional reports from the engineering consultants for geotechnical considerations and sewage disposal design; they are considered in separate reports.



Regional District of  
Kootenay Boundary

Date: 2020-03-24

# Site Location Map

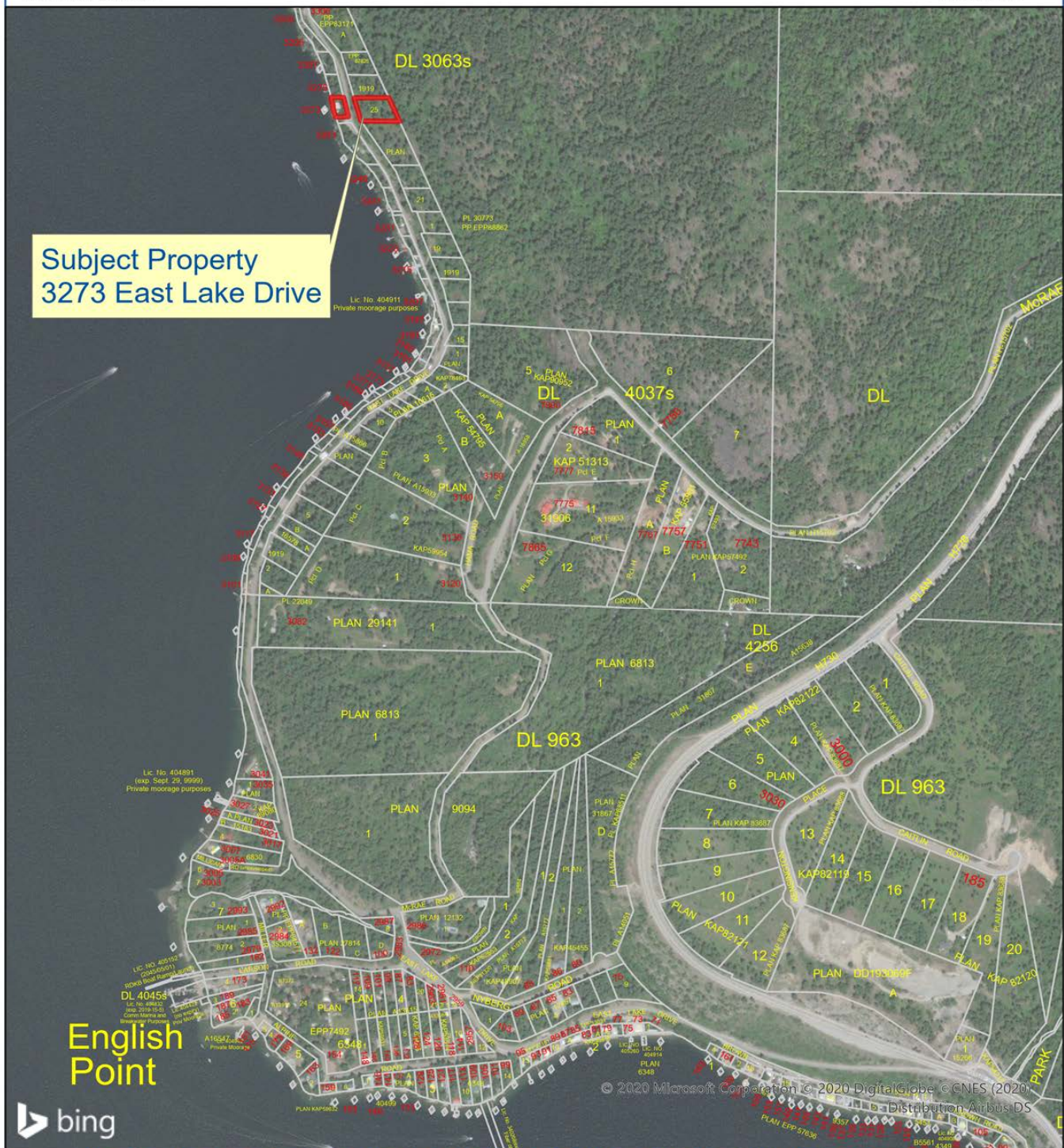
Lot 25,  
Plan KAP1919, DL 3063S,  
SDYD



0 50 100 150 200  
Meters

1:9,000

Subject Property  
3273 East Lake Drive



202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | [rdkb.com](http://rdkb.com)

Document Path: P:\PD\EA\_C\3063s-07052.000 Kalesnikoff\2020-03-DP-DVP-FloodplainMapping\2020-03-24\_SM\_C-3063s-07052.000\2020-03-24\_SM\_C-3063s-07052.000.aprx



February 10/ 2020

RDKB Planning and Development Department,  
843 Rossland Avenue,  
Trail, BC  
V1R 4S8

To Whom It May Concern,

This letter is to be read as an Appendix to the "Application to the Board of Variance" for the property owned by the Kalesnikoff Family at 3273 East Lake Drive on Christina Lake, BC.

The Variance being sought is to reduce the lakeside building setback from 7.5M to 4.2M.

This letter is offered as an explanation for what can be considered "undue hardship" as it relates to the requested Variance on behalf of Elaine and Ken Kalesnikoff.

- for context with this Application the Kalesnikoff Family has owned the current Cabin and property for 12 years and, with the construction of a new Cabin on the property, they have ambitions that the new Cabin will be of a "legacy" type and be held within the Family for many generations to come. The Kalesnikoff Family has built and owns the Kalesnikoff Lumber Company in Thrums, BC and is in the process of completing a new \$35M "Mass Timber" facility (Glue Laminated and Cross Laminated Timber products). It is the Kalesnikoff's ambition to construct their new Cabin with Mass Timber products from their new facility,

- the property is located between East Lake Drive and Christina Lake, has no immediate neighbour to the south and the property to the north currently holds a tiny one room cabin and outhouse. The property is extremely steep which inherently provides a hardship for just about any form of construction. Positioning a building on the property in conformance with the Building Setback from the "Natural Boundary" would require significantly more excavation that would lead to more construction costs, more difficulties in property access (through the construction process and after), increased construction safety risk as well as the potential to undermine the structural integrity of East Lake Drive,

- the construction of a new cabin will help address many of the current challenges that the current Cabin presents along with diminishing the increasing difficulties that one of the owners, specifically Elaine Kalesnikoff, is experiencing with the challenging access and steep terrain of this property: Elaine Kalesnikoff is a 58 year old amputee who uses a prosthesis. With a strong ambition to be physically

and visually connected to their entire family that spans 4 generations, the proposed design of the Cabin addresses these challenges by including vehicle access that is proposed to be at-grade with the front door, the main stair and an elevator access to all floors from the building Entry, single Main Floor living for the Kalesnikoff seniors along with a lakeside deck off the Main Floor to allow for "single floor living" meal-time congregation and family gatherings. The lakeside deck also allows direct visual access to the waterfront for reasons of "eyes and-ears-on-the-dock" safety and general family congregation.

- in concert with this Application are a "*Site-specific exemption to the Floodplain Bylaw*" Application and a "*Environmentally Sensitive Waterfront Development Permit*" Application. Both of these Applications promote reasonable solutions regarding the mediation of risk hazards as well as hardship potential in terms of development costs (..for example, the proposed building location on the property allows for the sewage system to be located and accessed adjacent to the Cabin as opposed to the sewage system being located much further uphill and across East Lake Drive),

- to note, the current Cabin location on the property projects approximately 10'-10" beyond the "setback from natural boundary line". With this application it is proposed that the structural support columns for the lakeside deck do not extend further into the setback than the current Cabin. The proposed building footprint encroaches 3'-2" into the "setback from natural boundary line" which is 7'-8" back from the current Cabin's lakeside footprint (..please refer to enclosed Site Plan).

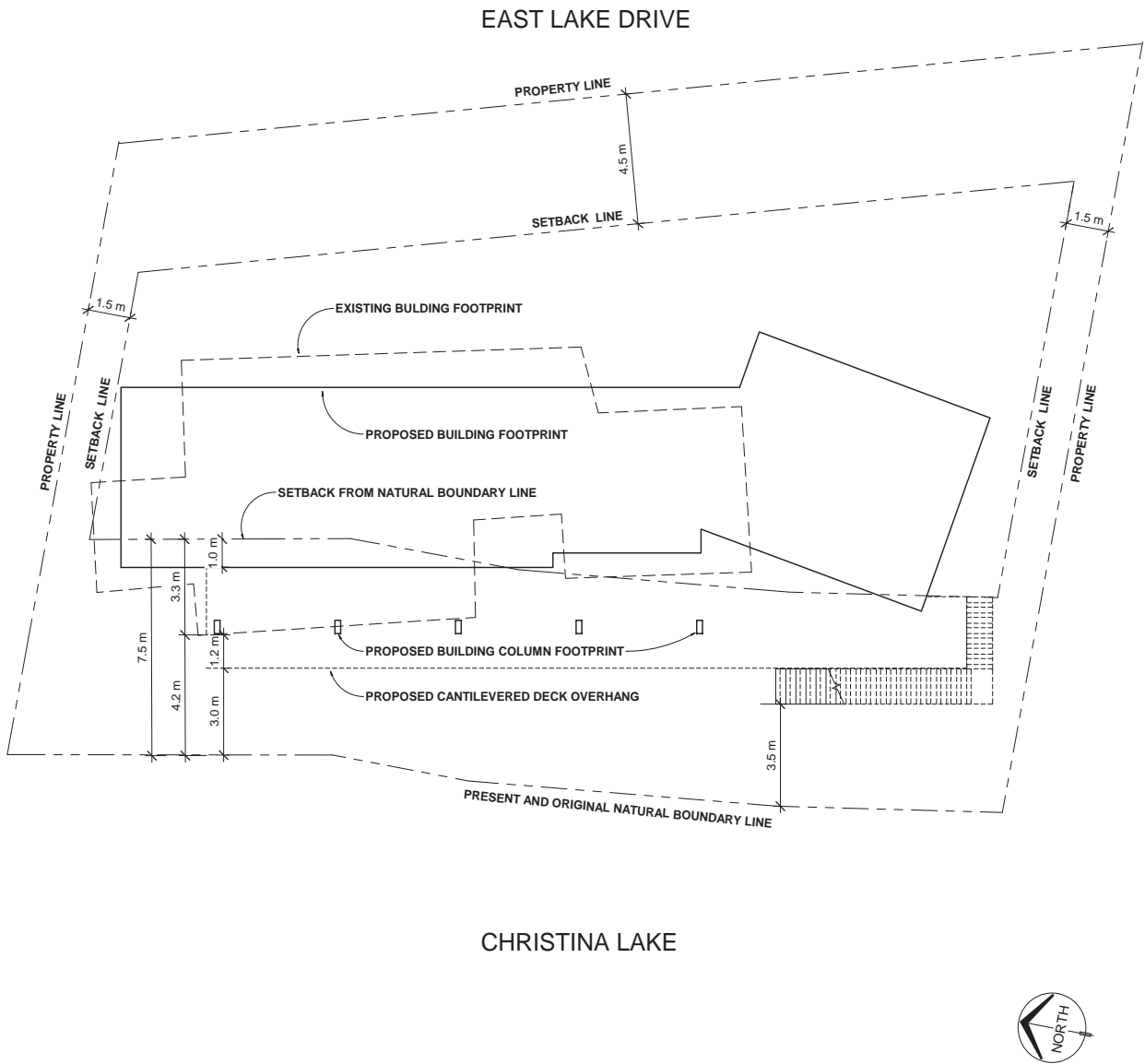
Please also see the attached 4 photographs of the existing Cabin and property for reference.

Sincerely yours,

Peter Buchanan on behalf of Elaine and Ken Kalesnikoff

Peter Buchanan  
Architect AIBC  
Principal  
[peter@northarchitecturestudio.ca](mailto:peter@northarchitecturestudio.ca)

North Architecture Studio Inc. 9508  
Emerald Drive, Whistler, BC  
V0N 1B9 Tel  
604 842 3350  
[www.northarchitecturestudio.ca](http://www.northarchitecturestudio.ca)



1 SITE PLAN - WITH BUILDING OUTLINE AND DIMENSIONS  
1/8" = 1'-0"

THIS DRAWING MUST NOT BE SCALED. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS AND LEVELS PRIOR TO COMMENCEMENT OF WORK. ALL ERRORS AND OMISSIONS MUST BE REPORTED IMMEDIATELY TO THE CONSULTANT. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH ALL OTHER DRAWINGS AND SPECIFICATIONS. VARIATIONS AND MODIFICATIONS TO WORK SHOWN SHALL NOT BE CARRIED OUT WITHOUT WRITTEN PERMISSION FROM THE CONSULTANT. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF THE CONSULTANT AND CANNOT BE REPRODUCED, COPIED, OR LOANED WITHOUT PERMISSION OF THE CONSULTANT.

**NORTH**  
ARCHITECTURE  
**studio**

North Architecture Studio Inc.  
9508 Emerald Drive  
Whistler, BC V0N 1B9  
Tel: 604.842.3350

CONSULTANT: DRAWING

NO	DATE	DESCRIPTION

NORTH POINT:	STAMP:

PROJECT:  
KALESNIKOFF CABIN  
3273 EAST LAKE DR.  
CHRISTINA LAKE, BC

DRAWING:  
SITE PLAN - WITH BUILDING  
OUTLINE AND DIMENSIONS

PROJECT NO: T00000	SCALE: 1/8" = 1'-0"
START DATE: 12/01/19	DRAWN BY: GB
FORMAT: 34"x22"	CHECKED BY: PB
SHEET NUMBER:	

A1.2a

PROJECT TEAM

OWNER

KEN KALESNIKOFF  
2090 BC-31,  
CASTLEGAR, BC V1N 3L8  
T: 250.399.4211

ARCHITECT

NORTH ARCHITECTURE STUDIO  
CONTACT: PETER BUCHANAN ARCHITECT AIBC, MRAIC  
9508 EMERALD DRIVE  
WHISTLER, BC V0N 1B9  
T: 604.842.3350  
E: peter@northarchitecturestudio.ca

STRUCTURAL ENGINEERING

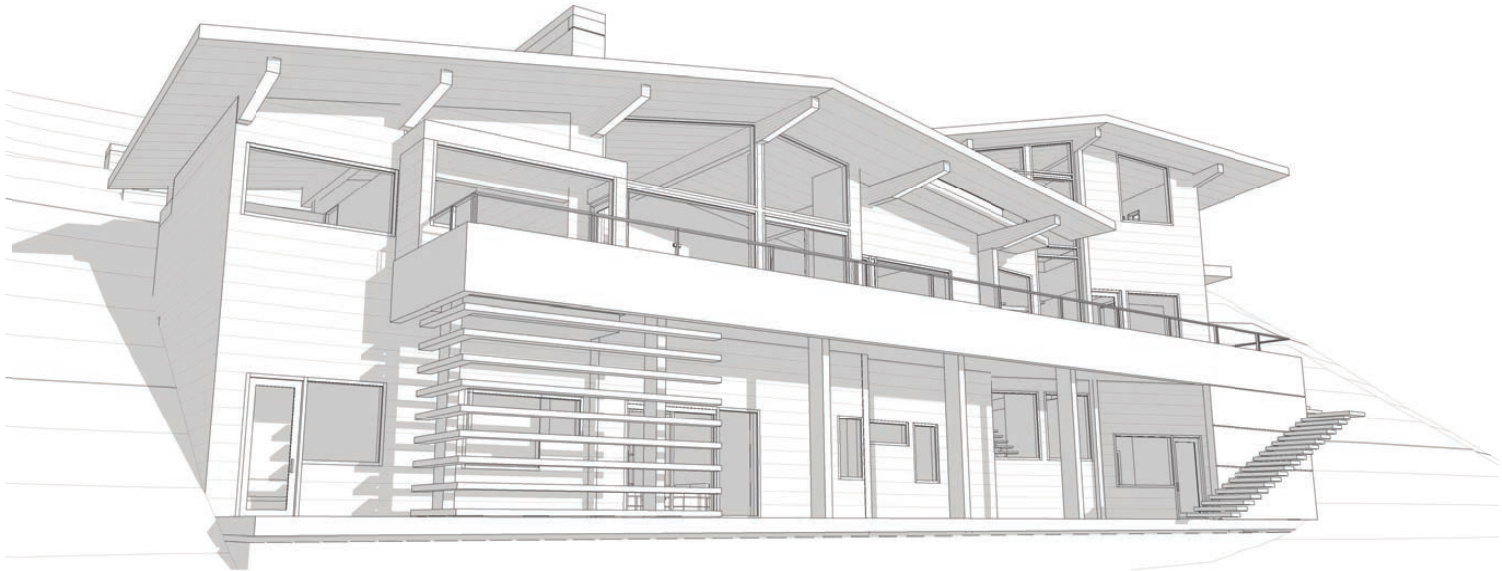
FAST + EPP  
CONTACT: NICK DE RIDDER P.ENG.  
201 - 1672 WEST 1ST AVENUE,  
VANCOUVER, BC  
T: 604.235.3126  
E: nderidder@fastepp.com

CIVIL ENGINEERING

WSA ENGINEERING  
CONTACT: DAN SAHLSTROM P.ENG.  
2248 COLUMBIA,  
CASTLEGAR, BC V1N 2X1  
T: 1.888.617.6927 EXT 1  
E: dans@wsaeng.com

GEOTECHNICAL ENGINEERING

DEVERNEY ENGINEERING SERVICES  
CONTACT: NORMAN L. DEVERNEY P.ENG., FEC  
4711 ROBERTSON ROAD,  
NELSON, BC V1L 6N4  
T: 250.825.4347  
E: deverney.engineering@shawcable.com



ARCHITECTURAL DRAWINGS

- A0.1 COVER SHEET, ZONING REQUIREMENTS & PROJECT INFORMATION
- A0.2 PROJECT ANALYSIS AND SPATIAL SEPARATION CALCULATIONS
- A0.3 ASSEMBLIES
- A0.5 SPECIFICATIONS
- A1.1 EXISTING SURVEY
- A1.2 SITE PLAN
- A1.2a SITE PLAN - WITH BUILDING OUTLINE AND DIMENSIONS
- A1.3 DEMOLITION PLANS
- A2.1 LOWER LEVEL FLOOR PLAN
- A2.2 MAIN LEVEL FLOOR PLAN
- A2.3 UPPER LEVEL FLOOR PLAN
- A2.4 Unrimed
- A2.5 ELEVATIONS
- A2.6 ELEVATIONS
- A3.1 ENLARGED FLOOR PLANS
- A4.1 BUILDING SECTIONS
- A4.2 BUILDING SECTION
- A4.3 BUILDING SECTION
- A5.1 REFLECTED CEILING PLAN
- A6.1 INTERIOR ELEVATIONS
- A7.1 VERTICAL CIRCULATION PLANS AND SECTIONS
- A8.1 PLAN & SECTION DETAILS
- A9.1 MILLWORK DETAILS

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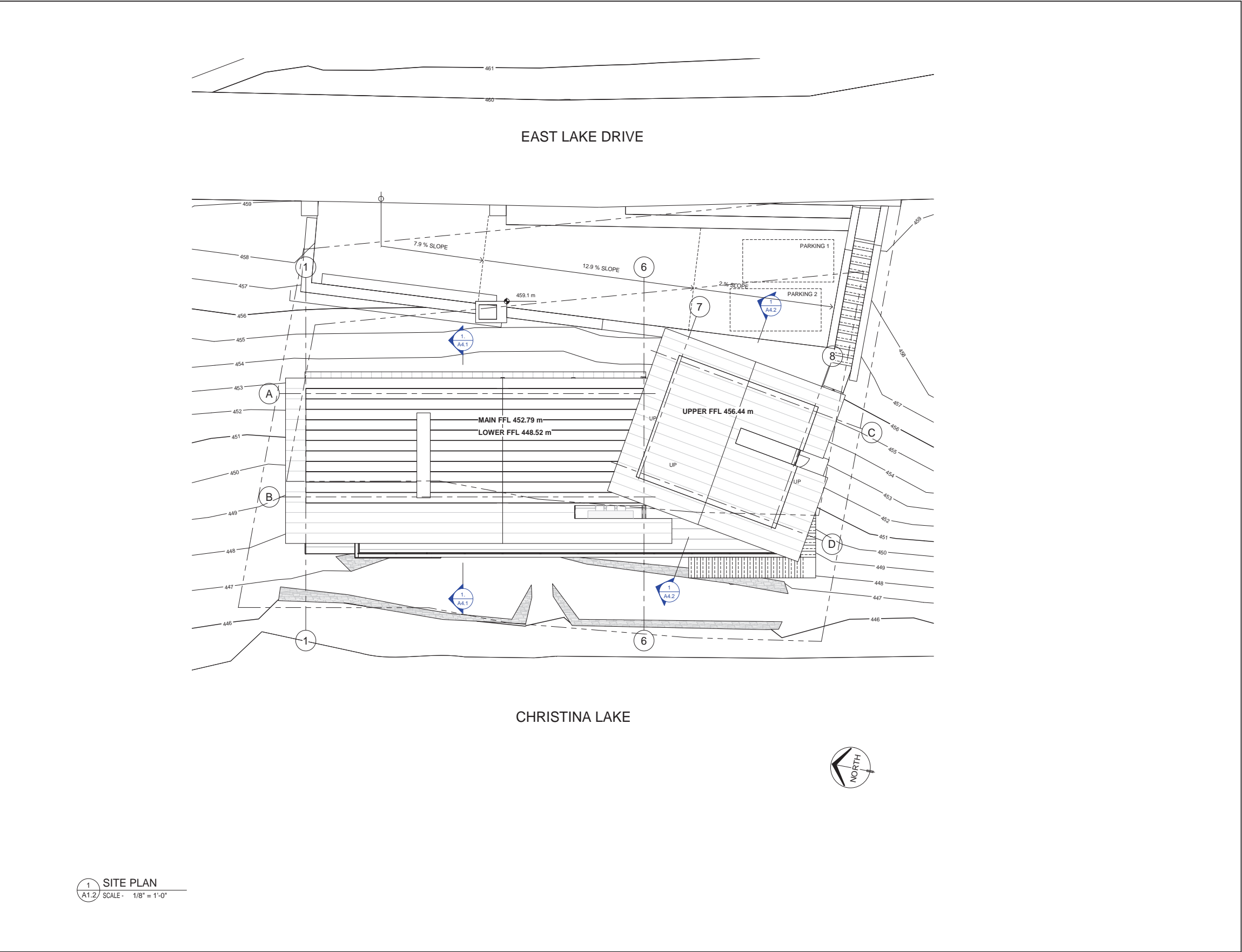
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ARCHITECTURE  
**studio**

North Architecture Studio Inc.  
9508 Emerald Drive  
Whistler, BC V0N 1B9  
Tel: 604.842.3350

CONSULTANT: DRAWING

NO	DATE	DESCRIPTION
NORTH POINT:		STAMP:
PROJECT:		
KALESNIKOFF CABIN		
3273 EAST LAKE DR.		
CHRISTINA LAKE, BC		
DRAWING:		
COVER SHEET, ZONING REQUIREMENTS & PROJECT INFORMATION		
PROJECT NO:	SCALE:	
T00000	12" = 1'-0"	
START DATE:	DRAWN BY:	
07/11/14	GB	
FORMAT:	CHECKED BY:	
34"x22"	PB	
SHEET NUMBER:		

A0.1



1 SITE PLAN  
A1.2 SCALE - 1/8" = 1'-0"

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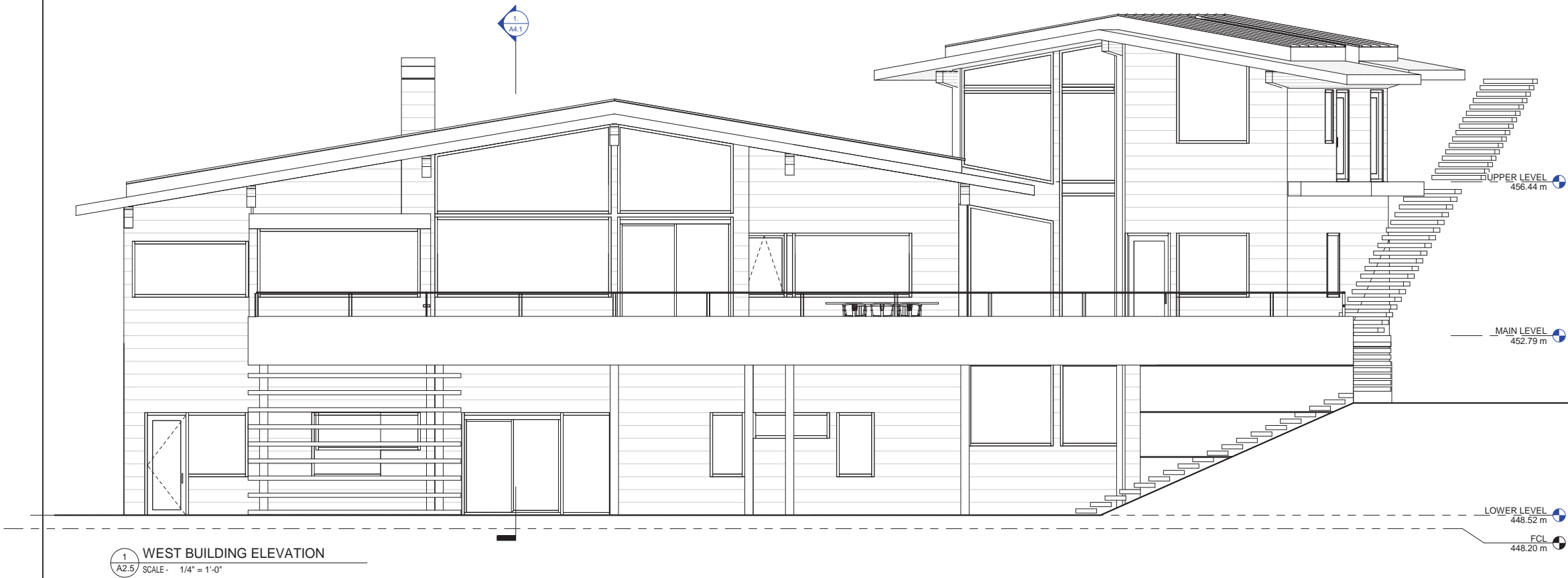
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ARCHITECTURE  
**studio**

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9508 Emerald Drive  
Whistler, BC V8N 1B9  
Tel: 604.842.3350

CONSULTANT: DRAWING

NO	DATE	DESCRIPTION
NORTH POINT:	STAMP:	
PROJECT:		
KALESNIKOFF CABIN 3273 EAST LAKE DR. CHRISTINA LAKE, BC		
DRAWING:		
SITE PLAN		
PROJECT NO:		SCALE:
T00000		1/8" = 1'-0"
START DATE:	DRAWN BY:	
07/15/14	GB	
FORMAT:	CHECKED BY:	
34"x22"	PB	
SHEET NUMBER:		

A1.2



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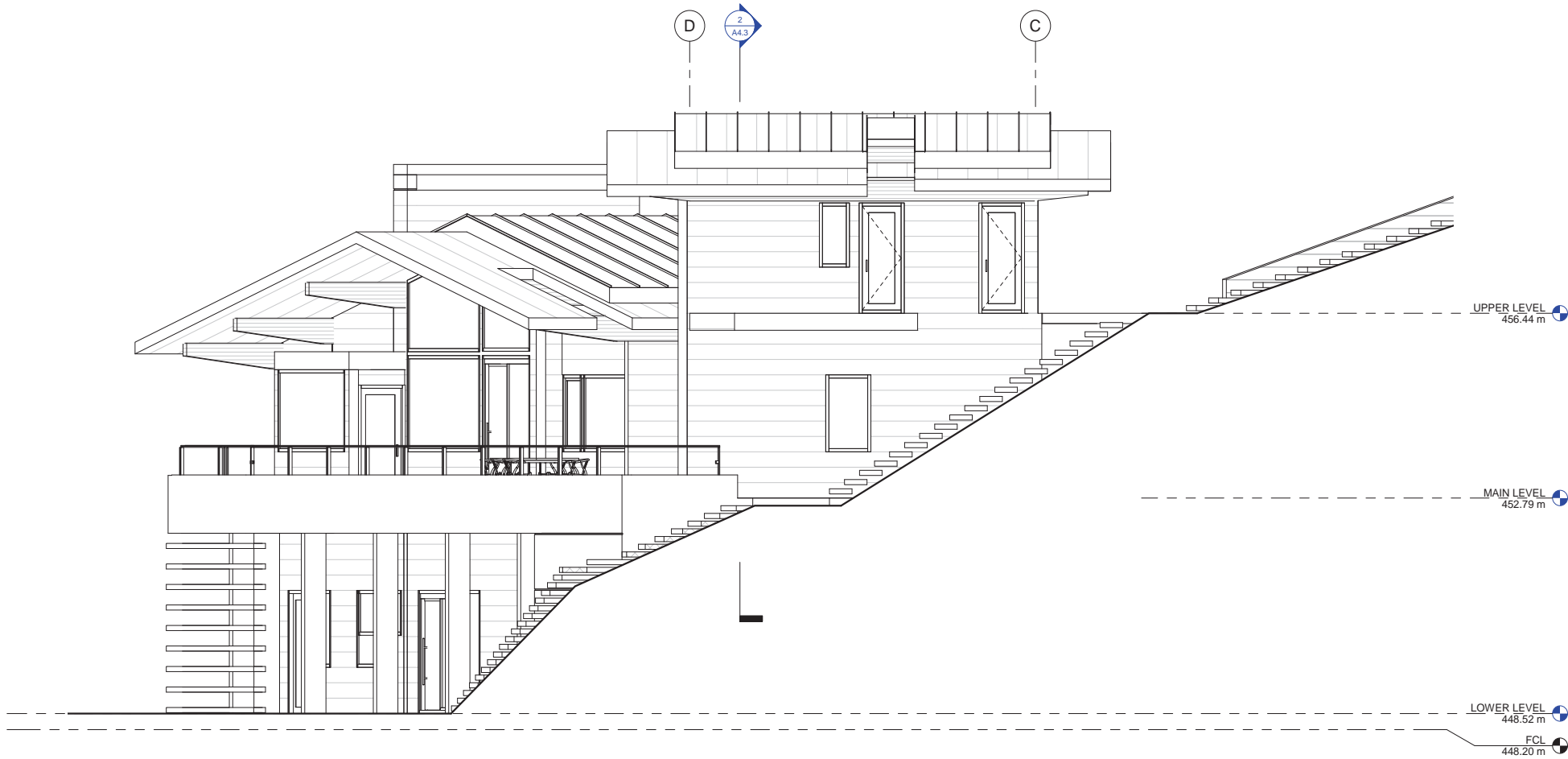
**NORTH**  
ARCHITECTURE  
**studio**

North Architecture Studio Inc.  
9508 Emerald Drive  
Whistler, BC V8N 1B9  
Tel: 604.842.3350

CONSULTANT: DRAWING

NO	DATE	DESCRIPTION
NORTH POINT:		STAMP:
PROJECT:		
KALESNIKOFF CABIN 3273 EAST LAKE DR. CHRISTINA LAKE, BC		
DRAWING:		
ELEVATIONS		
PROJECT NO:	SCALE:	
T00000	1/4" = 1'-0"	
START DATE:	DRAWN BY:	
10/27/19	GB	
FORMAT:	CHECKED BY:	
34"x22"	PB	
SHEET NUMBER:		

A2.5



1 SOUTH BUILDING ELEVATION  
A2.6/ SCALE - 1/4" = 1'-0"

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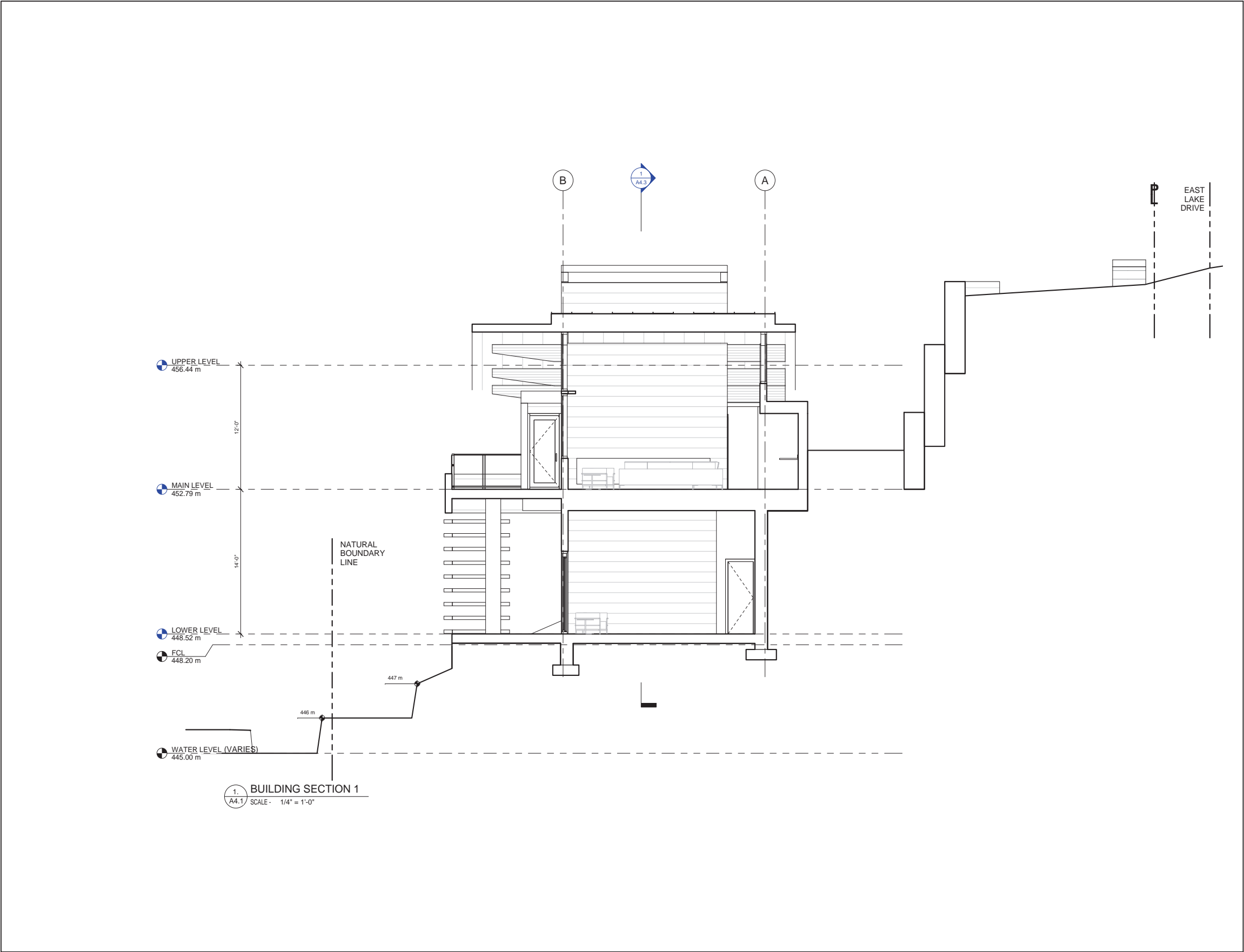
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NORTH POINT:		STAMP:

PROJECT:  
KALESNIKOFF CABIN  
3273 EAST LAKE DR.  
CHRISTINA LAKE, BC

DRAWING:  
ELEVATIONS

PROJECT NO: T00000	SCALE: 1/4" = 1'-0"
START DATE: 12/01/19	DRAWN BY: GB
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A2.6



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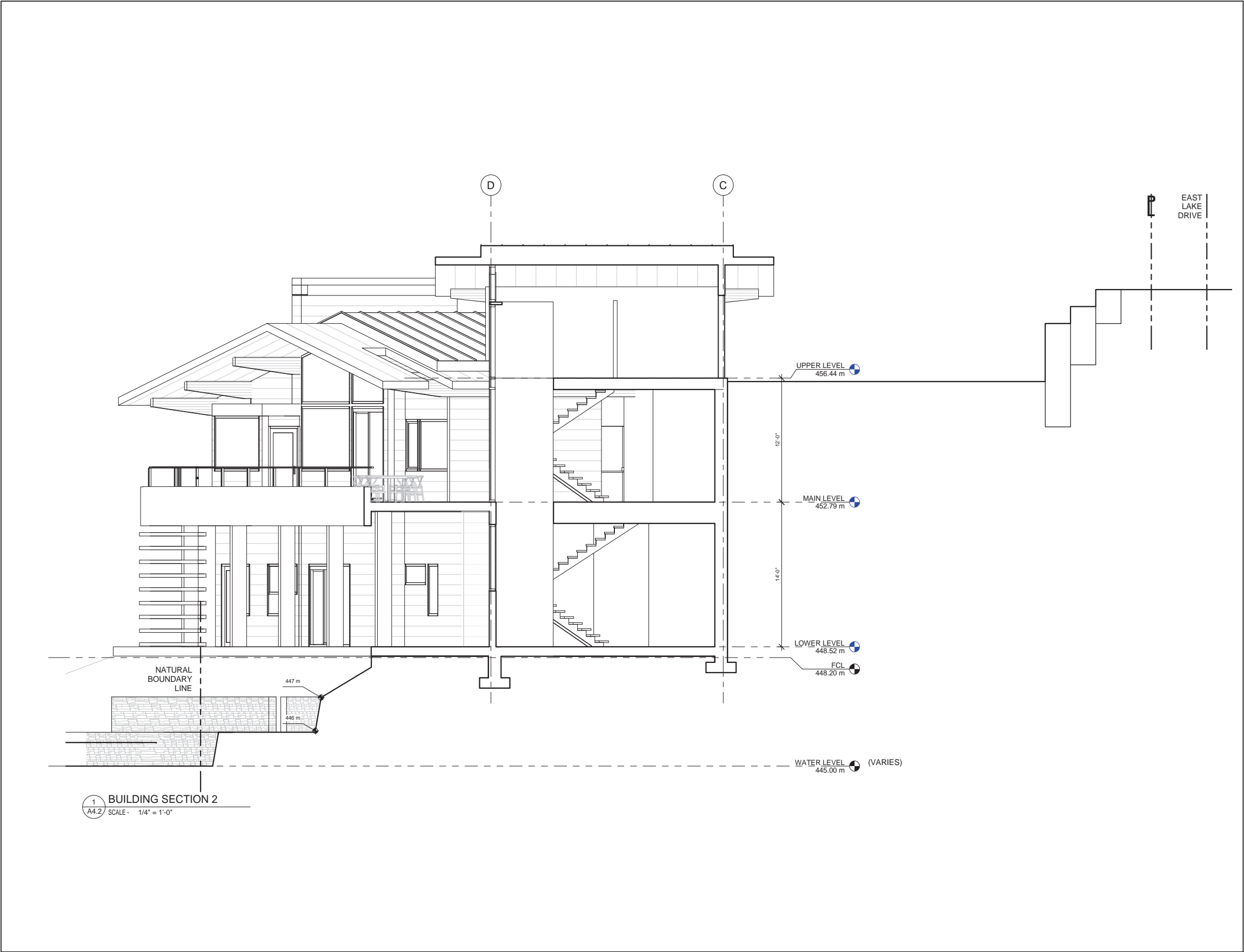
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NORTH POINT:		STAMP:

PROJECT:  
KALESNIKOFF CABIN  
3273 EAST LAKE DR.  
CHRISTINA LAKE, BC

DRAWING:  
BUILDING SECTIONS

PROJECT NO: T00000	SCALE: 1/4" = 1'-0"
START DATE: 07/15/14	DRAWN BY: GB
FORMAT: 34"x22"	CHECKED BY: PB
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A4.1



1 BUILDING SECTION 2  
A4.2 SCALE: 1/4" = 1'-0"

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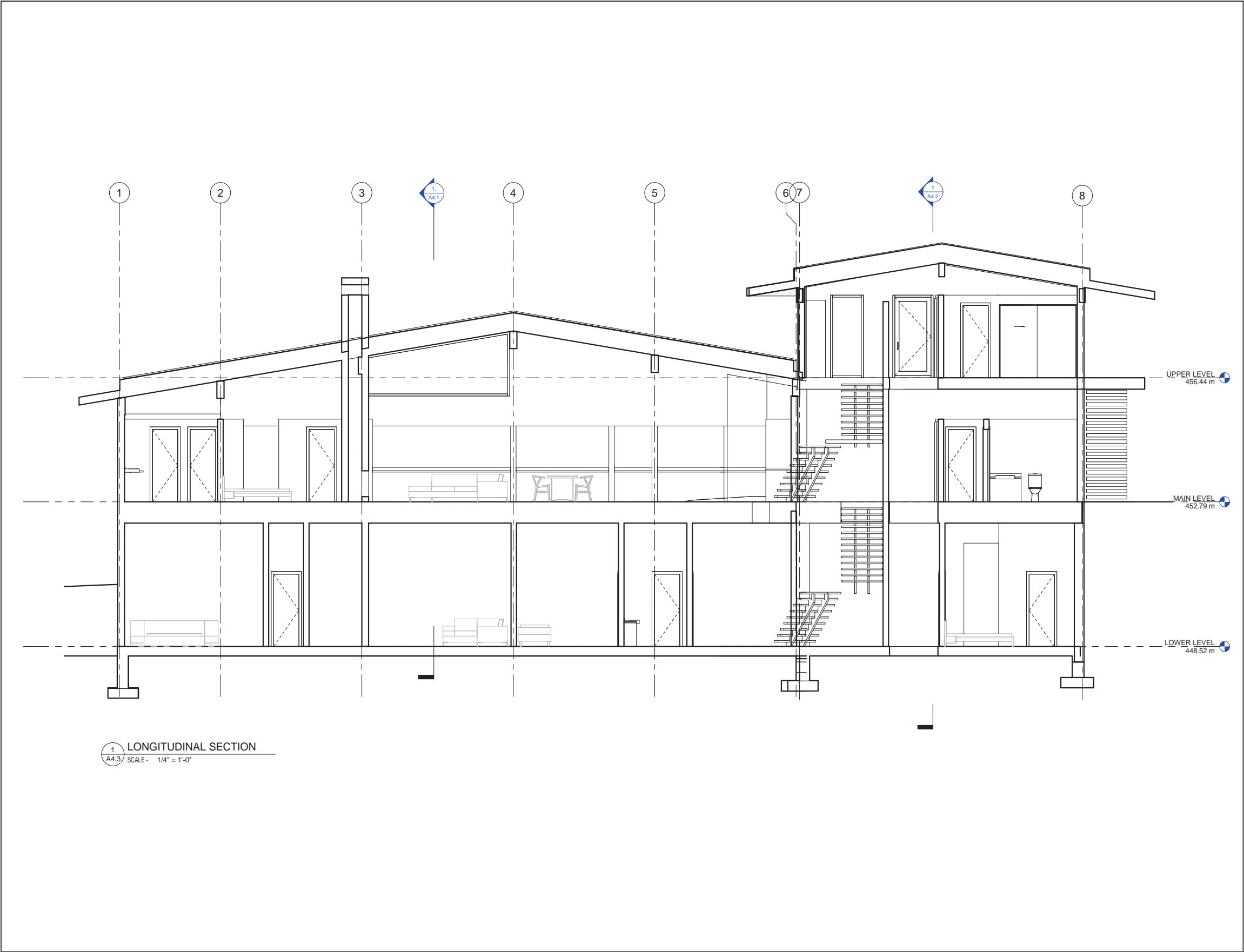
NO	DATE	DESCRIPTION
NORTH POINT:		STAMP:

PROJECT:  
KALESNIKOFF CABIN  
3273 EAST LAKE DR.  
CHRISTINA LAKE, BC

DRAWING:  
BUILDING SECTION

PROJECT NO: T00000	SCALE: 1/4" = 1'-0"
START DATE: 11/09/19	DRAWN BY: GB
FORMAT: 34"x22"	CHECKED BY: PB
SHEET NUMBER:	

A4.2



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9508 Emerald Drive  
Whistler, BC V0N 1B9  
Tel: 604.842.3350

CONSULTANT: DRAWING

NO	DATE	DESCRIPTION
NORTH POINT:		STAMP:
PROJECT:		
KALESNIKOFF CABIN 3273 EAST LAKE DR. CHRISTINA LAKE, BC		
DRAWING:		
BUILDING SECTION		
PROJECT NO:	SCALE:	
T00000	1/4" = 1'-0"	
START DATE:	DRAWN BY:	
11/09/19	GB	
FORMAT:	CHECKED BY:	
34"x22"	PB	
SHEET NUMBER:		

A4.3



## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Site-specific exemption to the Floodplain Bylaw – Kalesnikoff		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	C-3063s-07052.000
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received an application for a site-specific exemption to the Floodplain Bylaw (floodplain exemption) from Peter Buchanan of North Architecture Studio Inc., on behalf of Elaine and Ken Kalesnikoff for the construction of a single family dwelling in Electoral Area C/Christina Lake (see attachments).

Property Information	
<b>Owner(s):</b>	Elaine and Ken Kalesnikoff
<b>Agent:</b>	Peter Buchanan (North Architecture Studio Inc.)
<b>Location:</b>	3273 East Lake Drive
<b>Electoral Area:</b>	Electoral Area C/Christina Lake
<b>Legal Description(s):</b>	Lot 25, DL 3063s, SDYD, Plan KAP1919
<b>Area:</b>	0.33ha (0.81acr)
<b>Current Use(s):</b>	Single family dwelling
Land Use Bylaws	
<b>OCP Bylaw 1250:</b>	Waterfront Residential
<b>DP Area:</b>	Waterfront Environmentally Sensitive
<b>Zoning Bylaw 1300:</b>	Waterfront Residential 2
Other	
<b>ALR:</b>	N/A
<b>Waterfront / Floodplain:</b>	Partial
<b>Service Area:</b>	NA

### History / Background Information

The subject property is located along East Lake Drive in Electoral Area C/Christina Lake. It is a hooked parcel with approximately 0.08ha (0.19acr) on the west side of the road and the remaining 0.25ha (0.62acr) on the east side. It has a "Waterfront Residential" Official Community Plan (OCP) land use designation and is zoned "Waterfront Residential 2". Christina Lake abuts the western boundary of the property. As such, it is

within the floodplain as well as the Environmentally Sensitive Waterfront Development Permit Area.

### **Proposal**

The applicant is proposing to demolish the existing cabin and construct a new cabin and deck on the same building footprint. They are requesting to reduce the required floodplain setback from the natural boundary of Christina Lake from 7.5m to 4.2m for the construction of a new single family dwelling and deck. The number above differs from the variance they are also requesting (from 7.5m to 3.0m), as this application refers to the distance to the structural supports for the deck rather than the edge of the cantilevered structure.

More information on the design of the proposed development as well as the related geotechnical considerations has been submitted by the applicant (see attachments).

The applicant has also submitted applications for a development variance permit and development permit for the proposed development, which are presented in separate reports.

### **Implications**

The existing cabin is located 4.2m from the natural boundary of Christina Lake. The requested floodplain exemption is for 4.2m to preserve the existing building footprint. It should be noted that presently the portion of the structure located 4.2m from the natural boundary is used for dwelling purposes. The proposal would pull all dwelling space back an additional 2.3m (see attachments), siting habitable portions of the structure no closer than 6.5m from the natural boundary.

The structural supports for the deck would be situated 4.2m from the natural boundary. The floodplain setback requirements apply to the deck's supports as they would be functionally connected to the dwelling.

#### Provincial Flood Hazard Guidelines

The Provincial "Flood Hazard Area Land Use Management Guidelines" provide direction for local governments contemplating modifications to floodplain bylaws implemented under Section 524 of the *Local Government Act*. The guidelines state that a "local government may alter any bylaw condition to best match the flood hazard provided the level of protection is not altered." The geotechnical report submitted with the application notes that the level of protection currently on the property is suitable for the intended use and structures will be safe from flood hazards.

The Guidelines advise that floodplain bylaw modifications may be permissible where a serious hardship exists and no other reasonable option is available. They state that:

"a valid hardship should only be recognized where the physical characteristics of the lot (e.g., exposed bedrock, steep slope, the presence of a watercourse, etc.) and size of the lot are such that building development proposals,

consistent with land use zoning bylaws, cannot occur unless the requirements are reduced."

#### Applicant Rationale

The presence of Christina Lake, exposed bedrock on the southern portion of the property and steep slopes adjacent to, and on the other side of, East Lake Drive are all elements that restrict the building platform on the property. The building platform area under the existing setbacks is approximately 9m deep by 32m wide. The applicant has noted that the topography on the property requires the building to be pushed back beyond the required 4.5m front yard setback to ensure safe access and egress onto the property. Additionally, the presence of bedrock along the southern portion of the property was noted as a significant barrier to an elongated building design.

The geotechnical report also recommends the registration of a legal covenant on the property's land title. The covenant will ensure future restriction of development within the floodplain and indemnify the Regional District from any damages suffered as a result of flooding.

#### **Advisory Planning Commission (APC)**

The Electoral Area C/Christina Lake APC considered the application at their April 7, 2020 meeting. No discussion points were provided in the meeting minutes. The APC provided a recommendation of support for the application.

#### **Recommendation**

That the application for a Site-Specific Exemption to the Floodplain Bylaw submitted by Peter Buchanan of North Architecture Studio Inc., on behalf of Ken and Elaine Kalesnikoff, in order to construct a new single family dwelling and deck within the required floodplain setback on the parcel legally described as Lot 25, DL 3063s, SDYD, Plan KAP1919 be presented to the Regional District of Kootenay Boundary Board of Directors for consideration with a recommendation of approval, subject to: adherence to all the recommendations included in the Flood Hazard Assessment report submitted by Deverney Engineering Services Ltd., dated March 5, 2020 and the owner registering a new standard floodplain covenant on title in favour of the Regional District of Kootenay Boundary.

#### **Attachments**

Site Location Map

Subject Property Map

Floodplain Hazard Assessment, prepared by Deverney Engineering Services Ltd., dated March 5, 2020



Regional District of  
Kootenay Boundary

Date: 2020-03-24

# Site Location Map

Lot 25,  
Plan KAP1919, DL 3063S,  
SDYD



0 50 100 150 200  
Meters

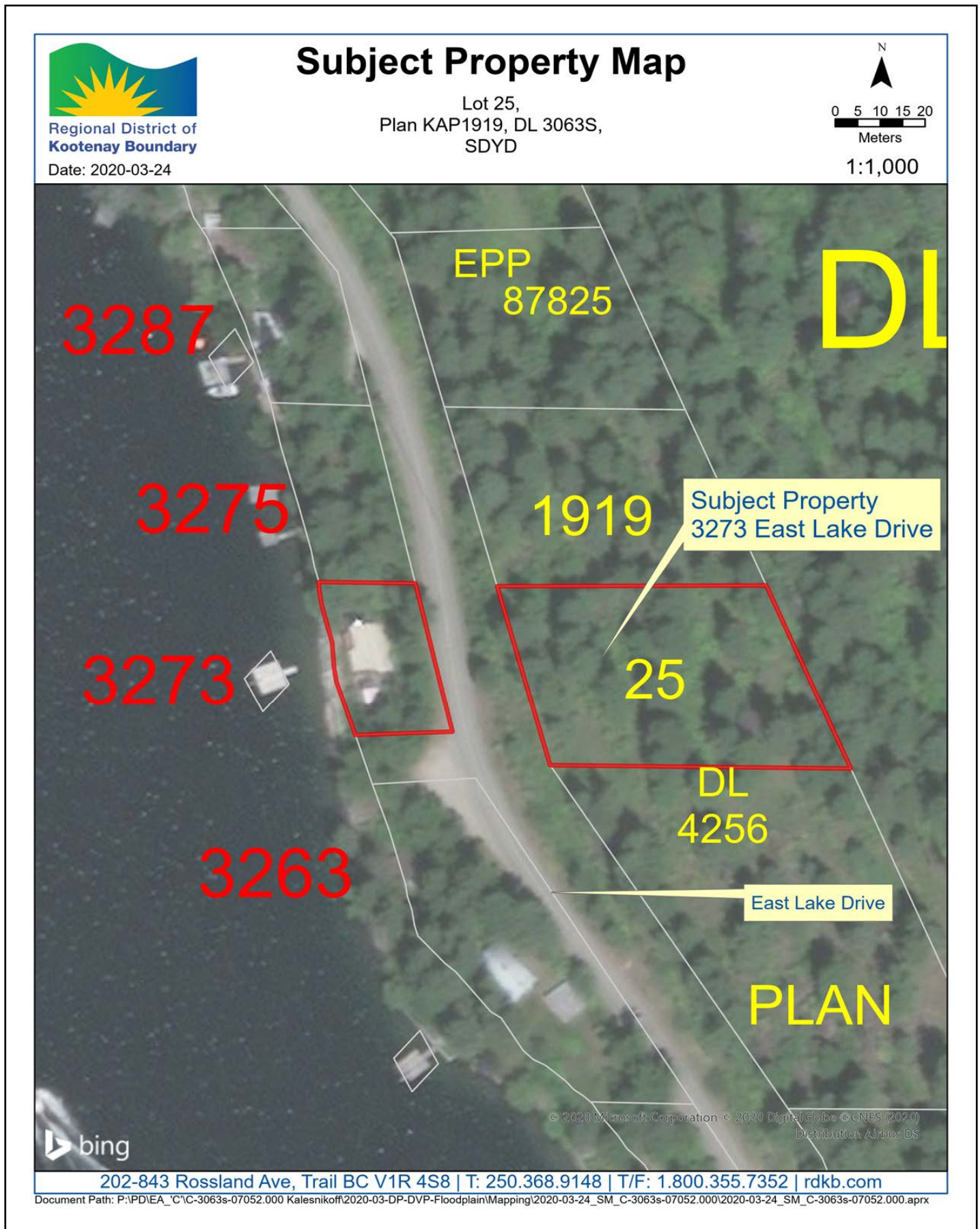
1:9,000

Subject Property  
3273 East Lake Drive



202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com

Document Path: P:\PD\EA\_C\3063s-07052.000 Kalesnikoff\2020-03-DP-DVP-FloodplainMapping\2020-03-24\_SM\_C-3063s-07052.000\2020-03-24\_SM\_C-3063s-07052.000.aprx





Ms. Elaine Kalesnikoff and Mr. Ken Kalesnikoff  
 c/o North Architecture Studio Inc.  
 9508 Emerald Drive  
 Whistler, BC, V0N 1B9

Date: March 5, 2020  
 File: DE15-1441

Cc: Mr. Peter Buchanan, Architect AIBC ,MRAIC, North Architecture Studio Inc.

Re: Site Specific Exemption from Floodplain Bylaw, Kalesnikoff Cabin  
3273 East Lake Drive, Christina Lake, BC

Dear Sir and Madam,

This letter-report presents a summary of findings of an assessment of the site of a proposed residential structure – Kalesnikoff Cabin at 3273 East Lake Drive, Christina Lake, BC.

Authorization to proceed with the work was received from Mr. Peter Buchanan of North Architecture Studio Inc. on behalf of the property owners.

The attached Site Plan map shows the subject property and the proposed residential development in relation to property boundaries, including the Natural Boundary. The Site Plan also shows East Lake Drive.

## **1.0 BYLAWS AND REGULATION**

### **RDKB Bylaw No. 677.**

This report is prepared in accordance with requirements of **Section 7** of the Regional District of Kootenay Boundary Bylaw No. 677; a Bylaw to designate certain lands within the Regional District of Kootenay Boundary as floodplain and to set flood levels and floodplain setbacks pursuant to Section 910 of the Local Government Act.

### **7. Site-Specific Exemptions**

***“Applications by property owners to the Regional District of Kootenay Boundary for site- specific exemptions pursuant to Section 910(5) of the Local Government Act shall be in writing and be submitted to the office of the Regional District on the appropriate form, which is provided for that purpose by the Regional District.”***

---

Mailing address: 4711 Robertson Road, Nelson, BC, V1L 6N4  
 Telephone: 250-551-0181  
 Email: [deverney.engineering@shawcable.com](mailto:deverney.engineering@shawcable.com)

### **Local Government Act (Section 524) – Flood Plain Bylaw Exemption**

Requirements for a Site-Specific Exemption are described in the Local Government Act (Section 524) – Flood Plain Bylaw Exemption as follows:

*With reference to subsection (7) Subject to the Provincial regulations and a plan or program as local government has developed under those regulations, the local government may exempt a person from the application of subsection (6), or a bylaw under subsection (3), in relation to a specific parcel of land or a use, building, or other structure on the parcel of land, if the government considers it advisable and either*

- (a) considers that the exemption is consistent with the Provincial guidelines, or*
- (b) has received a report that the land may be safely used for the use intended, which report is certified by a person who is*
  - (i) a professional engineer or geoscientist and experienced in geotechnical engineering, or*
  - (ii) a person in a class prescribed by the environment minister under subsection (9)*

Such a report may recommend requirements for measures, that may include, but is not limited to items such as erosion / scour protection, special foundation design to address reduced soil bearing capacity under flooding conditions, and limits to use of portions of the building for electrical and mechanical installations.

Under the Local Government Act, a covenant may be placed on the property title that limits the Owner's eligibility for Provincial Floodplain relief.

### **Professional Practice Guidelines**

Reference has been made to Engineers and Geoscientists BC, Professional Practice Guidelines for Legislated Flood Assessments in a Changing Climate in BC, V 2.1 – August 28, 2018.

### **2.0 LIMITATIONS OF REPORT**

Deverney Engineering Services Ltd. (DESL) has prepared this report for and at the expense of the property owners. The material in it reflects the judgement of DESL in light of the information available to DESL at the time of report preparation.

Findings and recommendations presented in this report are intended to support application for a Site Specific Exemption from the Floodplain Bylaw and can be used by the Owner and the Development Approval agencies to adjudicate the proposed development.

Any use that other third parties make of this report, or any reliance on decisions to be based on it is the responsibility of such third parties. DESL accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

### 3.0 CONFIDENTIALITY AND DISCLOSURE

With reference to Professional Practice Guidelines for Legislated Flood Assessments in a Changing Climate in BC (V 2.1 – August 28, 2018):

***“Subject to the following, the Qualified Professional (QP) will keep confidential all information, including documents, correspondence, reports and opinions, unless disclosure is authorized in writing by the client. However, in keeping with Engineers and Geoscientists BC’s Code of Ethics, if the QP discovers or determines that there is a material risk to the environment or the safety, health, and welfare of the public or worker safety, the QP shall notify the client as soon as practicable of this information and the need that it be disclosed to the appropriate parties. If the client does not take the necessary steps to notify the appropriate parties in a reasonable amount of time, the QP shall have the right to disclose that information to fulfill his/her ethical duties, and the client hereby agrees to that disclosure.”***

### 4.0 SITE INVESTIGATION

An initial site field investigation was conducted by the writer on April 4, 2016. Subsequent to that, further field reviews were undertaken periodically, most recently in June 2019 in conjunction with construction field reviews conducted at neighbouring properties.

The investigations included reconnaissance assessment of the prospective building site on the subject property as well as nearby areas including lake shoreline conditions. No sub-surface investigation of the subject property was conducted.

Reference was made to observations of surficial soils at this property, to soils and building site investigations on nearby properties conducted by the writer, regional soils reports, aerial images, and topographic maps. A list of references follows the signature page.

### 5.0 SITE DESCRIPTION

The subject property is situated on a steeply sloping west-facing property on the shore of Christina Lake. The subject property is bounded on the east side by East Lake Drive and on the north and south by residential properties.

The owners are proposing to construct a new residential structure on the subject property replacing the existing dwelling.

The Exemption request is to reduce the Setback Distance (from the Natural Boundary) to 4.2 metres, being the closest distance measured from the Natural Boundary to the proposed building column footprint as indicated on the Site Plan Map.

The Exemption is proposed to resolve hardship of construction due to the small available footprint and to assure that foundation construction can be undertaken with consideration of cut slope stability between the building footings and East Lake Drive.

Discussion of excavation cut slope stability considerations is presented in Section 8.0.

Accessibility of the completed building is also a key consideration in the design and layout of the building to address the substantial elevation difference between East Lake Drive and the lowest level of the building. Discussion of accessibility constraints will be by Others.

The owners propose to otherwise conform to the elevation requirements of the Floodplain Bylaw with respect to subsection 6 (a):

***(i) the underside of any floor system, or the top of any pad supporting any space or room, including a manufactured home, that is used for dwelling purposes, business or the storage of goods which are susceptible to damage by floodwater shall be above the specified level***

The Designated Flood Construction Level for Christina Lake is the projected 200 - Year Return Period flood water level of **448.2m** (GSC Datum).

A 1:200 year flood level (including freeboard) of 448.2m was adopted in September 1991, and retained on the basis of the 1990 Mapping Study (see references "**A Design Brief on the Floodplain Mapping Study, Christina Lake**").

The FCL at 448.2m that includes a Freeboard Allowance of 0.6m, corresponding to an inferred static water level of 447.6 metres plus a combined wind setup of 0.1m plus maximum wave height of 0.5m.

## **6.0 SHORELINE CONDITIONS AND STRUCTURES**

### **6.1 Lake Characteristics**

The drainage area of Christina Lake is 492 km<sup>2</sup> with major tributaries including Sutherland Creek, McRae Creek, Texas Creek and Sandner Creek.

Maximum lake water levels occur in the period from April to June; associated with snowmelt conditions.

Annual peak lake levels over the period of record from 1948 to 1979 ranged from a high of 446.8 (1948) to 445.71m (1977).

The maximum-recorded daily lake level of 446.8m (GSC Datum) used for the Floodplain Mapping study occurred on May 29, 1948.

The flood event of 2018 appears to have exceeded the 1948 maximum-recorded daily water level. Post - event elevation surveys commissioned by the Regional District of Kootenay –

Boundary for Christina Lake reported flood lines derived from debris markers at elevation 447.18m.

## 6.2 Wave Action

In the 1990 Floodplain Mapping Study, the freeboard allowance of 0.6m was confirmed as being appropriate to consider wind setup (estimated to be in the order of less than 0.1m) and wave height of approximately 0.5m based on a sustained wind speed of 50 km / hr. Note that the conventional definition of wave height is the vertical distance between the trough of a wave and the following crest.

Predominant wave direction in Christina Lake is inferred to be in the north / south direction, following the general alignment of the valley. The estimated wind setup of less than 0.1 metre described in the 1990 Floodplain Mapping Study would likely be based on a total fetch distance of approximately 18.5 km.

The maximum fetch distance at the subject property is approximately 3.5 km (to the northwest) at a direction skewed from the predominant wave direction. This property is partially sheltered from the main lake shoreline by the Texas Creek alluvial fan.

Accordingly, the generalized lake-wide maximum wave setup and wave height estimates are conservative when applied to the subject property, i.e. they tend to over estimate the projected wind and wave impacts.

## 6.3 Waves Generated By Recreational Boating Activity

A frequently heard complaint from shoreline property owners in this area of Christina Lake is the generation of waves by recreational boaters. Wave erosion of shorelines, particularly at periods of peak lake water levels is a common concern.

In a study conducted in 2015 (Ruprecht et al. <sup>1</sup>), maximum wave height generated by a 24' boat with a deep-V hull, expressly for generating waves for recreational wake boarding or wake surfing was measured at 16.2" (0.41m) with the boat operating at a distance of 76' (23 metres) from the shore.

---

<sup>1</sup> **Wakesurfing: Some Wakes are More Equal than Others**, Australasian Coasts & Ports Conference, Ruprecht, J.E., Glamore, W.C., Coghlan, I.R. & Flocard, F. 2015

Those findings were cited in a report by the Oregon State Marine Board (Table 4) in a Staff report dated January 10, 2018 with regard to safety around wake sports.

With reference to the Floodplain Mapping Study, the waves generated by recreational boating approach, but do not exceed the height of waves generated by wind (estimated at 0.5 metres).

Accordingly, no increase to the freeboard allowance applied to the Flood Construction Level is warranted on the basis of recreational boat activity.

#### **6.4 Stratigraphy**

Surficial soils at the subject property between East Lake Drive and the lake shore are partially obscured by the presence of the existing building and by improvements such as terraces, walkways, and shoreline erosion protection revetments.

Exposed soils at the elevation of East Lake Drive and at cut slope exposures east (up-slope) of that road comprise veneers of well-drained silty sand and gravel with scattered cobble and small boulder sizes. Typical soil depths are estimated to be in the order of 1 – 3 metres or more overlying bedrock.

#### **6.5 Shoreline Conditions and Structures**

Closer to lake level, some sections of un-disturbed shoreline are rocky, either intact bedrock, or fractured bedrock overlain by irregular deposits of coarse angular rubble.

Natural vegetation, where present consists of shrubs and mixed deciduous and coniferous trees. Presence of horsetails at some locations indicates persistent seepage emerging at the interface between the overburden soils and the bedrock surface.

Shoreline areas lakeward of the existing house at the subject property comprise a stepped series of stacked and fitted rock revetments as shown on attached Photos 1 and 2.

The lowest rock structure is approximately 1.0 m (40") height. Crest elevation is 446.0 m. Visible backfill materials behind this structure comprise gravel and cobble sizes with some sand that slopes very gently upward to the front face of the second wall. This structure is interrupted in the central part of the property by a set of fitted stone steps that provide access to shoreline areas below.

The second rock structure is approximately 2 to 2.5m landward of the lowest one, comprising fitted and stacked rock with a gravel / cobble backfill. This structure is also approximately 1.0m high, having a top elevation of approximately 447.0 m.

The upper structure rises to a height above the FCL (448.2m), comprising a sloped area above the second structure and steeper segments of approximately 0.5 – 0.7m height.

The revetments are robustly constructed of erosion resistant materials. The revetments are intact, and show no indications of deterioration or distress over the period between 2016 and autumn of 2019. That period encompasses four freshet – associated high water periods, including the very high lake water levels that occurred in June 2018.

## **6.6 Proposed Building Elevations**

Proposed building elevations will have under-side of floor slab slightly above the Flood Construction Level (FCL) of 448.2m as shown on Figures 1 and 2. As such, floor elevations as shown will be in conformance with the requirements of the Flood Construction Level (FCL).

## **6.7 Footings**

Footings at the lake-ward face of the building will be set at or near elevation 447.25m. These footings will be approximately 0.9m below the under-side of the patio slab for frost protection.

The rear (landward) footings will be set at elevation 447.7m. The lesser depth considers that there is no requirement for additional depth for frost protection at this part of the building. The higher base elevation reduces the excavation depth required for construction in close proximity to the slope toward East Lake Drive.

All footings will be near or below the 200-year return period static water level in Christina Lake, and therefore, the geotechnical component of footing design will require consideration of the associated reduced soil bearing resistance under high water table conditions.

Footing dimensions shown are for illustration only, and may require design modification prior to construction to consider applied loads and the available soil bearing resistance.

## **7.0 EROSION HAZARDS**

### **7.1 Beaches**

The native beach materials across the subject property are mixed gravel sand and cobble sizes.

Existing shoreline soils exposed at the lakeward side of the subject property and adjacent properties to the north and south are potentially subject to erosion from storm waves and from waves generated from passing watercraft during periods of high lake water levels.

The existing beach at the subject property comprises a disturbed / modified shoreline lake-ward of the lowest revetment that appears relatively stable. Seasonal changes in sand surface levels in the range of a few centimetres may occur as beach materials are eroded and recycled with variations in lake water levels. Associated erosion impacts would be limited to loss of surface fines (small gravel, sand, and silt sizes), resulting in the exposure of underlying coarser materials (gravel and cobble sizes) to form a coarse pavement.

There are visible disturbances of exposed soils on slope faces at un-developed sites north and south of the property limits. Localized sloughing has occurred where waves have removed surface soils causing collapse of overlying materials from above. Disturbance sites are relatively small, typically less than one square metre area. These localized disturbances are unlikely to affect the subject property.

## **7.2 Erosion Protection - Revetments**

Because of the extent of the existing revetments at the lakeward side of the subject property, there are no indications of active shoreline regression. The rock materials at the lake-ward side of the subject property provide effective protection against wave erosion during periods of moderate to high lake water levels. Effective performance against wave erosion, including during periods of high lake water levels (2018) has been demonstrated and observed by the writer over the period from 2016 to 2019.

In consideration of the wave and erosion protection they afford and because of the retaining function that supports near grade - level walk in / walk out access to the lowest level of the proposed building, it is anticipated that the revetments will be maintained and kept in good condition commensurate with the residents' access requirements and consistent with the high property values at this site.

## **7.3 Native Soils Above Revetments**

It is expected that revetments and / or paved and armoured surfaces will be established and retained at all sites lake-ward of the house below the FCL.

Building support column foundations on the lakeward side of the building are well protected against shoreline regression.

Lateral to the building, damaging effects of waves may be detrimental to landscape features, plantings, and improvements that are not part of the residential structure.

## **7.4 Flood Hazards**

Flooding hazards associated with high lake water levels will be effectively addressed by building construction elevations in conformation with the designated Flood Construction Level (FCL) that provides protection against flooding up to the 200 year return period.

## **7.5 Climate Change Considerations**

Effects of climate change on erosion hazards are associated with possible occurrence of high lake water levels at a higher frequency compared to the probability model employed during the floodplain mapping.

This can happen as an increased frequency of occurrence of water levels at the magnitude of the 200-year return period, and / or possible occurrence of water levels that exceed the 200-year return period. Higher frequency of event occurrence may be expressed as increased requirements for remedial repairs or maintenance.

Increased event magnitude, i.e. flood levels that exceed the estimated 200-year return period elevations are addressed in part by the 0.6m freeboard allowance. Effects of higher magnitude events may be expressed as increased requirements for remedial repairs or maintenance.

In both instances, the revetments will be effective to protect the building footings against scour. Concrete floor slabs at the base elevation will be resistant to structural damage from high water levels.

Damaging effects of high water levels may be detrimental to finishings and surface materials that are not part of the residence's structure.

## **8.0 EXCAVATION CUT SLOPE STABILITY - CONSTRUCTION CONSIDERATIONS**

The proposed building siting and general arrangement on the subject property as presented has been developed with careful consideration of geotechnical requirements for a stable and safe excavation slope for worker safety under Section 20 of the WorkSafeBC OH&S Regulation, and also for assurance of a stable excavation slope in close proximity to East Lake Drive.

### **8.1 Excavation Safety for Workers**

It is inferred from the observed soil material types present that an excavation slope no steeper than 1H : 1V (100% gradient) will likely provide a suitably stable excavation cut slope over the period of several months between the start of excavation until foundation walls have achieved sufficient strength to allow partial backfill.

The inferred stable slope configuration is somewhat optimistic and is not based on any form of detailed site sub-surface investigation. The assumptions applied include absence of seepage discharge from the excavation face, and planned late summer onset of construction, with partial backfill before the end of October.

To illustrate the safe excavation requirements, prospective cut slopes at 1H : 1V have been drawn on Figures 1 and 2. As indicated, total excavation slope height will be approximately 10.8 to 11.3m (35 to 37') between the base level footings and the surface of East Lake Drive.

### **8.2 Slope Stability at East Lake Drive**

As shown on Figures 1 and 2, the 1H : 1V excavation slope will intersect East Lake Drive approximately 1 to 1.5 metres lakeward of the edge of asphalt. This slope configuration assures conformance with the generalized 1H : 1V line of influence for traffic wheel loads possibly affecting the excavation slope and the building structure.

## 9.0 CONCLUSIONS

Whereas one objective of the floodplain setback is to reduce the potential for erosion of soil under structural footings events up to a 1 in 200 year flood event, the existing shoreline revetment at the lakeward side of the property will be effective to protect building foundations against erosion.

There is no expectation of landward regression of the lake shoreline under lake water level conditions up to and including the 200-year return period maximum lake level.

Building foundations constructed at depth below grade to meet the recommended frost protection requirements will establish those footings below the Flood Construction Level. Accordingly, there is no expectation of scour due to wave erosion that will expose, degrade, or otherwise damage building foundations under lake water level conditions up to and including the 200 - year return period maximum lake level.

Where the 200 - year return period is generally accepted as a tolerable level of risk, then the proposed site-specific exemption is consistent with that accepted risk level.

Reduction of the setback distance as proposed for this Site Specific Exemption will not increase the likelihood of damage due to flooding in Christina Lake above the specified 200 – year return period frequency of occurrence.

Further, full conformance with the setback requirement of the Floodplain Bylaw at 7.5m would not allow for construction as proposed with grade level or near grade – level beach access due to consideration for safe construction excavations between the building and East Lake Drive.

## 10.0 RECOMMENDATIONS – EXEMPTION APPROVAL

It is recommended that consideration be given to approval of the requested Exemption from the Floodplain Bylaw for proposed building construction on the subject property as follows:

### 10.1 Floodplain Setback

The proposed relaxed setback distance is ***no closer than 4.2 m*** from the Natural Boundary, and otherwise as shown on the Site Plan.

### 10.2 Restrictive Covenant

The revetments at the lakeward side of the subject property provide effective and sufficient protection of proposed building foundations against damaging effects of high water levels and waves in Christina Lake. Degradation, damage, or removal of the revetments may expose the building to damage at lake water levels at or below the 200-year return period.

Therefore, it is recommended that a Covenant be registered on the subject property that will ensure that the rock revetments or a replacement structure be present and maintained to provide a similar level of protection as the existing structures.

## **11.0 RECOMMENDATIONS – SITE WORKS AND CONSTRUCTION**

### **11.1 Erosion Protection**

There are no recommendations for additional (new) erosion protection measures.

Existing erosion protection elements that are displaced or removed for building construction are to be replaced or re-constructed to provide a similar or greater level of erosion protection.

### **11.2 Building Design and Construction**

The soil bearing resistance of building foundations will be adversely affected by high groundwater levels during seasonal high lake water levels. It is recommended that building foundation design include consideration of high groundwater table conditions and associated reduction of soil bearing resistance.

Such considerations may include wider than normal footings to reduce bearing pressures and coincidentally to increase soil bearing resistance, and / or to specify footings at some depth below the floor slab base or finished ground level to increase confining soil pressure on all sides of the footings.

In conformance with the Floodplain Bylaw, it is recommended that building design consider measures to mitigate possible damage to buildings and contents, including electrical and mechanical installations during periods of high lake water levels up to and including the designated Flood Construction Level of 448.2 m.

### **11.3 Supervision**

The implementation of foundation recommendations, including verification of site native soils, and the excavation, preparation, and construction of building foundation sites are to be conducted under the direction or supervision of a suitably qualified Professional Engineer to meet the intent and requirement of Schedule B under the BC Building Code.

It is recommended that verification of building elevations and foundation locations with respect to Flood Construction Levels and the Relaxed Setback Distance be conducted by a BCLS or other Qualified Registered Professional (QRP).

## 12.0 SAFE FOR INTENDED PURPOSE

Reference is to be made to the attached Statement prepared in conformance with EGBC's **Professional Practice Guidelines for Legislated Flood Assessments in a Changing Climate in BC** for statements regarding suitability of the property, as being **safe for the purpose intended**, under conditions where the Site-Specific Exemption is granted.

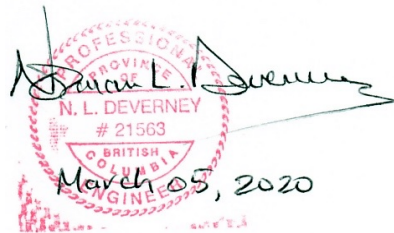
## 13.0 CLOSURE

This report is prepared in accordance with generally accepted engineering practices in this area. No other warranty, express or implied is made.

Variability is inherent in geological features, and actual ground conditions in some parts of the site may differ from those inferred. Subsurface soil conditions have been inferred from the observed exposures. Changes to design details, work procedures and other project considerations may be warranted on the basis of site conditions encountered.

Respectfully submitted

**DEVERNEY ENGINEERING SERVICES LTD.**



Norman L. Deverney, P.Eng., FEC

**Photo 1**                      **View of existing house and rock revetments**



**Photo 2**                      **Oblique View, Looking South Along Shoreline.**  
**Figure is standing on the 2<sup>nd</sup> Stone Structure at Elevation 447 metres**



March 2020  
 File: DE15-1441

13

Site – Specific Exemption from Floodplain Bylaw  
 Kalesnikoff Cabin  
 3273 East Lake Drive, Christina Lake, BC  
 North Architecture Studio Inc.

**DEVERNEY ENGINEERING SERVICES LTD.**

## References

Air Photos      Google Earth Images

**Soil Survey of the Kettle River Valley in the Boundary District of British Columbia**, Report No. 9 of the British Columbia Soil Survey, British Columbia Department of Agriculture and Research Branch, Canada Department of Agriculture, Sprout, P.N. and C.C. Kelley, 1964.

**A Design Brief on the Floodplain Mapping Study, Christina Lake**, R.W. Nichols Senior Hydraulic Engineer, Special Projects Section, Victoria, BC prepared under the Canada – British Columbia Floodplain Mapping Agreement, November 1990.

**Floodplain Mapping, Kettle and Granby Rivers, Design Brief**, prepared under the Canada – British Columbia Floodplain Mapping Agreement, prepared by Acres International Ltd., Design Brief dated December 1991.

**Floodplain Mapping – Christina Lake, Drawing No. 89-1-5, Sheet 5 of 5**, Environment Canada Inland Waters, BC Ministry of Environment, Canada British Columbia Floodplain Mapping Agreement, Map dated September 30, 1991.

Province of BC. **Flood Hazard Area Land Use Management Guidelines, Victoria, BC: Province of BC**, 2004

Naval Facilities Engineering Command, **Soil Mechanics Design Manual**, 7.01, 2005

Canadian Geotechnical Society, **Canadian Foundation Engineering Manual, 4th Edition, 2006.**

Engineers and Geoscientists BC, **Professional Practice Guidelines for Legislated Flood Assessments in a Changing Climate in BC**, V 2.1 – August 28, 2018

Province of BC, **Amendment Section 3.5 and 3.6 – Flood Hazard Area Land Use Management Guidelines**, January 1, 2018)

**Wakesurfing: Some Wakes are More Equal than Others**, Australasian Coasts & Ports Conference, Ruprecht, J.E., Glamore, W.C., Coghlan, I.R. & Flocard, F. 2015.

## FLOOD ASSURANCE STATEMENT

Note: This statement is to be read and completed in conjunction with the current Engineers and Geoscientists BC *Professional Practice Guidelines – Legislated Flood Assessments in a Changing Climate in BC* ("the guidelines") and is to be provided for flood assessments for the purposes of the *Land Title Act*, *Community Charter*, or the *Local Government Act*. Defined terms are capitalized; see the Defined Terms section of the guidelines for definitions.

To: The Approving Authority

Date: March 5, 2020

Regional District of Kootenay Boundary  
843 Rossland Avenue, Trail, BC, V1R 4S8  
 Jurisdiction and address

With reference to (CHECK ONE):

- ☐ Land Title Act (Section 86) – Subdivision Approval
- ☐ Local Government Act (Part 14, Division 7) – Development Permit
- ☐ Community Charter (Section 56) – Building Permit
- ☐ Local Government Act (Section 524) – Flood Plain Bylaw Variance
- ☒ Local Government Act (Section 524) – Flood Plain Bylaw Exemption

For the following property ("the Property"):

**Lot 25, District Lot 3063S, Plan 1919, Similkameen Division, Yale Land District**  
**3273 East Lake Drive, Christina Lake, BC**  
 Legal description and civic address of the Property

The undersigned hereby gives assurance that he/she is a Qualified Professional and is a Professional Engineer or Professional Geoscientist who fulfils the education, training, and experience requirements as outlined in the guidelines.

I have signed, sealed, and dated, and thereby certified, the attached Flood Assessment Report on the Property in accordance with the guidelines. That report and this statement must be read in conjunction with each other. In preparing that Flood Assessment Report I have:

[CHECK TO THE LEFT OF APPLICABLE ITEMS]

- ☐ 1. Consulted with representatives of the following government organizations:
- ☒ 2. Collected and reviewed appropriate background information
- ☒ 3. Reviewed the Proposed Development on the Property
- ☐ 4. Investigated the presence of Covenants on the Property, and reported any relevant information
- ☒ 5. Conducted field work on and, if required, beyond the Property
- ☒ 6. Reported on the results of the field work on and, if required, beyond the Property
- ☒ 7. Considered any changed conditions on and, if required, beyond the Property
- 8. For a Flood Hazard analysis I have:
  - ☒ 8.1 Reviewed and characterized, if appropriate, Flood Hazard that may affect the Property
  - ☒ 8.2 Estimated the Flood Hazard on the Property
  - ☒ 8.3 Considered (if appropriate) the effects of climate change and land use change
  - ☒ 8.4 Relied on a previous Flood Hazard Assessment (FHA) by others
  - ☐ 8.5 Identified any potential hazards that are not addressed by the Flood Assessment Report

**PROFESSIONAL PRACTICE GUIDELINES**  
**LEGISLATED FLOOD ASSESSMENTS IN A CHANGING CLIMATE IN BC – V2.1**

### FLOOD ASSURANCE STATEMENT

9. For a Flood Risk analysis I have:

- ☐ 9.1 Estimated the Flood Risk on the Property
- ☐ 9.2 Identified existing and anticipated future Elements at Risk on and, if required, beyond the Property
- ☐ 9.3 Estimated the Consequences to those Elements at Risk

10. In order to mitigate the estimated Flood Hazard for the Property, the following approach is taken:

- ☒ 10.1 A standard-based approach
- ☐ 10.2 A Risk-based approach
- ☐ 10.3 The approach outlined in the guidelines, Appendix F: Flood Assessment Considerations for Development Approvals
- ☐ 10.4 No mitigation is required because the completed flood assessment determined that the site is not subject to a Flood Hazard

10. Where the Approving Authority has adopted a specific level of Flood Hazard or Flood Risk tolerance, I have:

- ☐ 11.1 Made a finding on the level of Flood Hazard or Flood Risk on the Property
- ☐ 11.2 Compared the level of Flood Hazard or Flood Risk tolerance adopted by the Approving Authority with my findings
- ☐ 11.3 Made recommendations to reduce the Flood Hazard or Flood Risk on the Property

12. Where the Approving Authority has not adopted a level of Flood Hazard or Flood Risk tolerance, I have:

- ☒ 12.1 Described the method of Flood Hazard analysis or Flood Risk analysis used
- ☒ 12.2 Referred to an appropriate and identified provincial or national guideline for level of Flood Hazard or Flood Risk
- ☒ 12.3 Made a finding on the level of Flood Hazard or Flood Risk tolerance on the Property
- ☒ 12.4 Compared the guidelines with the findings of my flood assessment
- ☒ 12.5 Made recommendations to reduce the Flood Hazard or Flood Risk
- ☒ 13. Considered the potential for transfer of Flood Risk and the potential impacts to adjacent properties.
- ☒ 14. Reported on the requirements for implementation of the mitigation recommendations, including the need for subsequent professional certifications and future inspections.

**FLOOD ASSURANCE STATEMENT**

Based on my comparison between:

[CHECK ONE]

- ☐ The findings from the flood assessment and the adopted level of Flood Hazard or Flood Risk tolerance (item 11.2 above)
- ☒ The findings from the flood assessment and the appropriate and identified provincial or national guideline for level of Flood Hazard or Flood Risk tolerance (item 12.4 above)

I hereby give my assurance that, based on the conditions contained in the attached Flood Assessment Report:

[CHECK ONE]

- ☐ For subdivision approval, as required by the *Land Title Act* (Section 86), "that the land may be used safely for the use intended":

[CHECK ONE]

- ☐ With one or more recommended registered Covenants.
- ☐ Without any registered Covenant.

- ☐ For a development permit, as required by the *Local Government Act* (Part 14, Division 7), my Flood Assessment Report will "assist the local government in determining what conditions or requirements it will impose under subsection (2) of this section [Section 491 (4)].

- ☒ For a building permit, as required by the Community Charter (Section 56), "the land may be used safely for the use intended":

[CHECK ONE]

- ☒ With one or more recommended registered Covenants.
- ☐ Without any registered Covenant.

- ☐ For flood plain bylaw variance, as required by the *Flood Hazard Area Land Use Management Guidelines* and the *Amendment Section 3.5 and 3.6* associated with the *Local Government Act* (Section 524), "the development may occur safely".

- ☒ For flood plain bylaw exemption, as required by the *Local Government Act* (Section 524), "the land may be used safely for the use intended".

**FLOOD ASSURANCE STATEMENT**

I certify that I am a Qualified Professional as defined below.

March 5, 2020

*Date*

Prepared by

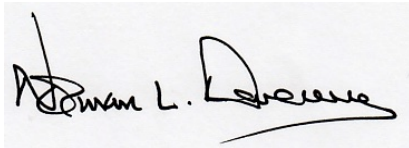
Norman L. Deverney, P.Eng., FEC

*Name (print)*

Reviewed by

Dan Sahlstrom, P.Eng., WSA Engineering (2002) Ltd.

*Name (print)*



*Signature*



*Signature*

Deverney Engineering Services Ltd.

4711 Robertson Road

Nelson, BC, V1L 6N4

*Address*

250-825-4347

*Telephone*

[deverney.engineering@shawcable.com](mailto:deverney.engineering@shawcable.com)

*Email*



(Affix PROFESSIONAL SEAL here)

If the Qualified Professional is a member of a firm, complete the following:

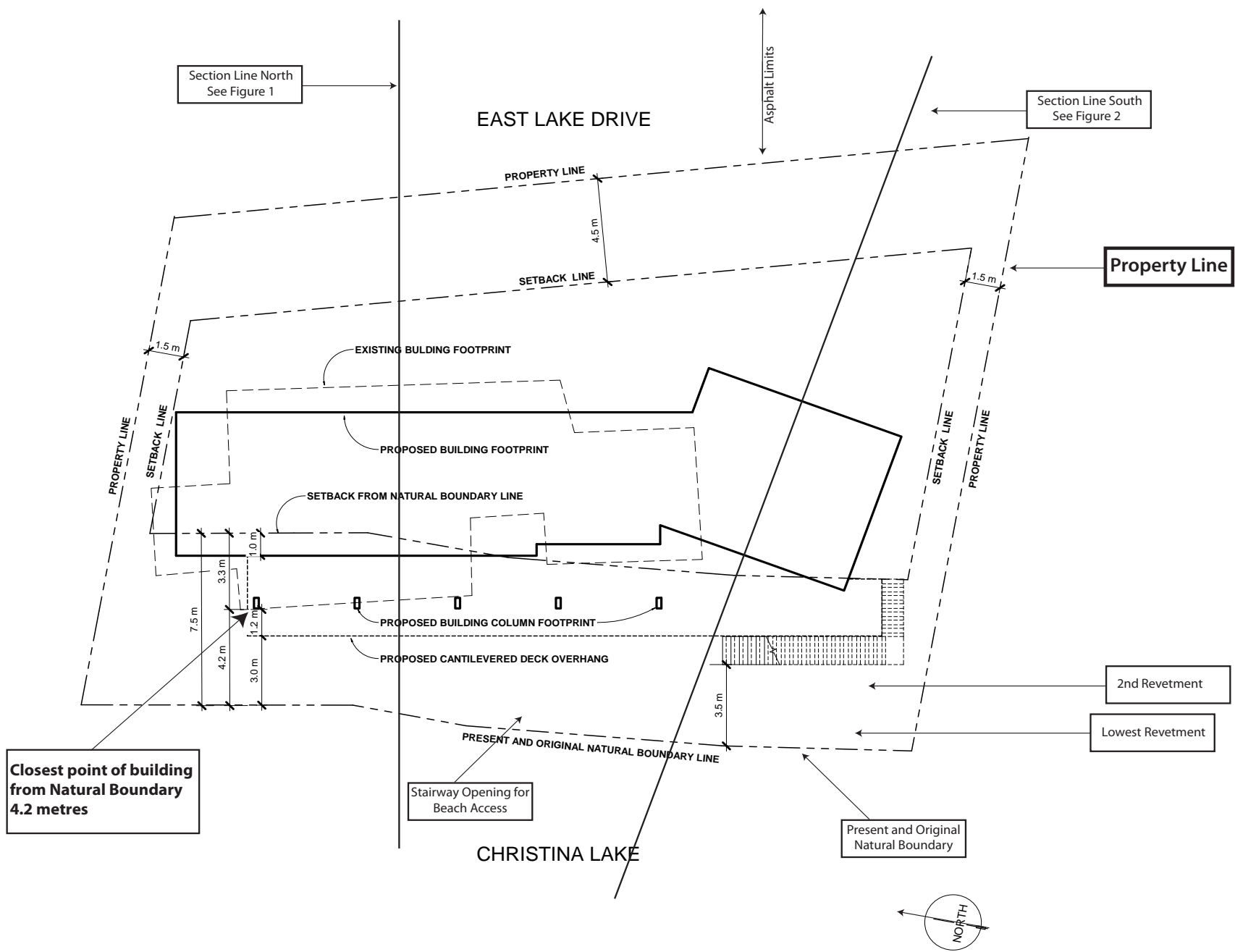
I am a member of the firm

and I sign this letter on behalf of the firm.

Deverney Engineering Services Ltd.

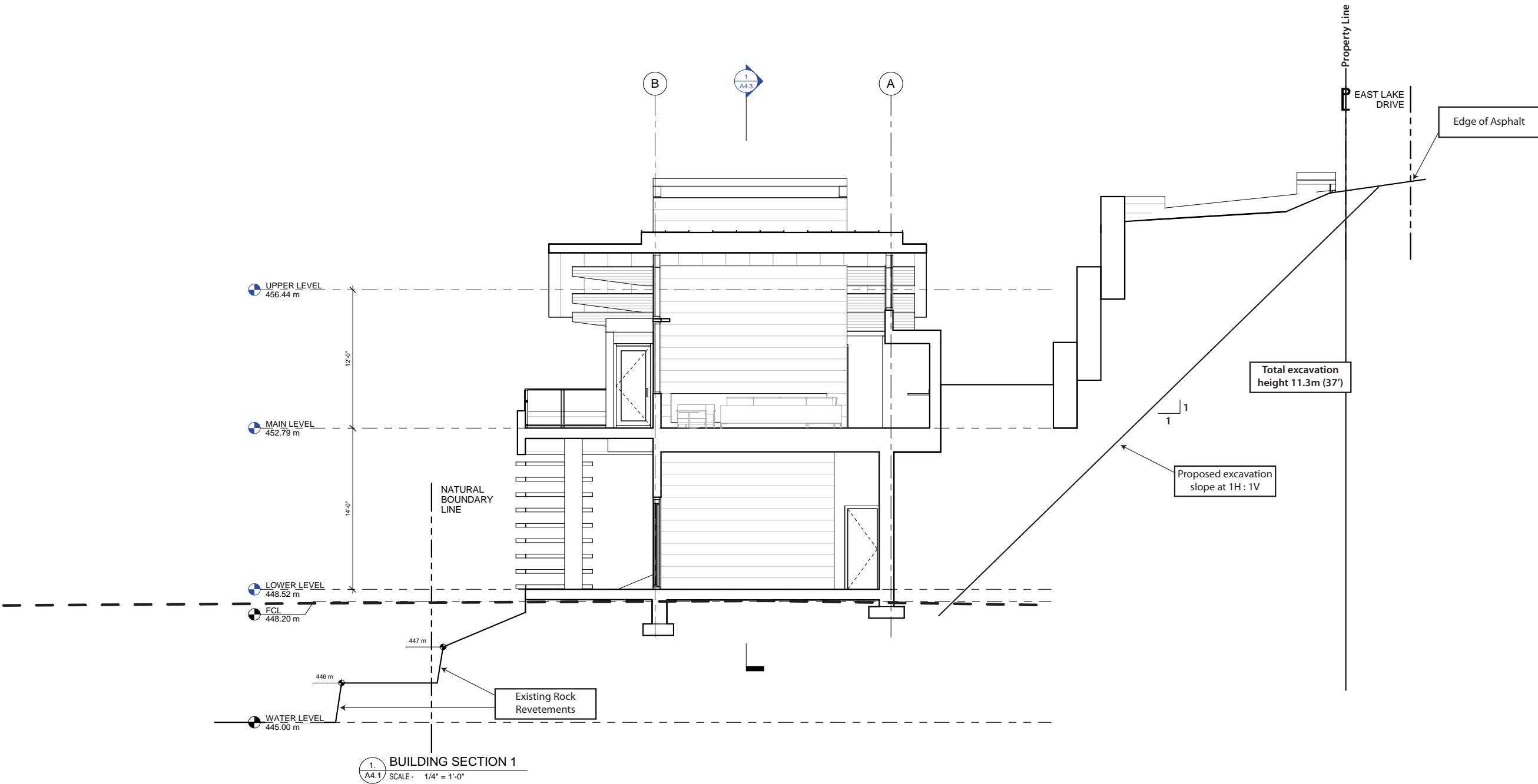
(Name of firm)

**PROFESSIONAL PRACTICE GUIDELINES  
LEGISLATED FLOOD ASSESSMENTS IN A CHANGING CLIMATE IN BC – V2.1**

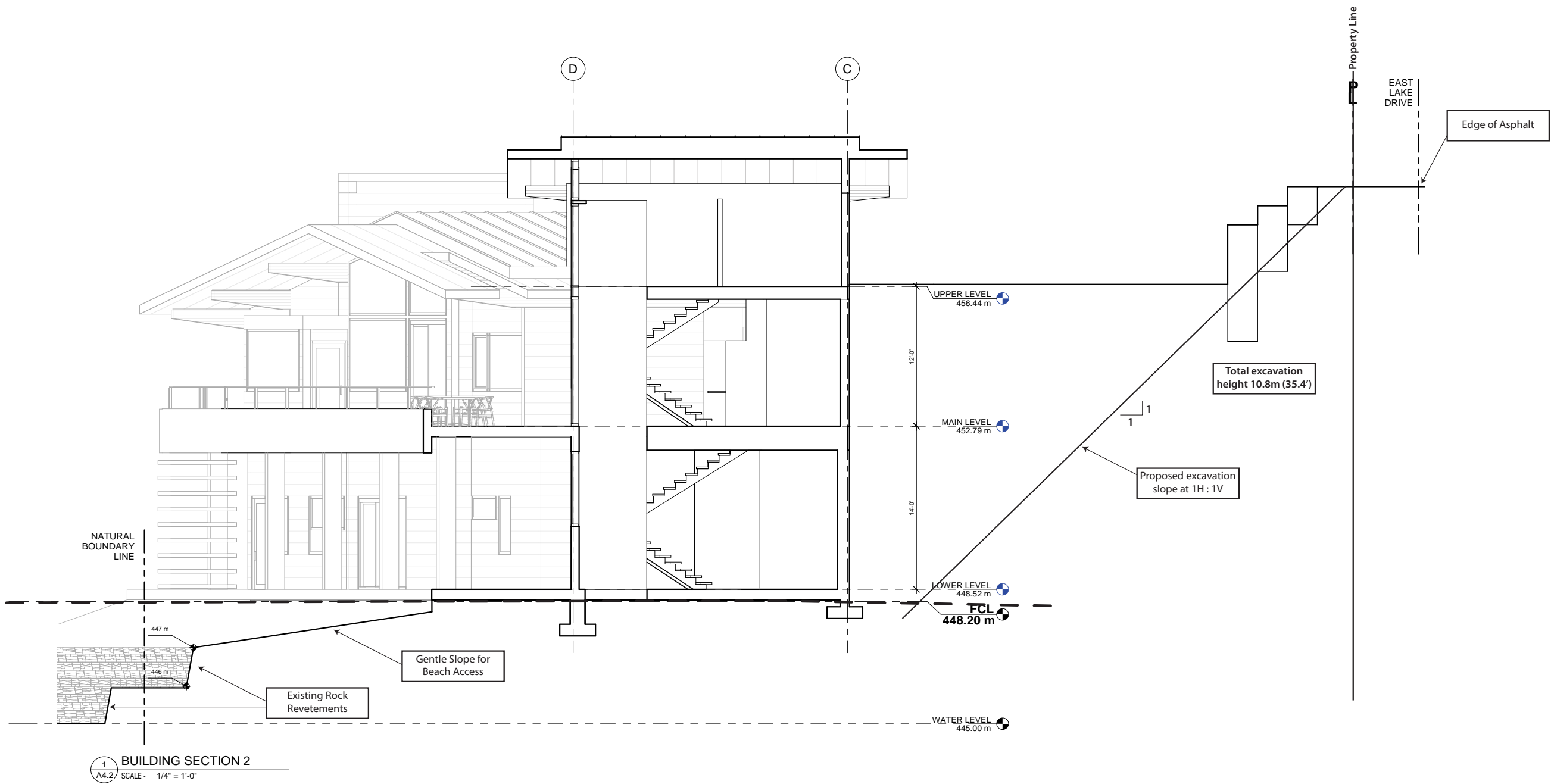


SITE PLAN - WITH BUILDING OUTLINE  
AND DIMENSIONS  
1/8" = 1'-0"

<b>DEVERNEY</b> ENGINEERING SERVICES LTD.		Reference: Dwg A1.2, North Architecture Studio		Date: March 2020	Designed by: NLD	Drawn by: JCD	Scale: 1 : 200	Job number: DE15-1441
		Site Plan Site Specific Exemption From Floodplain Bylaw Kalesnikoff Cabin 3273 East Lake Drive, Christina Lake, BC Ms. Elaine Kalesnikoff and Mr. Ken Kalesnikoff						



<b>DEVERNEY</b> ENGINEERING SERVICES LTD.		Figure 1, Section View - North Site Specific Exemption From Floodplan Bylaw Kalesnikoff Cabin 3273 East Lake Drive, Christina Lake, BC Ms. Elaine Kalesnikoff and Mr. Ken Kalesnikoff	
Reference: Dwg A4.1, North Architecture Studio	Date: March 2020	Designed by: NLD	Drawn by: JCD
		Scale: 1 : 100	Job number: DE15-1441



<b>DEVERNEY</b> ENGINEERING SERVICES LTD.		Figure 2, Section View - South Site Specific Exemption From Floodplain Bylaw Kalesnikoff Cabin 3273 East Lake Drive, Christina Lake, BC Ms. Elaine Kalesnikoff and Mr. Ken Kalesnikoff	
Reference: Dwg A4.2, North Architecture Studio	Date: March 2020	Designed by: NLD	Drawn by: JCD
Scale: 1 : 100		Job number: DE15-1441	



## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Development Permit – Kalesnikoff		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	C-3063s-07052.000 (641-20D)
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received an application for a development permit from Peter Buchanan of North Architecture Studio Inc., on behalf of Elaine and Ken Kalesnikoff for the construction of a single family dwelling and sewage disposal system in Electoral Area C/Christina Lake (see attachments).

Property Information	
<b>Owner(s):</b>	Elaine and Ken Kalesnikoff
<b>Agent:</b>	Peter Buchanan (North Architecture Studio Inc.)
<b>Location:</b>	3273 East Lake Drive
<b>Electoral Area:</b>	Electoral Area C/Christina Lake
<b>Legal Description(s):</b>	Lot 25, DL 3063s, SDYD, Plan KAP1919
<b>Area:</b>	0.33ha (0.81acr)
<b>Current Use(s):</b>	Single family dwelling
Land Use Bylaws	
<b>OCP Bylaw 1250:</b>	Waterfront Residential
<b>DP Area:</b>	Waterfront Environmentally Sensitive
<b>Zoning Bylaw 1300:</b>	Waterfront Residential 2
Other	
<b>ALR:</b>	N/A
<b>Waterfront / Floodplain:</b>	Partial
<b>Service Area:</b>	NA

### History / Background Information

The subject property is located along East Lake Drive in Electoral Area C/Christina Lake. It is a hooked parcel with approximately 0.08ha (0.19acr) on the west side of the road and the remaining 0.25ha (0.62acr) on the east side. It has a "Waterfront Residential" Official Community Plan (OCP) land use designation and is zoned "Waterfront Residential 2". Christina Lake abuts the western boundary of the property. As such, it is

within the floodplain as well as the Environmentally Sensitive Waterfront Development Permit Area.

### **Proposal**

The applicant is proposing to demolish the existing cabin and construct a new one on the same building footprint. The applicant has retained Dan Sahlstrom, P. Eng. of WSA Engineering Limited to provide a report on the proposed septic upgrades and their compliance with the RDKB Development Permit guidelines.

The final septic system design will ultimately depend on whether a development variance permit and floodplain exemption are approved for the proposed development. Should the applications be approved, a Type 3 treatment plant will be installed in the fill on the road-side of the property underneath the driveway/parking area.

The applicant has also submitted applications for a development variance permit and a site-specific exemption to the floodplain bylaw, which are discussed in separate reports.

### **Implications**

A sewerage disposal report was submitted as part of the application, which discusses the site characteristics, possible options for a sewage treatment system and recommendations for the proposed design in accordance with our Environmentally Sensitive Waterfront Development Permit Area guidelines (see attachments).

The consulting engineer has confirmed that their recommended Type 3 system considers and will be able to accommodate the proposed house design. Planning staff noted the following revisions to the Report will be required prior to the issuance of a development permit for the system:

1. ensuring sewage treatment system is designed for the house design that receives approval;
2. specifying the number of bedrooms and approximate number of fixtures the treatment system can accommodate;
3. justifying why certain field methods were used; and,
4. identifying how the recommended design is an improvement over minimum Provincial standards.

These four points may change if the variance and floodplain exemption are denied, which is why they are unresolved for now. Staff will not issue a development permit until a report has been received from the applicant that addresses these items and meets our Development Permit Area guidelines.

### **Advisory Planning Commission (APC)**

The Electoral Area C/Christina Lake APC considered the application at their April 7, 2020 meeting. No discussion points were provided in the meeting minutes. The APC provided a recommendation of support for the application.

### **Recommendation**

That the staff report regarding the Development Permit application submitted by Peter Buchanan of North Architecture Studio Inc., on behalf of Ken and Elaine Kalesnikoff, to construct a new single family dwelling, in the Waterfront Environmentally Sensitive Development Permit Area on the parcel legally described as Lot 25, DL 3063s, SDYD, Plan KAP1919, Electoral Area C/Christina Lake, be received.

### **Attachments**

Site Location Map  
Subject Property Map  
Applicant Submission



Regional District of  
Kootenay Boundary

Date: 2020-03-24

# Site Location Map

Lot 25,  
Plan KAP1919, DL 3063S,  
SDYD



0 50 100 150 200  
Meters

1:9,000

Subject Property  
3273 East Lake Drive



202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | rdkb.com

Document Path: P:\PD\EA\_C\3063s-07052.000 Kalesnikoff\2020-03-DP-DVP-FloodplainMapping\2020-03-24\_SM\_C-3063s-07052.000\2020-03-24\_SM\_C-3063s-07052.000.aprx



**ENGINEERING (2012) LIMITED**

2248 Columbia Avenue Castlegar, BC V1N 2X1 e-mail: mail@wsaeng.ca Tel 1-888-617-6927

January 14, 2020  
Regional District of Kootenay Boundary  
202-843 Rossland Ave.  
Trail, BC V1R 4S8

File: C16001-059

Attn: Planning and Development Department

***Re: Sewerage Disposal Report for Development Permit for the property located at 3273 East Lake Drive, Christina Lake, BC (Lot 25 District Lot 3063S S.D.Y.D. Plan 1919).***

### ***Section 1 – Introduction***

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At the request of Ken and Elaine Kalesnikoff, the owners of the above noted property in the community of Christina Lake, WSA Engineering (2012) Ltd. (WSA) conducted an assessment on October 13, 2016 to evaluate the site for suitability to treat and dispose of sewerage from the proposed new residence without harm to the lakeshore and waters of Christina Lake. This report is intended to accompany a Development Permit application, required due to the property's location in a designated Environmentally Sensitive Waterfront Development Permit Area.

### ***Section 2 – Site Description***

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The subject property (Lot 25 District Lot 3063S S.D.Y.D. Plan 1919 at 3273 East Lake Road) is located on the east shore of Christina Lake. The parcel is trapezoidal in shape, measuring approximately 40 metres north-south and 100 metres east-west with a total area of about 0.33 hectares (0.81 acres).

The lot is divided by the right-of-way for East Lake Road and there is a right-of-way for public access to Christina Lake along the southern boundary of the lakeshore portion. The part of the lot between the western end (bordered by Christina Lake) and East Lake Road is about 0.074 hectares (0.184 acres).

The property's existing ground slopes up from the lakeshore at approximately 60% grade to the shoulder of East Lake Road, at 60% from the ditch line to the top of the existing cutbank and at between 45% and 55% to the eastern boundary.

There is an existing cabin within approximately 6m of the high water mark and an existing sewerage treatment field between the cabin and the lake, raised about 0.9m above the top of the beach level by a stacked and mortared rock wall.

The lakeshore portion has been cleared, presumably when the existing residence was built, and deciduous cover has grown in with maple, birch, cottonwood and trembling aspen about 10m tall.

January 14, 2020  
File: C16001-059

Page 1

The eastern part, above East Lake Road, still has a mature Douglas fir, lodgepole pine and larch overstory about 25m tall with shrubs and ground cover in the understory. Several rock outcroppings are visible above the road.

### ***Section 3 – Flows***

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The Daily Design Flow (DDF) is estimated for a total of 4 bedrooms in the proposed residence with a total floor area of 330m<sup>2</sup> (3500 ft<sup>2</sup>). Based on Table II-8 of the *BC Sewerage System Standard Practice Manual, Version 3 September 2014* (SPM) the DDF for 4 bedrooms will be **1,600 litres per day**.

Use of the buildings will be considered year-round residential and no unusual flow patterns or effluent anomalies are anticipated. Garburators and water softeners will not be used on this system.

### ***Section 4 – Field Investigation***

---

The site assessment was conducted on October 13, 2016; the notes have been scanned for digital storage and attachment to this report. The observations are summarized in the following tables:

#### **Observation Hole Data:**

Observation Hole	Depth	Soil Type	Fragment %	Fragment Size
OH16-1	0 – 120 cm	Loamy Sand	20	300 mm
OH16-2	0 – 120 cm	Loamy Sand	50	300 mm

#### **Permeameter Bore Hole Data:**

Test Hole #	Depth	Rate of Fall (mm per minute)	Soil Permeability K(fs)
P1	52 cm	40	2180
P2	60 cm	30	1635

Using Table II-23 from the SPM a Type 1 hydraulic loading rate (HLR) of 30 litres/m<sup>2</sup>/day is estimated for the dispersal field. The HLR is the rate of fluid movement through the soil that will allow capture and degradation of particles in the effluent before it comes into contact with groundwater or potential potable water sources. For Type 2 the HLR is 60 litres/m<sup>2</sup>/day.

### ***Section 5 – Assessment of Alternatives***

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A new sewerage system and disposal field are proposed for the site, and two options were considered. In order to comply with the 30m setback from the high water mark of Christina Lake (SPM Table II-19) the disposal field must be located in the eastern portion of the property above East Lake Road. For this option a Type 1 low-pressure system is proposed

To keep the sewerage treatment and disposal system below East Lake Drive a Type 3 system is proposed to be installed between the proposed residence and parking structure, concurrent with their construction.

#### **Alternative 1 – Type 1 System Above East Lake Road:**

Type 1 treatment consisting of sewerage separation and digestion in a 2-chambered tank will be sufficient to meet SPM requirements for disposal of generated wastes on-site, with a minimum infiltration area of 53.4m<sup>2</sup>. The entire property is steeper than the 15% maximum the SPM recommends for disposal fields, requiring some excavation at the field location and a long, narrow configuration across the slope.

To get effluent to the proposed disposal location will require a pump, and a pressure main crossing under East Lake Road. Boring of the crossing is recommended to prevent interruption of traffic access to the north, with a sleeve installed to facilitate installation of the pressure main when constructed. Traffic disruption must be considered as the road is narrow, with a shallow ditch on the uphill side and a steep embankment on the lower side.

The effluent dispersal may also be slowed and receive additional treatment with a layer of specified sand placed below the dispersal laterals and above the native soil interface. The sand will have a design HLR of 30 and 50 litres/m<sup>2</sup>/day for Type 1 and Type 2 respectively, resulting in required infiltrative surface areas of 53.4m<sup>2</sup> and 32 m<sup>2</sup>. For a Type 1 system the effluent at the native soil interface can then be considered Type 2. (SPM Section II-5.5.3.1(a)).

Type 2 treatment is considered as an option to improve treatment and filtration prior to effluent contact with groundwater and to reduce the footprint of the disposal area. Along with mechanical treatment plants, non-mechanical systems producing Type 2 effluent through a combined treatment and dispersal system (CTDS) are available requiring no power and limited maintenance. The CTDS systems can also be adapted to steeper slopes.

#### **Alternative 2 – Type 3 System Below East Lake Road and Within 30m Setback:**

A Type 3 system could also be installed under the proposed driveway or between the driveway and the proposed residence, eliminating the crossing of East Lake Road and the impact of heavy equipment accessing and working on the slopes above the road. Proximity to the proposed residence's perimeter foundation drainage must be considered during the design phase if this option is implemented, and the dispersal field will be within the 30.0 m setback from the present natural boundary. Vertical separation from the dispersal field to the high water mark will be approximately 4.3 m.

Following discussion with the landowner Alternative 2 is preferred to minimize the impact on East Lake Drive and the slopes above the road, mitigate vehicle traffic disturbance and provide ease of access for construction and future maintenance of the sewerage treatment and disposal system.

### ***Section 6 – Recommendations and Justification***

---

WSA recommends a Type 3 BioHarmony BioCycle wastewater treatment system and distribution header providing low-pressure flow to laterals over a C33 sand seepage bed, along with disinfection to provide Type 3 effluent at the disposal interface with native soil. The wastewater system treatment unit

will be located between the proposed residence and East Lake Drive and the disposal field, with a minimum of 27.0 m<sup>2</sup> of infiltrative surface in the proposed configuration, will be installed between the foundation wall and the proposed driveway to meet all SPM requirements. A waterproof barrier shall be installed to separate the dispersed effluent from water collected by the residence's foundation drain

A system installed as described will meet the requirements of the SPM and will not cause harm to the environment or endanger human health.

See attached report figure 2 for proposed system component locations.

### ***Closure***

---

This report has been prepared for the exclusive use of Ken and Elaine Kalesnikoff, their representatives and the RDKB and is in accordance with generally accepted engineering principles and practice. No other warranty, either expressed or implied, is made. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. WSA accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

We trust that the information provided above meets with your current requirements. If you have any questions, or require any further information, please contact the undersigned.

Respectfully submitted,

WSA ENGINEERING (2012) LTD.



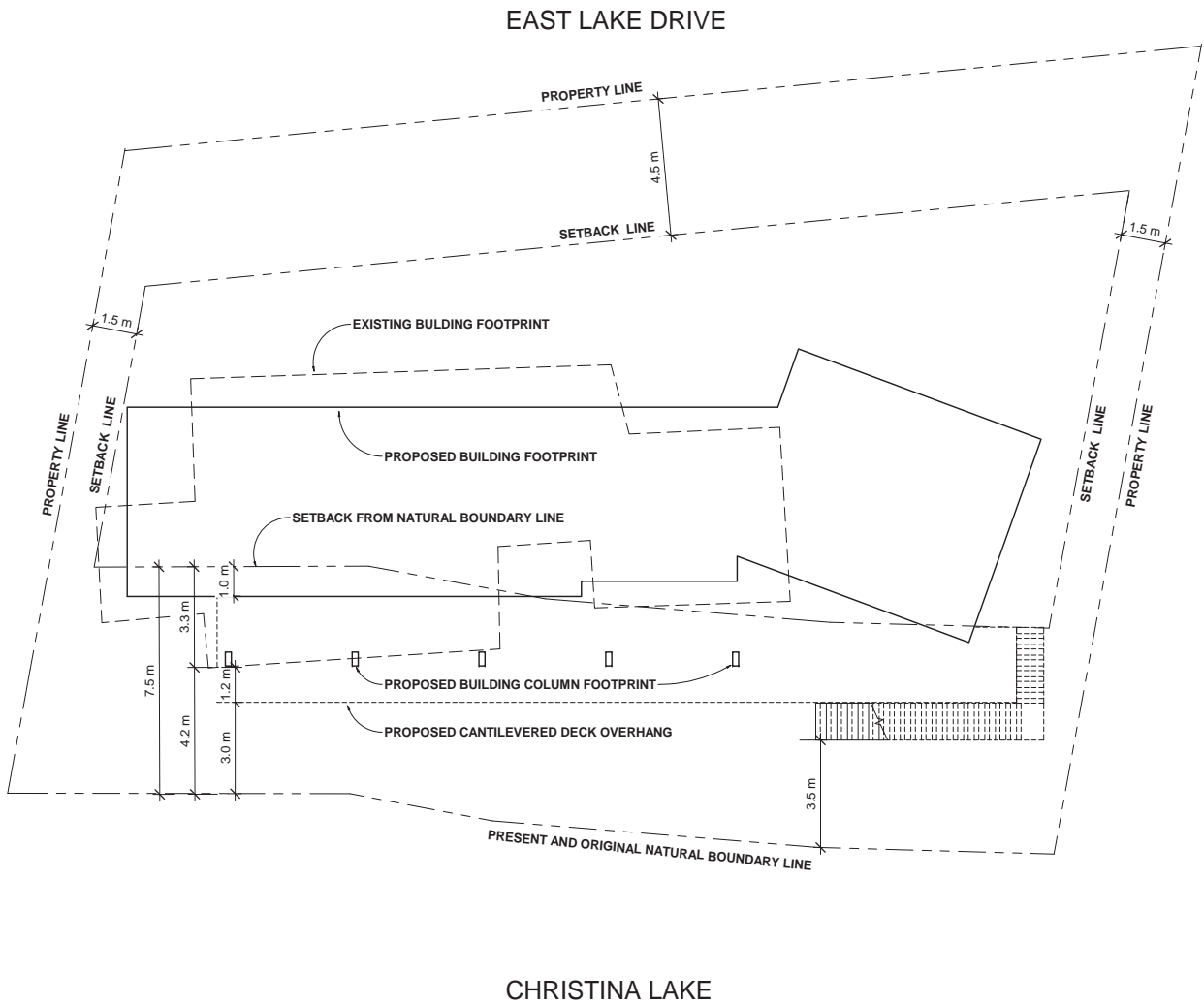
Dan Sahlstrom, P. Eng.

Encl: Figure 1 - Location Plan

Figure 2 - Site Plan

Figure 3 – Lot Section

Site Investigation Data Sheets



① SITE PLAN - WITH BUILDING OUTLINE AND DIMENSIONS  
1/8" = 1'-0"



THIS DRAWING MUST NOT BE SCALED. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS AND LEVELS PRIOR TO COMMENCEMENT OF WORK. ALL ERRORS AND OMISSIONS MUST BE REPORTED IMMEDIATELY TO THE CONSULTANT. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH ALL OTHER DRAWINGS AND SPECIFICATIONS. VARIATIONS AND MODIFICATIONS TO WORK SHOWN SHALL NOT BE CARRIED OUT WITHOUT WRITTEN PERMISSION FROM THE CONSULTANT. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF THE CONSULTANT AND CANNOT BE REPRODUCED, COPIED, OR LOANED WITHOUT PERMISSION OF THE CONSULTANT.

**NORTH**  
ARCHITECTURE  
**studio**  
North Architecture Studio Inc.  
9508 Emerald Drive  
Whistler, BC V0N 1B9  
Tel: 604.842.3350

CONSULTANT: DRAWING

NO	DATE	DESCRIPTION
NORTH POINT:		STAMP:
PROJECT:		
KALESNIKOFF CABIN 3273 EAST LAKE DR. CHRISTINA LAKE, BC		
DRAWING:		
SITE PLAN - WITH BUILDING OUTLINE AND DIMENSIONS		
PROJECT NO:	SCALE:	
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START DATE:	DRAWN BY:	
12/01/19	GB	
FORMAT:	CHECKED BY:	
34"x22"	PB	
SHEET NUMBER:		

A1.2a



Regional District of  
Kootenay Boundary

## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Development Permit Amendment – ESSO		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	C-498-02994.030 (564A-19D)
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

A Development Permit Amendment application has been submitted by Bergum Contracting Ltd., on behalf of 1040215 BC Ltd. – the owner of the ESSO gas station located at 1590 McGregor Frontage Road, for the construction of an accessory structure (see attachments).

Property Information	
<b>Owner(s):</b>	1040215 BC Ltd.
<b>Agent:</b>	Bergum Contracting Ltd. (c/o Rod Bergum)
<b>Location:</b>	1590 McGregor Frontage Road
<b>Electoral Area:</b>	Electoral Area C/Christina Lake
<b>Legal Description(s):</b>	Lot 1, DL 498, SDYD, Plan KAP52010
<b>Area:</b>	0.27ha (0.66acr)
<b>Current Use(s):</b>	Gas Station; Takeout Restaurant
Land Use Bylaws	
<b>OCP Bylaw No. 1250</b>	Highway Commercial
<b>DP Area:</b>	General Commercial Development Permit Area
<b>Zoning Bylaw No. 1300</b>	Highway Commercial 2 (C2)
Other	
<b>Waterfront / Floodplain</b>	NA
<b>ALR</b>	NA

### History / Background Information

The property owner applied for a Development Permit with a Variance in 2017, which was received by the Board of Directors on July 31, 2017. All information related to the original development approval (564-17D) is included in the 2017 staff report (see attachments).

### Proposal

The applicant has requested an amendment to the original Development Permit for the construction of a 15.7m<sup>2</sup> (169ft.<sup>2</sup>) accessory building for washroom facilities.

The original washroom location was going to be preserved on the north side of the building. However, that location is where the drive-thru will be. Shifting the washrooms to another part of the principal building would alter the loading space location and drive-thru, in turn narrowing the drive aisle on the east side of the site.

The applicant is proposing the change in location for the washrooms as a solution to the site constraints that may occur from relocating the washrooms within the principal building.

## **Implications**

### Development Permit Area (DPA) Guidelines

There are only minor alterations to the site layout as a result of the proposal. Most of the Commercial DPA guidelines are not relevant for the application because access and egress, traffic circulation and the pedestrian network are unaltered.

The DPA guidelines require buildings to "be finished on all sides with consistent exterior materials and colours to be used on all building facades." An artistic rendering was not submitted as part of the proposal. We can require the applicant to finish the accessory building with materials that are consistent with the building materials schedule from the original Development Permit approval as a condition of approval of the amendment. This item has been raised with the applicant for further discussion. A development permit will not be issued by staff until this item has been addressed.

### Zoning

The proposed amendment will slightly alter the original Site Plan. The only functional change to the site layout would be a reduction in the number of parking stalls provided. The original proposal included 20 stalls. The footprint of the proposed accessory building would take up 3 parking stalls, reducing the number of stalls provided to 17. This number still meets the parking requirements (17 stalls) set out in Electoral Area C/Christina Lake Zoning Bylaw No. 1300.

All other considerations from the original development approval – approved siting and signage variances, outdoor storage areas, landscaping, septic and proposed land uses – remain unaffected by the proposed amendment.

## **Advisory Planning Commission (APC)**

The Electoral Area C/Christina Lake APC considered the application at their April 7, 2020 meeting. The APC provided a recommendation of support for the application.

## **Recommendation**

That the staff report regarding the Development Permit application submitted by Rod Bergum of Bergum Contracting Ltd., on behalf of 1040215 BC Ltd., to construct a 15.7m<sup>2</sup> (169ft.<sup>2</sup>) accessory building for washroom facilities, in the General Commercial Development Permit Area on the parcel legally described as Lot 1, DL 498, SDYD, Plan KAP52010, Electoral Area C/Christina Lake, be received.

## **Attachments**

Site Location Map

Subject Property Map

Proposed Site Plan, prepared by CTM Design Services Ltd., dated October 16, 2019

Staff Report, dated July 27, 2019, prepared by Carly Rimell



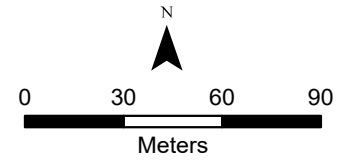


Regional District of  
Kootenay Boundary

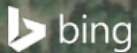
Date: 10-Feb-2020

## Subject Property Map

Lot 1, DL 498, SDYD,  
Plan KAP52010



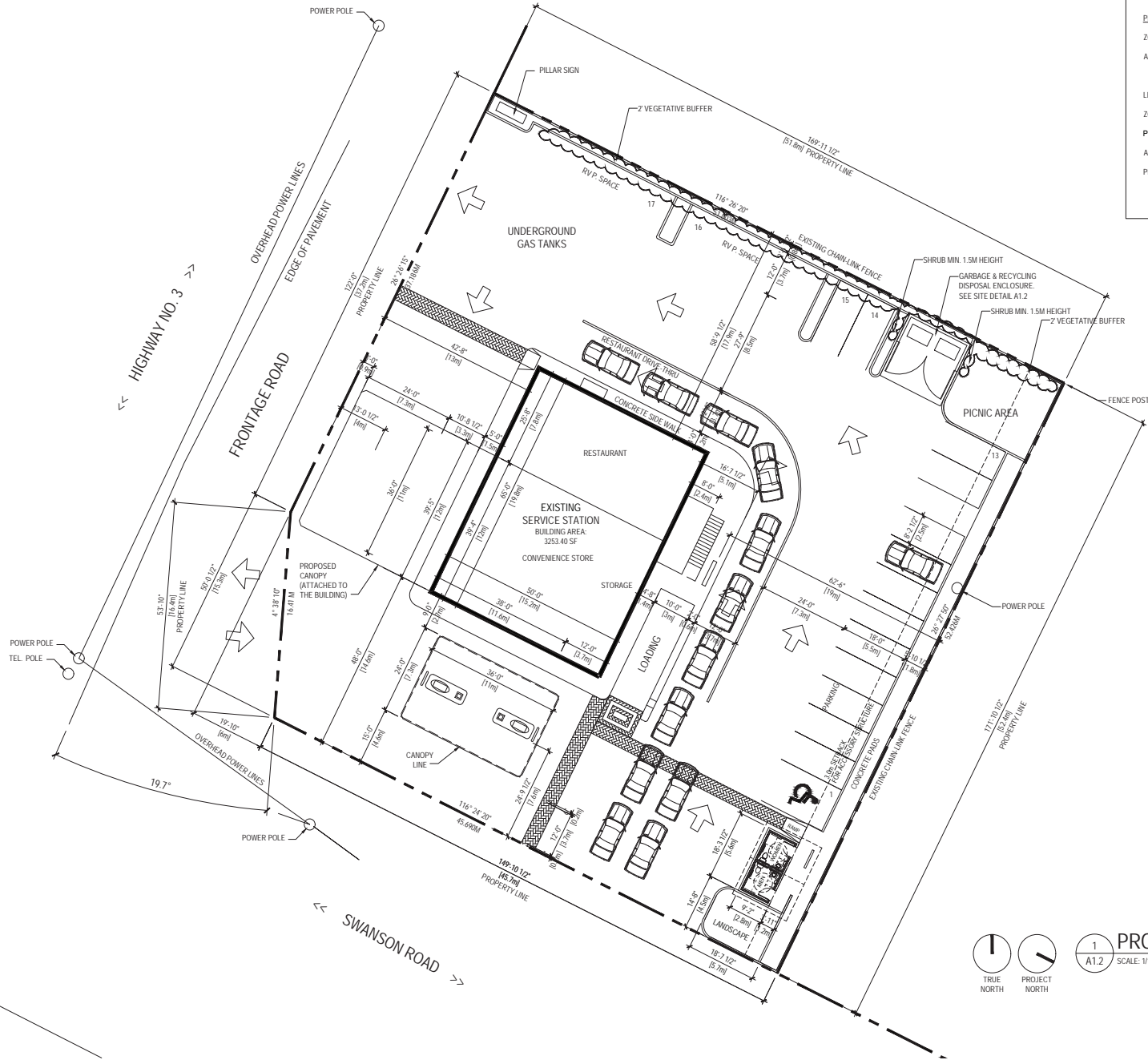
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P:\PD\VEA\_C\C-498-02994.030\_ESSO\2020-March-DP\APC\2019 - Mapping

P:\19041 PR PETROLEUM CHRISTINA LAKE\19041A1.1 EXISTING & PROPOSED SITE PLAN.DWG - 2019-10-16 - EDUARD



1  
A1.2  
SCALE: 1/16" = 1'-0"

### ZONING INFORMATION

#### PROPERTY INFORMATION

ZONE: C2 (HIGHWAY COMMERCIAL)  
ADDRESS: 1590 MCGREGOR FRONTAGE RD  
CHRISTINA LAKE, BC  
  
LEGAL DESCRIPTION: PLAN H738, 1 KAP 52010  
ZONING BYLAW NO. 1300  
PID: 018-701-057  
ALLOWABLE SITE COVERAGE: 60% OF BUILDING(S) AREA  
PROPOSED SITE COVERAGE: 12.5%

#### MAIN BUILDING SETBACKS

	REQUIRED	PROPOSED
FRONT YARD:	4.5 M	0.7 M
EXTERIOR SIDE YARD:	4.5 M	4.5 M
INTERIOR SIDE YARD:	1.5 M	19 M
REAR YARD:	7.5 M	17.9 M

<b>BUILDING AREA:</b>	FIRST FLOOR: 3,253.4 S.F. (302 MP)
	SECOND FLOOR: 1,435.6 S.F. (133.4 MP)
	TOTAL: 4,689.0 S.F. (435.4 MP)
<b>SITE AREA:</b>	28,725.6 S.F. (2,668.7 MP)

#### BUILDING HEIGHT

	ALLOWABLE	PROPOSED
	10 M (32'-10")	6.1 M (20'-0")

#### PARKING & LOADING/UNLOADING

REQUIRED SPACES:  
RESTAURANT: 1 SPACE PER 3 SEATS - 5 SPACES  
(PLUS 4 TANDEM DRIVE-THROUGH SPACES)  
RETAIL STORE: 5 SPACES/100 MP OF GROSS RETAIL AREA  
CARE TAKER SUITE: 1 SPACE / SUITE  
  
PROVIDED SPACES:  
RESTAURANT: (12 SEATS PROPOSED) 4 SPACES + 5 SPACES  
RETAIL STORE: 139 MP / 100 MP = 1.39 x 5 = 7 SPACES  
CARE TAKER SUITE: 1 SPACE  
  
TOTAL REQUIRED - 17 SPACES  
TOTAL PROVIDED - 17 SPACES  
(INCLUDING 1 ACCESSIBLE SPACE,  
2 RV PARKING SPACES)  
(PLUS 6 TANDEM DRIVE-THROUGH  
SPACES AS SHOWN ON SITE PLAN)

### LEGEND

- EXISTING / NEW ASPHALT
- LANDSCAPE
- CONCRETE  
PADS, SIDEWALK & CURBS
- STAMPED ASPHALT  
WALKWAY

### PROPOSED SITE PLAN

CHRISTINA LAKE  
C-SOTRE  
1590 MCGREGOR FRONTAGE RD.  
CHRISTINA LAKE, BC

PROJECT NO.

19041

FILE NO.

-

SCALE

1/16" = 1'-0"

REV. NO.

R00

OUTLET NO.

-

DATE

2019-10-16

DRAWN

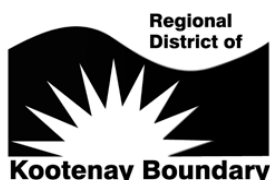
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## STAFF REPORT

<b>Date:</b>	July 27, 2017	<b>File #:</b>	C-498-02994.030
<b>To:</b>	Chair McGregor and Members of the Board		
<b>From:</b>	Carly Rimell, Senior Planner		
<b>RE:</b>	<b>Development Permit with Variance – General Commercial Development Permit Area</b>		

### ISSUE INTRODUCTION

The owners, 1040215 BC Ltd., through their agent Birte Decloux, of Urban Options Planning and Permits have applied for a Development Permit to update the existing building, add a drive-thru restaurant and relocate the gas islands at 1590 McGregor Frontage Road (*see Site Location Map, Applicant's Submission*). The applicants are also requesting variances through the development permit application to vary the sign requirements as well as siting exceptions and setback from the front parcel line in order to relocate the gas island. As the property is located in the 'General Commercial Development Permit Area', a development permit is required.

### HISTORY / BACKGROUND FACTORS

The property (2,671m<sup>2</sup>) located at 1590 McGregor Frontage Road is designated 'Highway Commercial' in the Electoral Area 'C'/Christina Lake Official Community Plan Bylaw No.1250 and zoned 'Highway Commercial 2' (C2) in the Electoral Area 'C'/Christina Lake Zoning Bylaw No. 1300. The property is within the 'General Commercial Development Permit Area'.

There was a history of bylaw contravention on the subject property with the previous owners due to; constructing an accessory building without a suitable building permit or development permit, constructing a roof over a storage area without adequate engineering, and using a bedroom contrary to the BC Building Code requirements.

In the spring of 1999 two notices were placed on title; the first for a Building Bylaw Contravention, the second for constructing a building in a development permit area, without a development permit.

In June 1999 a Development Permit (DP#154-99D) was subsequently issued for the existing accessory structure to bring it into compliance with the RDKB Land Use Bylaws.

These same owners were preparing to sell the property in April 2016 and requested that the notices on title be removed. The Building Inspector conducted a site visit where it was determined; the accessory buildings had been removed, the canopy had been removed, and the bedroom window height requirement was satisfied. Consequently, the building files were closed. The notice on title for the Building Bylaw contravention was removed in May 2016.

The existing commercial building has had multiple uses including a service station, liquor store, dwelling unit and hardware store (*see Site Photos*).

The property was purchased by the current owner, 1040215 BC Ltd., in May 2016.

## PROPOSAL

The applicants propose to renovate the existing service station building and to incorporate a restaurant (*see Aplin Martin renderings A1.1 Existing Site Plan and Aplin Martin renderings A1.2 Proposed Site Plan*). The gross floor area for the two storey building is about 435m<sup>2</sup> (4,686ft<sup>2</sup>). As part of the proposal the applicants intend to relocate the gas islands; add provisions for a drive thru and 12 seat eat-in restaurant and update the building façade.

The development permit area allows applicants to request a variance through the development permit application process. The applicant is requesting variances to the siting exceptions and setbacks from the front parcel line for the gas island and canopy, as well as additional signage. These variance requests are discussed below.

## IMPLICATIONS

A Development Permit is required for all new buildings and structures in the 'General Commercial Development Permit Area'. This development permit area is intended to benefit the community by ensuring functional, attractive and safe commercial areas. The following guidelines have been established for development in this area. Wording in italics relate to this development proposal.

### ***General Commercial Development Permit Area Guidelines***

Buildings should be sited to face a public road or open space such as a square. The rear walls of buildings should not be visible from a public road or street.

*The existing commercial building faces, McGregor Frontage Road which runs parallel to Highway 3. Therefore, the back of the building faces the rear parcel line.*

Buildings shall be finished on all sides with consistent exterior materials and colours to be used on all building facades. An artistic rendering showing the building in colour shall be provided.

*The agent provided an artistic rendering which shows the proposed building materials as mainly white stucco, with accents of grey thinset stone veneer and*

*black break metal cap flashing (see Aplin Martin rendering Drawing A4.3 and A4.4 Proposed Elevations)*

Buildings shall have safe, practical access and parking areas for passenger vehicles. A plan showing parking areas with proposed traffic circulation patterns must be provided. Expansions to existing developments should be surfaced with a material which minimizes dust. Paved or concrete surfaces are encouraged. The site and parking plan will be referred to the Ministry of Transportation for their approval.

*The agent provided a site plan which notes two access points, the entry off Swanson Road and exit to McGregor Frontage Road (see Aplin Martin rendering Drawing A1.2 Proposed Site Plan). Traffic flow and arrow markings anticipate that traffic will move in one direction, however the agent asserts that the drive aisle is wide enough to accommodate two-way traffic. The gas island which fronts Swanson Road is to be accessed directly from Swanson Road. Site surfaces are shown on the Aplin Martin rendering Proposed Site Plan A1.2 as a mixture of asphalt, stamped asphalt walkway and concrete pads, sidewalks and curbs. The majority of the parcel will be covered with asphalt.*

*The development permit application was forwarded to the Ministry of Transportation and Infrastructure and they do not oppose the development. The Commercial Access and Structural Setback permits were issued by Ministry of Transportation and Infrastructure on July 5<sup>th</sup> 2017.*

The design and layout of buildings and parking areas shall address and promote pedestrian activity and should include features such as low profile lighting, sidewalks, landscaping, street furniture, obvious building access points and parking areas that emphasize pedestrian safety and convenience.

Safe pedestrian connections shall be provided from parking areas to the building's main entry.

*Parking is provided along the rear parcel line with a raised concrete pad to allow for pedestrian movement along this space in the summer and snow storage in the winter (see Aplin Martin rendering Drawing A1.2 Proposed Site Plan). Parking for persons with disabilities is provided as close to the building access as possible with ramped let downs provided on the concrete sidewalk around the building for wheelchair and stroller access. Larger recreational vehicle parking spaces are provided along the north property line.*

*Existing pedestrian movement patterns were reviewed and will be formalized through stamped asphalt walkways. The agent anticipates that by providing delineated walkways there will be greater pedestrian safety. This includes pedestrian movement throughout the site as well as entering and exiting the property. The pathways were intentionally designed at right angles to the anticipated vehicle movement for optimal visibility.*

Appropriate fire-truck and other emergency vehicle access must be ensured. The Christina Lake Fire Chief may be asked to comment on applications.

*The development permit application was forwarded to the Christina Lake Fire Department for comment. The Christina Lake Fire Chief noted that access to the site and access around the building appears to be adequate to maneuver emergency vehicles.*

Landscaping should be implemented to enhance the appearance of the commercial area.

*Currently there is no vegetation onsite, however as part of this application a vegetative buffer is proposed along the north property line and a small 400ft<sup>2</sup> picnic area in the north east corner are planned for the site.*

Developments which involve multiple uses on one property are strongly encouraged. Any development, which incorporates the concept of a well designed central gathering place and focus for the community, will be favourably received.

*The proposal would add the additional use of an eating and drinking establishment with a take-out restaurant. The existing use of a service station and dwelling unit would be maintained.*

Signs should be consistent with building designs and complement their surroundings.

*The pylon sign will be refitted with new sign inserts and branding but will remain the same size and location. There will be 2 signs on each of the gas canopies as well as 3 on the commercial building (see Aplin Martin rendering Drawing A4.3 Proposed Elevations).*

### ***Request for Variances***

Variances can be granted through the development permit approval process as long as the variances do not vary use or density. This applicant requests variances to the setback and siting exceptions for the placement for the gas island structure as well as sign regulations.

#### **Setback and Siting Variances Requested**

As part of the development plan the applicant proposes to replace the existing attached gas bar canopies with detached canopies. The proposed placement of the canopy along McGregor Frontage Road would require a variance to the siting exceptions in Section 304 'Siting Exceptions' as well as Section 412.6 'Highway Commercial 2 Setbacks' of the Electoral Area 'C'/Christina Lake Zoning Bylaw.

The following variances are requested for the gas island structure fronting McGregor Frontage Road;

- A decrease in the front parcel line setback (from 7.5m to 4m); and

- An increase to the siting exceptions resulting in the edge of the aerial projection of the canopy being 0.9m from the front parcel line.

#### Sign Variances Requested

Section 318.4 requires that the maximum visible surface area of a sign must not exceed 3m<sup>2</sup> per side. The existing pylon sign has a total area of 10m<sup>2</sup> on each side, which is 7m<sup>2</sup> over the permitted visible surface area. All of the other proposed signs are under 3m<sup>2</sup>, satisfying this zoning regulation.

Section 318.5 requires that the maximum number of signs permitted per parcel is two unless otherwise permitted differently elsewhere in the bylaw. There is no exception for the C2 Zone, therefore there is maximum of two signs per parcel.

Currently there are 6 signs on the parcel between the pylon sign, signs located on the building and gas canopies (*see Site Photos*).

The proposal is for 8 signs total on the parcel. The pylon sign is proposed to stay the same and simply modify the sign inserts to update the branding. The applicant proposes 3 signs on the commercial building located along the fascia. The applicant is also proposing 2 signs along each gas canopy, for a total of four signs. The long side of each canopy are proposed to face the respective roads and will be backlit. The logo is proposed in a corner of the canopy and not to run the length of the canopy. The applicant also proposes 2 more signs which have the logo in the corner, but will not be backlit.

Section 318.12 requires the maximum combined surface area of signs must not exceed an area equal to 15% of the wall or walls facing the front parcel line in the C2 Zone. The combined surface areas of the proposed signs facing McGregor Frontage Road is 5% and therefore is compliant with this zoning regulation.

The following variances are requested for signage;

- An increase to visible surface area for the pylon sign of 7m<sup>2</sup> per side (from 3m<sup>2</sup> to 10m<sup>2</sup>)
- An increase of permitted signs from 2 signs to 8.

#### ***Evaluation Criteria for Variances***

The criteria which is used to evaluate development permits with a variance in the General Commercial Development Permit Area is as follows;

- a) is consistent with the development permit guidelines;
- b) is shown to enhance the proposal;
- c) is necessary due to an unavoidable physical constraint; and
- d) does not adversely impact an adjacent property.

### Gas Island Canopy Setback and Siting Variances

The agent asserts the relocation and placement of the gas island will improve the access and traffic patterns which would be formalized to have a distinct entry off Swanson Road and exit to McGregor Frontage Road. The agent asserts this will also contribute to pedestrian safety. As the intent of the 'General Commercial Development Permit Area' is to ensure functional, attractive and safe commercial areas the requested variances can be considered consistent with the development permit guidelines.

In order to meet the 7.5m setback from the front parcel line it would reduce the space between the principal building and the gas island by 3.5m. The applicant asserts this is valuable space which would be useful to contributing to less congestion in this area at the entrance of the building.

### Signage Variances

The development permit guidelines support mixed use commercial developments. Therefore, the applicant would like a sign to promote each of the 3 services it plans to offer including a restaurant, convenience store/liquor store and gas bar. The agent notes that they anticipate the majority of the customers will be visitors traveling through Christina Lake. Signage, therefore is important to the viability of the business and providing services to visitors. The applicant believes that without the signs the business may miss customers and that they may continue to the next town to purchase the items which they plan to offer.

A similar variance was granted at Santa Rosa Corner to permit 3 signs, 1 for each individual business unit in July 2015 as part of a Development Permit application with a variance.

The illuminated signs on the gas canopies would face away from the neighbouring residential property located to the east. The agent asserts due to the placement of the canopy and the siting of the neighbour's residence that it is anticipated there would be minimal impact of light pollution from the sign or the overhead lighting from the gas island.

A Development Notification sign was posted on the property on June 23<sup>rd</sup> to inform neighbours and community members of the proposal. Planning and Development Staff had not received any feedback from neighbours or community members at the time this report was written.

### ***Other Zoning Considerations***

#### Parking as required in Section 319

Planning and Development Staff have determined that 17 spaces, plus 6 in tandem drive thru storage are required for the proposed development. The applicant proposes

20 spaces, plus 6 in tandem drive thru storage. The parking requirement is therefore satisfied and in compliance with the Electoral Area 'C'/Christina Lake Zoning Bylaw.

#### Outdoor Storage Areas as required in Section 412.8

The proposed outdoor storage area for garbage and recycling and is designed to have screening 2m in height (*see Aplin Martin rendering A1.3 Garbage and Recycling Enclosure*). In the C2 Zone outdoor storage areas must be surrounded by a solid landscape screen at least 2.0m in height, but not exceed 2.5m in height. Therefore, these criteria are satisfied.

#### Dwelling Unit

The dwelling unit which is on the second floor of the commercial building is 133m<sup>2</sup> in size. A building permit was issued for the dwelling unit in October 1997 when the property was previously zoned as 'Commercial (Town Centre) 1 (C1)' Zone in Bylaw No. 900. The building permit was closed in 2016.

The proposal satisfies the 'Highway Commercial 2' Zone permitted uses. This type of mixed use development is consistent with the commercial objectives and policies in the Electoral Area 'C'/Christina Lake OCP.

#### Septic

The existing septic system is located in the north-east corner of the site, where the proposed picnic area is located. The agent notes that a septic system specialist will be employed at the time of construction to ensure that the system can accommodate the proposed volumes.

#### Compliance with the *Environmental Management Act (Site Profile)*

Section 40 of the *Environmental Management Act* requires that in certain circumstances, a site profile must be completed and be submitted to the Province before development or construction can take place on a parcel which the parties know has been or is being used for industrial or commercial purposes.

A site profile, in effect, is a screening system to identify potentially contaminated sites and see that proper remediation takes place. Since the subject property has been used to store and sell petroleum products a site profile has been submitted to the Province.

Pursuant to the *Local Government Act (Section 557)* the MOE decision is to suspend approval of the subject application. The agent is working with MOE to release the freeze triggered by the site profile. The development permit cannot be issued until the MOE is satisfied that the site is not contaminated, or the site does not present a significant threat if the application is approved, or the MOE has received and accepted a plan to remediate the site.

## REFERRALS

This application was referred to the Ministry of Transportation and Infrastructure (MoTI) for comment. MoTI responded to the referral and notified the RDKB that they do not oppose the development. The Commercial Access and Structural Setback permits were issued by Ministry of Transportation and Infrastructure on July 5<sup>th</sup> 2017.

The Christina Lake Fire Chief noted that access to the site and access around the building appears to be adequate to maneuver emergency vehicles.

The RDKB, which owns the Christina Lake Water Utility (CLWU), requires that the CLWU water regulation and toll bylaws be adhered to.

## ADVISORY PLANNING COMMISSION COMMENTS

The Electoral Area 'C'/Christina Lake Advisory Planning Committee had no concerns and therefore supports the application.

## BACKGROUND INFORMATION PROVIDED

*Site Location Map*

*Applicant's Submission*

*Site Photos*

*Aplin Martin Renderings*

## RECOMMENDATION

That the staff report regarding the application for a Development Permit, submitted by Birte Decloux, as agent for 1040215 BC Ltd., to update the existing building, add a drive-thru restaurant and relocate the gas islands and the following variances; a decrease in the front parcel line setback (from 7.5m to 4m) for the gas island; an increase to the siting exceptions resulting in the edge of the aerial projection of the canopy being 0.9m from the front parcel line; an increase to visible surface area for the pylon sign of 7m<sup>2</sup> per side (from 3m<sup>2</sup> to 10m<sup>2</sup>); and an increase of permitted signs from 2 signs to 8 signs in the General Commercial Development Permit Area, for the property legally described as Lot 1, DL 498, SDYD, Plan KAP52010, be received.



## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Ministry of Transportation and Infrastructure – Subdivision – Seymour		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	C-312-02632.260
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received a referral from the Ministry of Transportation and Infrastructure (MOTI) regarding a subdivision application in Electoral Area C/Christina Lake (see attachments).

Property Information	
<b>Owner(s):</b>	Inez & Richard Seymour
<b>Agent:</b>	Inez Seymour
<b>Location:</b>	575 & 701 Border Road
<b>Electoral Area:</b>	Electoral Area C/Christina Lake
<b>Legal Description(s):</b>	Lot 32, DL 312, SDYD, Plan 29935 Except Plan KAP56175; and, Lot 1, DLs 312 and 347, SDYD, Plan KAP56175
<b>Area:</b>	5.6ha (Lot 32); 32.5ha (Lot 1)
<b>Current Use(s):</b>	Rural
Land Use Bylaws	
<b>OCP Bylaw No. 1250</b>	Rural
<b>DP Area:</b>	NA
<b>Zoning Bylaw No. 1300</b>	Rural 1 (RUR1)
Other	
<b>Waterfront / Floodplain</b>	NA
<b>ALR</b>	Partial

### History / Background Information

The two subject properties are located between Mountain View Road and Border Road, with the Canada-United States border directly south of each property. Both are designated for 'Rural' land use in the Electoral Area C/Christina Lake Official Community Plan (OCP) Bylaw No. 1250 and zoned 'Rural 1' (RUR1) in the Electoral Area C/Christina Lake Zoning Bylaw No. 1300.

575 Border Road (Lot 32) is 5.6ha and 701 Border Road (Lot 1) is 32.5ha. Access to both parcels is from Border Road and there is a dirt path that spans between both properties and Mountain View Road (see attachments). Both properties are partially

within the Agricultural Land Reserve (ALR) and are subject to the Agricultural Land Commission's (ALC) regulations as well as ours.

## **Proposal**

The applicant is proposing a lot line adjustment to consolidate 701 Border Road with the northern ~3.3ha of 575 Border Road. The applicant has provided a sketch (see attachments). They anticipate the new lot sizes to be approximately 2.5ha (Lot 32) and 35.8ha (Lot 1).

## **Implications**

The proposal is consistent with the goals, objectives and policies contained within the Christina Lake OCP.

Under the Zoning Bylaw, newly created RUR1 parcels must have a minimum parcel size of 10ha. However, because no new parcels are being created, Section 306.5 of the Bylaw applies. This provision exempts interior lot line adjustments from having to meet the minimum lot size requirements.

Most interior lot line adjustments that involve ALR land require approval from the ALC prior to submission to MOTI. However, under Section 10(1) of the *ALR General Regulation*, subdivisions may be approved by an approving officer without the approval of the Commission. To receive approval, the proposed subdivision must:

1. not involve more than 4 parcels, each of which is a minimum of 1 ha;
2. result in no increase in the number of parcels;
3. adjust boundaries to allow for the enhancement of farming on the agricultural land; and,
4. result in ALR-parcels being no less than 1 ha in size.

An application to the ALC may not be required; however, that is ultimately a decision of the approving officer.

## **Advisory Planning Commission (APC)**

The Electoral Area C/Christina Lake APC considered the application at their April 7, 2020 meeting. No discussion points were provided in the meeting minutes. The APC provided a recommendation of support for the application.

## **Recommendation**

That the staff report regarding the Ministry of Transportation and Infrastructure referral for a proposed subdivision, for the parcels legally described as Lot 32, DL 312, SDYD, Plan 29935 Except Plan KAP56175 and Lot 1, DLs 312 and 347, SDYD, Plan KAP56175, Electoral Area C/Christina Lake, be received.

## **Attachments**

Site Location Map  
Subject Property Map  
Applicant Submission



Regional District of  
Kootenay Boundary

Date: 2020-03-25

# Site Location Map

Lot 1, Plan KAP56175, DL 312 347, SDYD  
and  
Lot 32, Plan KAP29935, DL 312, SDYD



0 200 400 600 800  
Meters

1:25,000

Agricultural Land Reserve



202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | [rdkb.com](http://rdkb.com)

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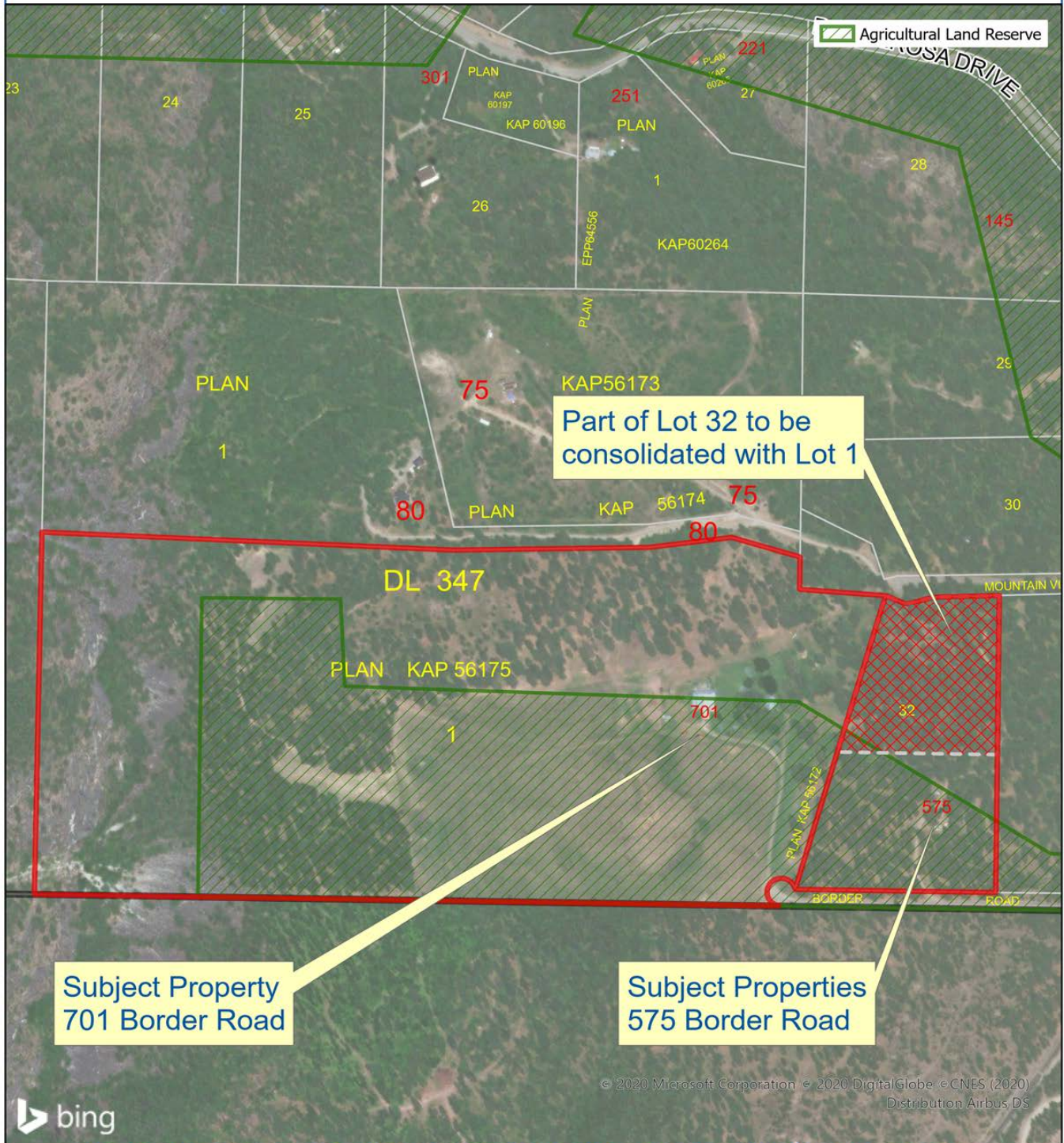
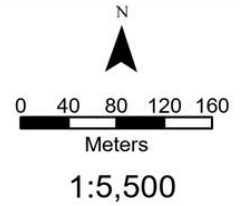


Regional District of  
Kootenay Boundary

Date: 2020-03-25

# Subject Property Map

Lot 1, Plan KAP56175, DL 312 347, SDYD  
and  
Lot 32, Plan KAP29935, DL 312, SDYD



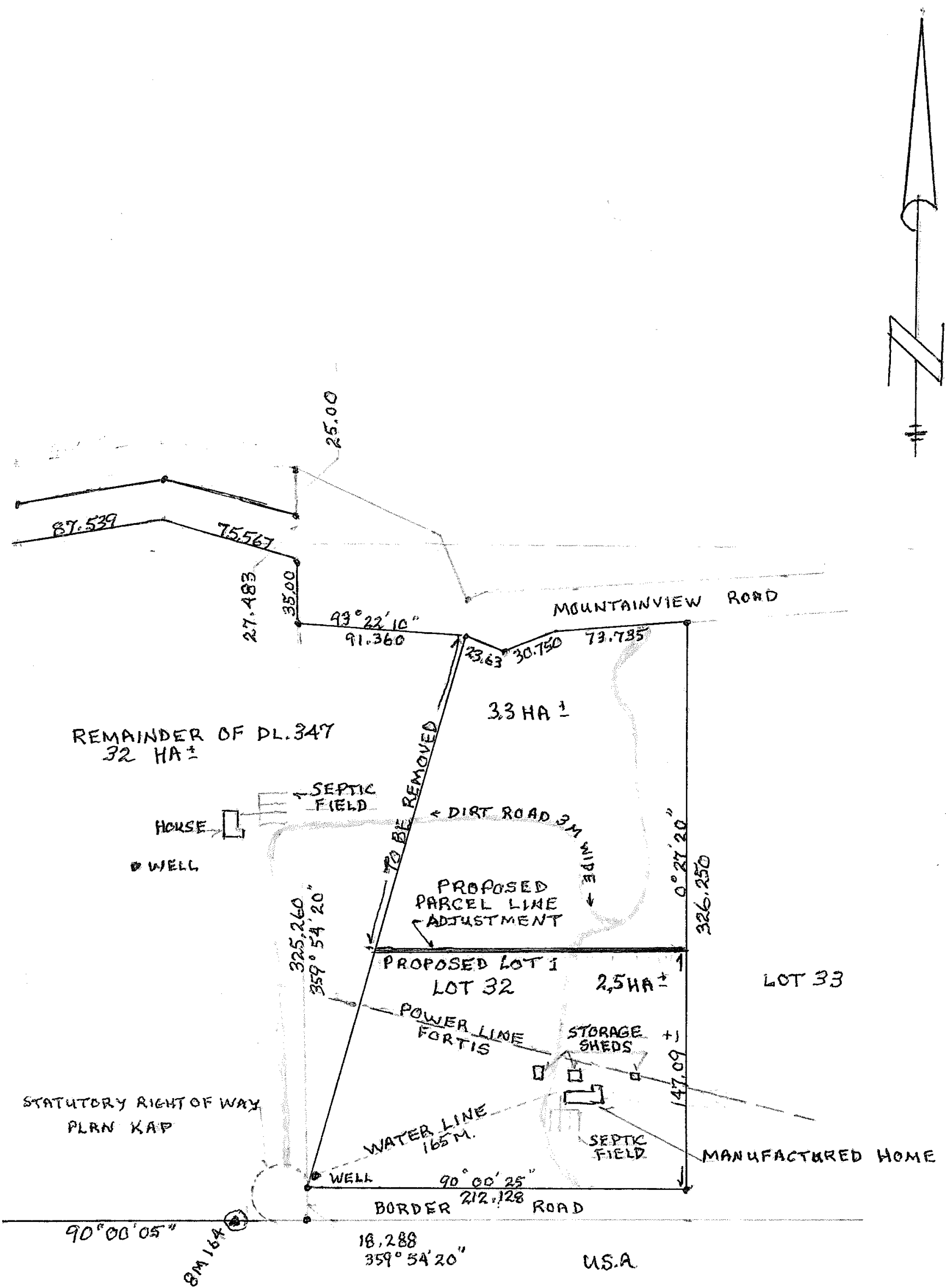
202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | [rdkb.com](http://rdkb.com)

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PROPOSED PARCEL LINE ADJUSTMENT  
FOR LOT 32 PLAN KAP 29935 DL LOT 312  
PID 004-128-796 + LOT 1 PLAN  
KAP 56175 DL 312347 PID 023-344-059

SCALE 1-2000  
METRIC

DATE: 2020/02/26 DWN BY R. SEYMOUR





Regional District of  
Kootenay Boundary

## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Development Variance Permit – Francis		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	D-333-03860.055 (643-20V)
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received a Development Variance Permit from Michael Francis for the construction of an accessory structure in Electoral Area D/Rural Grand Forks (see attachments).

Property Information	
<b>Owner(s):</b>	Michael Francis
<b>Agent:</b>	NA
<b>Location:</b>	3485 Davy Road
<b>Electoral Area:</b>	Electoral Area D/Rural Grand Forks
<b>Legal Description(s):</b>	Lot B, DL 333, SDYD, Plan KAP41743
<b>Area:</b>	0.5ha (1.2acr)
<b>Current Use(s):</b>	Residential
Land Use Bylaws	
<b>OCP Bylaw No. 1555:</b>	Residential Serviced 1
<b>DP Area:</b>	NA
<b>Zoning Bylaw No. 1675:</b>	Residential 1 (R1)
Other	
<b>ALR:</b>	NA
<b>Waterfront / Floodplain:</b>	NA
<b>Service Area:</b>	Sion Improvement District
<b>Planning Agreement Area:</b>	Grand Forks

### History / Background Information

The subject property is a 1.2-acre parcel located near Ward Lake, slightly northwest of the City of Grand Forks. It is designated as "Residential Serviced 1" in the Electoral Area D/Rural Grand Forks Official Community Plan Bylaw No. 1555 and is zoned "Residential 1" (R1) in the Electoral Area D/Rural Grand Forks Zoning Bylaw No. 1675.

The property is within the Sion Improvement District and the Grand Forks Planning Agreement Area. The RDKB Board member for the City of Grand Forks is entitled to vote on applications and referrals for properties within the Grand Forks Planning

Agreement Area at both the Electoral Area Services Committee meeting and the Board of Directors meeting.

### **Proposal**

The applicant proposes to construct a 126m<sup>2</sup> (1360ft.<sup>2</sup>) detached garage, with a 37m<sup>2</sup> (400ft.<sup>2</sup>) carport attached to it. They are requesting to increase the maximum permitted height from 5.0m to 5.8m, a 0.8m variance, for the construction of the accessory building.

### **Implications**

For Development Variance Permit applications, the RDKB considers whether the proposed variance will:

- a) Resolve a hardship;
- b) Improve the development;
- c) Cause negative impacts to the neighbouring properties.

The applicant has submitted their rationale for why they require a variance (see attachments). To summarize, the variance will allow the applicant to construct a garage that is high enough to store their recreational vehicle, along with other vehicles, while also meeting the snow load requirements of the *BC Building Code*.

Their rationale does not account for a hardship; however, the applicant considers it to be an improvement to the development that will not have negative impacts on neighbouring property owners. Letters will be sent to neighbouring property owners as part of the application review process, and they will be given the opportunity to provide comments to the Board of Directors prior to a decision.

### **Advisory Planning Commission (APC)**

The Electoral Area D/Rural Grand Forks APC considered the application at their April 7, 2020 meeting. In their discussion, they noted that the "proposal seems appropriate both for the location and the use" and provided a recommendation of support.

### **Recommendation**

That the Development Variance Permit application submitted by Michael Francis to allow for an increase in the maximum permitted height of an accessory building from 5.0m to 5.8m, a 0.8m variance, for the construction of a detached garage on the property legally described as Lot B, DL 333, SDYD, Plan KAP41743, Electoral Area D/Rural Grand Forks be presented to the Regional District of Kootenay Boundary Board of Directors for consideration, with a recommendation of support.

### **Attachments**

Site Location Map  
Subject Property Map  
Applicant Submission

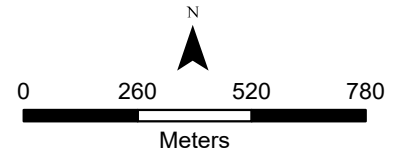


Regional District of  
Kootenay Boundary

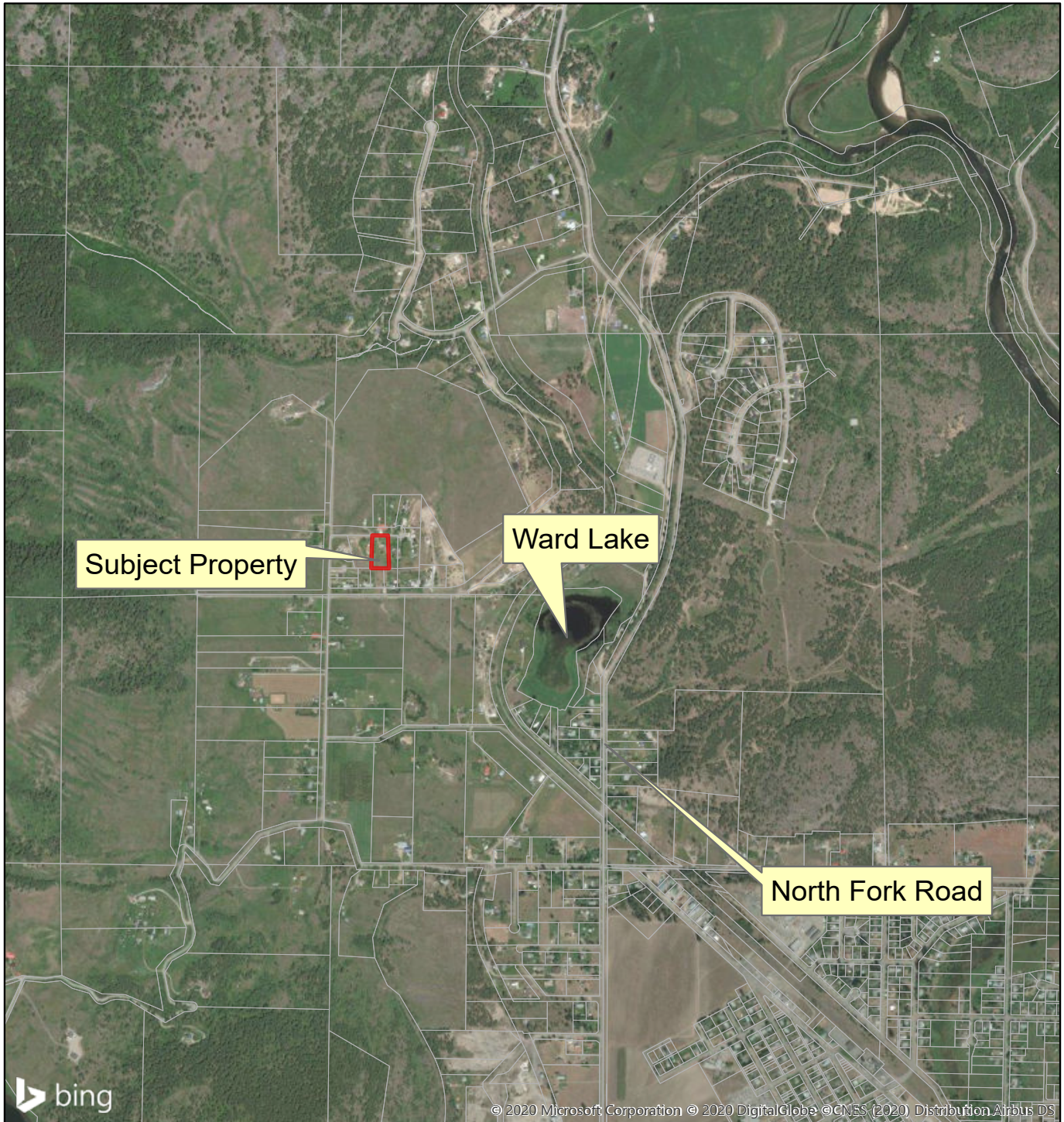
Date: 13-Mar-2020

## Site Location Map

Lot B, DL 498, SDYD,  
Plan KAP29837



1:15,000



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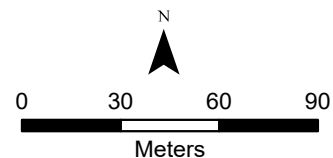


Regional District of  
**Kootenay Boundary**

Date: 13-Mar-2020

## Subject Property Map

Lob B, DL 333, SDYD,  
Plan KAP41743



1:2,000



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The space below is provided to describe the proposed development. Additional pages may be attached.

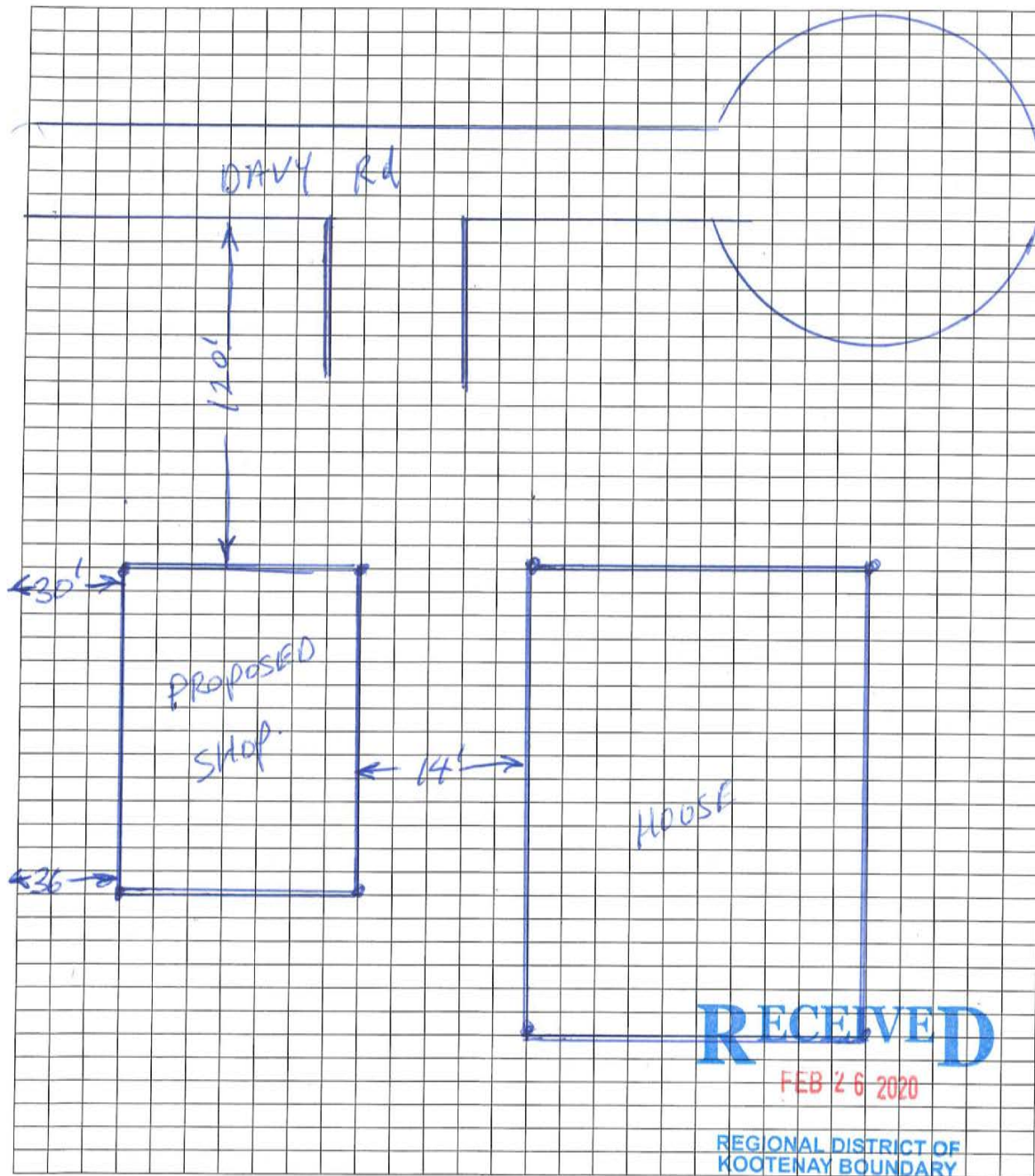
"STATEMENT IDENTIFYING WHICH REGULATION IS PROPOSED TO BE VARIED"  
 UNDER 602. RESIDENTIAL 1 ZONE NO. 7 HEIGHT b) ACCESSORY  
 BUILDINGS AND STRUCTURES MUST NOT EXCEED 5 METRES IN HEIGHT.  
 PROPOSED VARIANCE IS TO ALLOW CONSTRUCTION OF A RESIDENTIAL  
 GARAGE WITH A MAXIMUM HEIGHT OF 5.7404 METRES.

THIS VARIANCE IS REQUIRED TO ALLOW CONSTRUCTION WITH A  
 4.1148 METRE HEIGHT GARAGE DOOR AND MEET THE SNOW LOAD  
 REQUIREMENTS WITH A ROOF PITCH OF 3/12. THIS WILL ALLOW  
 ME TO STORE MY MOTORHOME AND OTHER VEHICLES AND IMPROVE  
 THE DEVELOPMENT OF MY GARAGE.

I HAVE SPOKEN TO MY NEIGHBOURS AND IT WILL NOT CAUSE  
 ANY NEGATIVE IMPACTS TO MY NEIGHBOURING PROPERTIES.

## BUILDING SITE PLAN

1. Draw proposed location of home or building on space provided below, and show distances to all PROPERTY LINES. Also, show north arrow.
2. Show location of street access and names of streets.
3. Show location and distances of any water courses.







Regional District of  
Kootenay Boundary

## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Ministry of Transportation and Infrastructure – Subdivision - Venema		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	D-365-03787.050
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received a referral from the Ministry of Transportation and Infrastructure (MOTI) regarding a subdivision application in Electoral Area D/Rural Grand Forks (see attachments).

Property Information	
<b>Owner(s):</b>	Harland Venema
<b>Agent:</b>	Breann Venema
<b>Location:</b>	5155 Legebokoff Road
<b>Electoral Area:</b>	Electoral Area D/Rural Grand Forks
<b>Legal Description(s):</b>	Lot 1, DL 365, SDYD, Plan KAP45565
<b>Area:</b>	4.4ha (10.9acr)
<b>Current Use(s):</b>	Single family residential
Land Use Bylaws	
<b>OCP Bylaw No.: 1555</b>	Agricultural Resource 1; Residential Serviced 2
<b>DP Area:</b>	NA
<b>Zoning Bylaw No.:</b>	Agricultural Resource 1; Residential 2
Other	
<b>ALR:</b>	Partial
<b>Waterfront / Floodplain:</b>	NA
<b>Service Area:</b>	Sion Improvement District
<b>Planning Agreement Area:</b>	Grand Forks

### History / Background Information

The subject property is located on the corner of Spencer Road and Legebokoff Road, to the west of Grand Forks Townsite and on the north side of Highway 3. It is designated in the Electoral Area D/Rural Grand Forks Official Community Plan (OCP) Bylaw No. 1555 for 'Agricultural Resource 1' and 'Residential Serviced 2' land use as well as zoned 'Agricultural Resource 1' (AGR1) and 'Residential 2' (R2) in Zoning Bylaw No. 1675.

The subject property is within the Grand Forks Planning Agreement Area. The RDKB Board member for the City of Grand Forks is entitled to vote on applications and

referrals for properties within the Grand Forks Planning Agreement Area at both the Electoral Area Services Committee meeting and the Board of Directors meeting.

The subject property is a 'hooked' parcel that is bisected by Legebokoff Road. It is 4.4ha in size, with each portion being approximately 2.2ha in size. Approximately 1.5ha of the northern portion of the parcel is within the Agricultural Land Reserve (ALR).<sup>1</sup> As such, it is also subject to the Agricultural Land Commission's (ALC) regulations.

## **Proposal**

The applicant is proposing to subdivide the subject property into two approximately 2.2ha parcels (see attachments). The subdivision would follow the existing parcel boundaries, using Legebokoff Road to separate the two parcels.

## **Implications**

### Land Use Considerations

The goals, objectives and policies for 'Residential Serviced' land uses in the OCP are based on parcels having the potential to connect to a community water system. The parcel is within the Sion Improvement District, but their water system may not extend to the parcel. The proposal is consistent with the goals, objectives and policies for 'Agricultural Resource' land uses.

### Zoning Considerations

The required minimum parcel size is 10ha for the AGR1 zone and 0.2ha for R2 parcels connected to a community water system, or 1 hectare where community water is not available. The proposal does not meet the size requirements of the AGR1 zone, as the proposed AGR1-zoned parcel is less than the required 10ha.

Section 305.9 of the Zoning Bylaw states that "parcels that are split into more than one zone may be subdivided along the zone boundary provided:

- a) the minimum parcel area requirement for new parcels created by subdivision can be achieved in at least one of the zones; and
- b) no parcel created pursuant to this section may be less than:
  - i. 2000m<sup>2</sup> when connected to a community water system,
  - ii. 1 hectare when not connected to a community water system."

In order to meet the requirements of the Zoning Bylaw, the new parcel boundary must follow the zone boundary for the AGR1 portion of the subject property. Doing so would alter the proposal to be one AGR1-zoned parcel of approximately 1.5ha and one hooked R2-zoned parcel of approximately 2.9ha.

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<sup>1</sup> The approximate sizes are based on our Interactive Webmap and differ from those shown by the applicant in their application package.

### ALR Considerations

Under Section 10(1) of the *ALR General Regulation*, subdivisions may be approved by an Approving Officer without the approval of the Commission. To receive approval, the proposed subdivision must:

1. not involve more than 4 parcels, each of which is a minimum of 1 ha;
2. result in no increase in the number of parcels;
3. adjust boundaries to allow for the enhancement of farming on the agricultural land; and,
4. result in ALR-parcels being no less than 1 ha in size.

An application to the ALC may be required; however, that is ultimately a decision of the approving officer and the ALC.

### **Advisory Planning Commission (APC)**

The Electoral Area D/Rural Grand Forks APC considered the application at their April 7, 2020 meeting. The following questions were raised at the meeting:

- “Is the road as wide as it should be?”
- Should the zoning by-law have a clause regarding properties already split by a highway?”

The APC provided the following discussion points and recommendation:

“After much discussion about the zoning bylaw, property layout and size, and setting of precedents, it was recommend[ed] to the Regional District that the application be supported. While we recognize that this is a departure from the zoning regulation, it is the most logical way to divide this property.”

### **Staff Comments**

The road dedication would have been a requirement of the subdivision of the parent parcel in 1957. It appears that the dedicated highway is 15m wide and likely would have met MOTI's requirements at the time when it was subdivided. A width of 20m is generally required for new subdivisions. Road width would be addressed by MOTI as part of the current subdivision application.

It is not known if this road width still meets MOTI's requirements; however, if it does not it would be addressed by MOTI as part of the current subdivision application.

With respect to the second question posed by the APC, the Zoning Bylaw has a regulation (Section 305.7) that prohibits the subdivision of new hooked parcels unless both portions of the parcel meet the minimum parcel size requirement. The northern R2-zoned portion of the parcel is approximately 0.7ha. The parcel would have to be connected to a community water system in order to be subdivided along the highway boundary; otherwise it needs to be a minimum of 1.0ha.

The applicant's proposal does not meet the requirements of the Zoning Bylaw, as it is a subdivision of an AGR1-zoned parcel, which requires a 10ha minimum parcel size. For the RDKB to support the subdivision application, the applicant will need to either:

Page 3 of 4

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1. Change their proposal to make the boundary of the AGR1 zone the new parcel boundary and retain a hooked parcel; or,
  2. Apply for a Zoning Amendment to rezone the AGR1-zoned portion of the parcel to another zone that allows for a smaller minimum parcel size, such as R2.
- However, it is unlikely that there would be policy support for such an application, as the AGR1-zoned portion of the parcel is within the ALR.

Should this staff report be received by the EAS Committee, it will be forwarded to MOTI and its contents will comprise our formal comments.

### **Recommendation**

That the staff report regarding the Ministry of Transportation and Infrastructure referral for a proposed subdivision, for the parcel legally described as Lot 1, DL 365, SDYD, Plan KAP45565, Electoral Area D/Rural Grand Forks, be received.

### **Attachments**

Site Location Map  
Subject Property Map  
Applicant Submission

Regional District of  
**Kootenay Boundary**

Date: 2020-03-23

## Site Location Map

Lot 1,  
Plan KAP45565, DL 365,  
SDYL



0 200 400 600 800

Meters

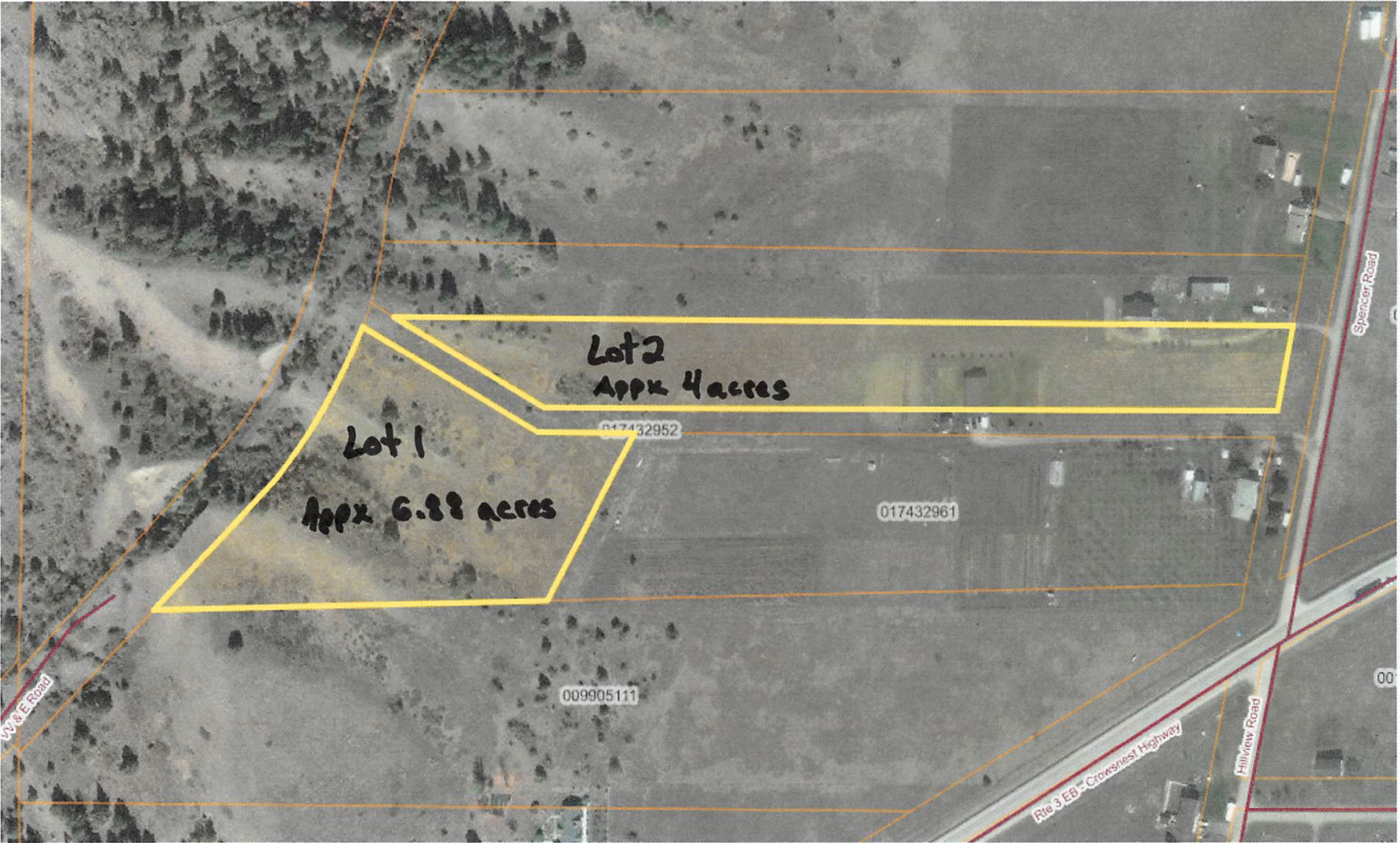
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## Electoral Area Services (EAS) Committee Staff Report

<b>RE:</b>	Development Permit – Wellman and Saura		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	BW-4222-07500.825 (646-20D)
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received an application from the purchasers of 386 Feathertop Way, Robin Wellman and Scott Saura, for an Alpine Environmentally Sensitive Development Permit in Electoral Area E/West Boundary-Big White (see attachments).

Property Information	
<b>Owner(s):</b>	Elizabeth & Quinn Weninger
<b>Agent:</b>	Robin Wellman & Scott Saura
<b>Location:</b>	386 Feathertop Way
<b>Electoral Area:</b>	Electoral Area E/West Boundary-Big White
<b>Legal Description(s):</b>	SL 45, DL4222, SDYD, Strata Plan KAS3134
<b>Area:</b>	0.05ha (0.13acr)
<b>Current Use(s):</b>	Vacant
Land Use Bylaws	
<b>OCP Bylaw No.: 1125</b>	Medium Density Residential
<b>DP Area:</b>	Commercial and Multi-Family DP1; Alpine Environmentally Sensitive DP2
<b>Zoning Bylaw No.: 1166</b>	Chalet Residential 3
Other	
<b>ALR:</b>	NA
<b>Waterfront / Floodplain:</b>	NA
<b>Service Area:</b>	NA
<b>Planning Agreement Area:</b>	NA

### History / Background Information

The subject property is located along Feathertop Way at Big White Ski Resort. It is designated "Medium Density Residential" in the Official Community Plan Bylaw No. 1125 (OCP) and zoned "Chalet Residential 3" (R3) in Zoning Bylaw No. 1166.

The property is also within the Commercial and Multiple Family and Alpine Environmentally Sensitive Development Permit Areas (DPAs). The proposal is exempt from a Multiple Family Development Permit because it only involves the construction of

a single family dwelling. However, it is still subject to the requirements of the Alpine Environmentally Sensitive DPA.

### **Proposal**

The proposal is to construct a single family dwelling and undertake landscape remediation works on the subject property. An Alpine Environmentally Sensitive Development Permit is required prior to the issuance of a building permit to ensure remediation of the land following disturbance. The applicant has submitted a landscape plan as part of their application (see attachments).

### **Implications**

The landscape plan demonstrates that the areas adjacent to the driveway will be reserved for snow storage. In an effort to retain native vegetation on the site, the applicant is proposing to transplant any existing vegetation in the snow storage areas to other parts of the property. Additionally, hard surfacing and landscape rock will be used instead of mulch in keeping with Fire Smart principles.

Eight new trees and twelve medium-sized shrubs will be planted. The applicant is proposing four of the trees to be Blue Spruce, which is a non-native species in British Columbia. Ideally, the landscape plan should include drought-tolerant, native plant species. Replacing the Blue Spruce with a different, native plant species has been suggested to the applicant to be consistent with our DPA guidelines.

### **Advisory Planning Commission (APC)**

The Electoral Area E/West Boundary-Big White APC considered the application at their April 7, 2020 meeting. The following points were raised for discussion by the APC:

- "How close is the Front overhang to the front of the street/property?"
- Blue Spruce Tree is not local to the area."

The APC provided a recommendation of support for the application, conditional upon resolving the items noted in their discussion.

### **Staff Comments**

Planning staff have followed up with the applicant for additional measurements from the eave and post of the entranceway. That information had not been received at the time this report was prepared. The required minimum setback from the front parcel line is 4.5m. Eaves are permitted to encroach 2.0m into this setback area. As such, the post must be a minimum of 4.5m and the eave a minimum of 2.5m from the front parcel line.

Vegetation type was also flagged for the applicant to address. The following native tree types are recommended in BC Wildfire Service's *FireSmart Begins at Home Manual*: poplar, birch, aspen, cottonwood, maple, alder and ash. These recommended tree types have been pointed out to the applicant.

Staff will not issue a development permit until the above-noted concerns have been addressed by the applicant.

### **Recommendation**

That the staff report regarding the Development Permit application submitted by Robin Wellman & Scott Saura to construct a cabin in the Commercial and Multi-Family and Alpine Environmentally Sensitive Development Permit Areas on the parcel legally described as SL 45, DL4222, SDYD, Strata Plan KAS3134, Electoral Area E/West Boundary-Big White, be received.

### **Attachments**

Site Location Map  
Subject Property Map  
Applicant Submission

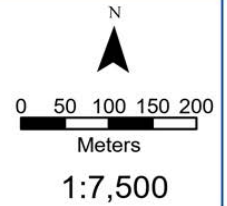


Regional District of  
Kootenay Boundary

Date: 2020-03-25

# Site Location Map

Strata Lot 45,  
Plan KAS3134, DL 4222,  
SDYD



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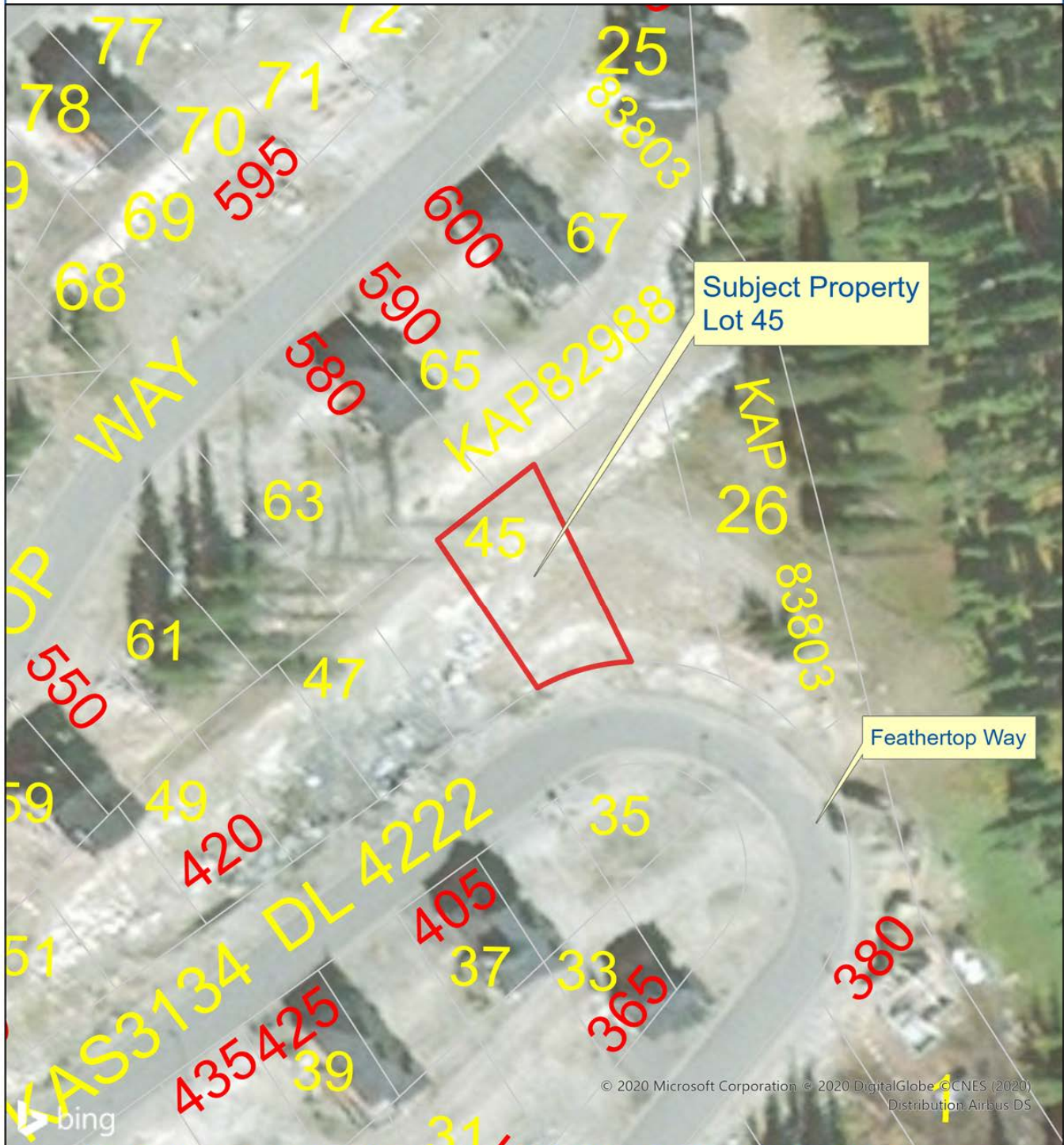
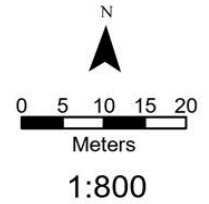


Regional District of  
Kootenay Boundary

Date: 2020-03-25

## Subject Property Map

Strata Lot 45,  
Plan KAS3134, DL 4222,  
SDYD



202-843 Rossland Ave, Trail BC V1R 4S8 | T: 250.368.9148 | T/F: 1.800.355.7352 | [rdkb.com](http://rdkb.com)

Document Path: P:\PD\EA\_E\Big\_White\BW-4222-07500.825\2020-April-DP\Mapping\2020-03-24\_SM\_BW-4222-07500.825\2020-03-24\_SM\_BW-4222-07500.825.aprx

**Damaged Land Reclamation Plan : Lot 45/386 Feathertop Way  
Big White B.C**

In our plan for this proposed single family home, we intend to keep our impact and disruption to the native landscape as little as possible. Preserving all native vegetation where possible.

In order to maintain the appearance of the natural environment found at Big White and promote water conservation, we intend to plant native, drought tolerant plants where disruption has occurred. If possible, we will transplant any trees and shrubs away from either side of the driveway where we intend to store cleared snow.

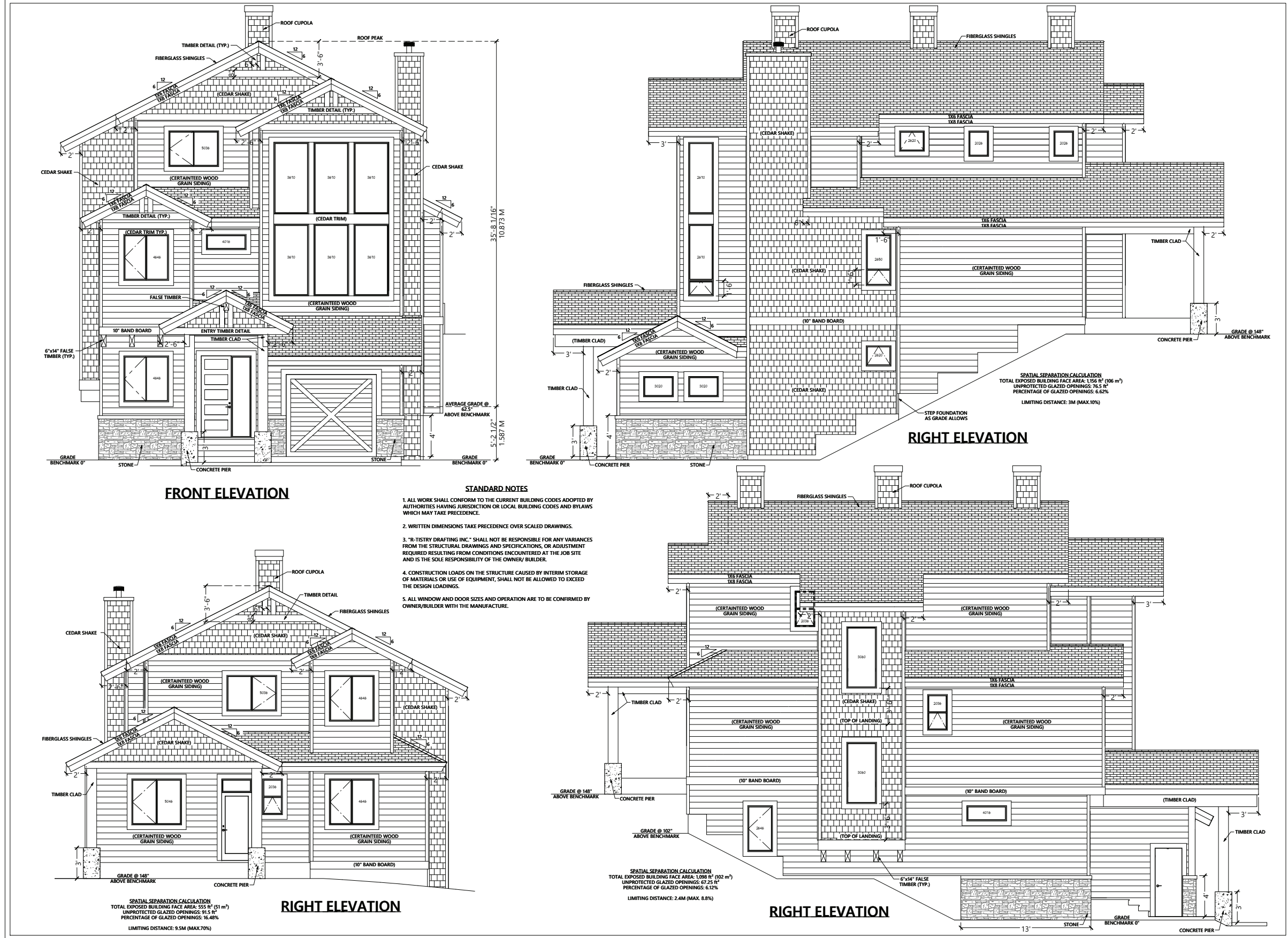
We are also committed to removing all construction debris from the site once the project is complete.


In order to mitigate the possible threat of wildfire we plan to use a solid surface driveway and walkways, along with crushed landscape rock surrounding the house as a fire barrier.

What our plan is to have a low maintenance, natural landscape that will help emphasize the natural beauty of the surroundings.

Your consideration is appreciated,

**Robin Wellman  
Wellman Homes  
250 717 6754**





**R-tistry Home Design**  
design@rtistryhomedesign.com  
PH: 250-469-1641

ISSUED PLANS:	
NO.1 PERMIT DRAWINGS	MARCH 12-20
NO.2 SIDING AND PLOT PLAN REV.	MARCH 11-20

PROJECT TITLE:

386 FEATHERTOP WAY  
LOT 45 - BIG WHITE  
BEVERDELL, BC

DATE:

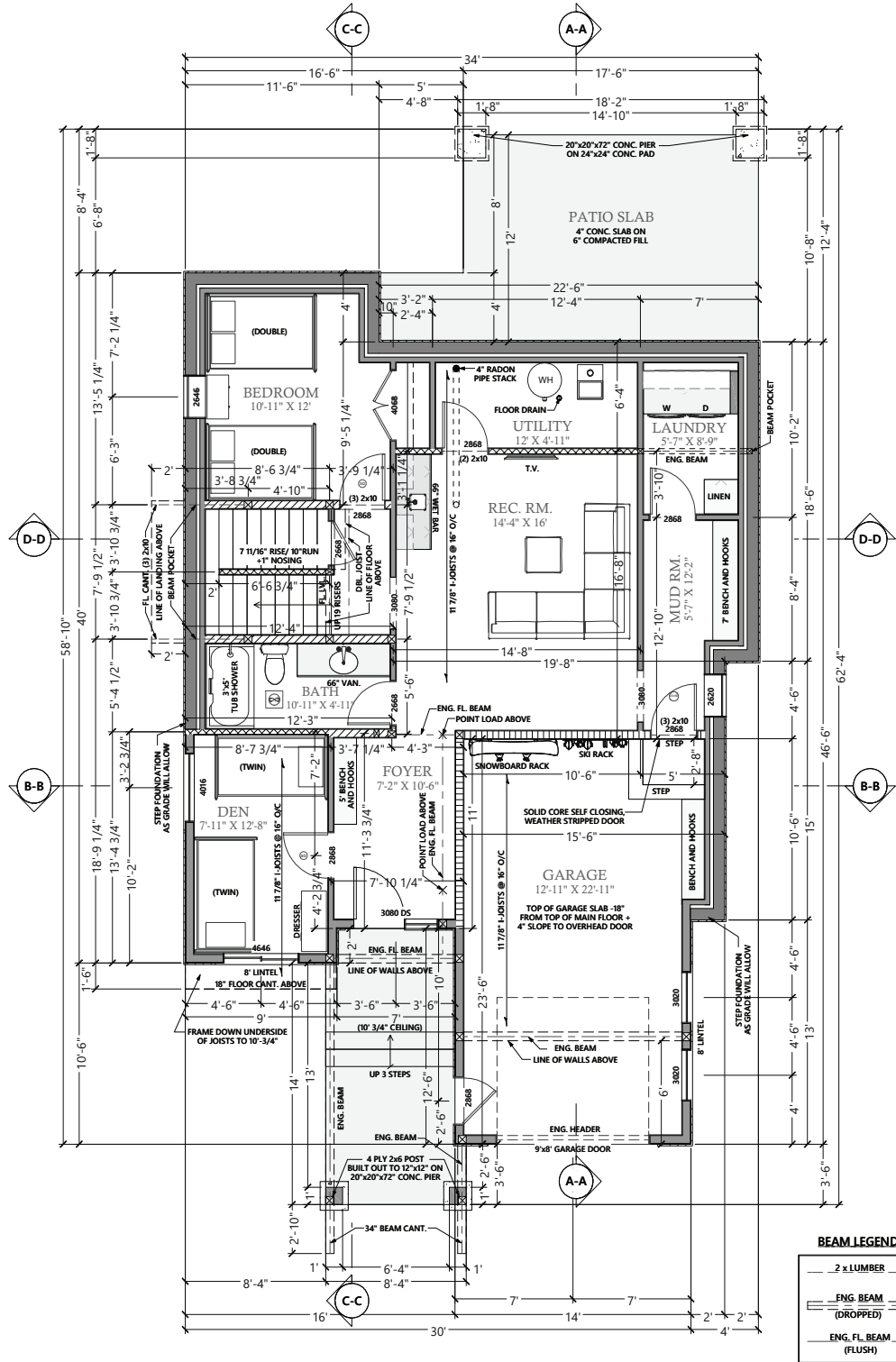
2020-03-11

SCALE:

1/4" = 1'

SHEET:

1/6

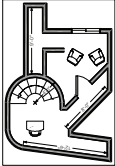
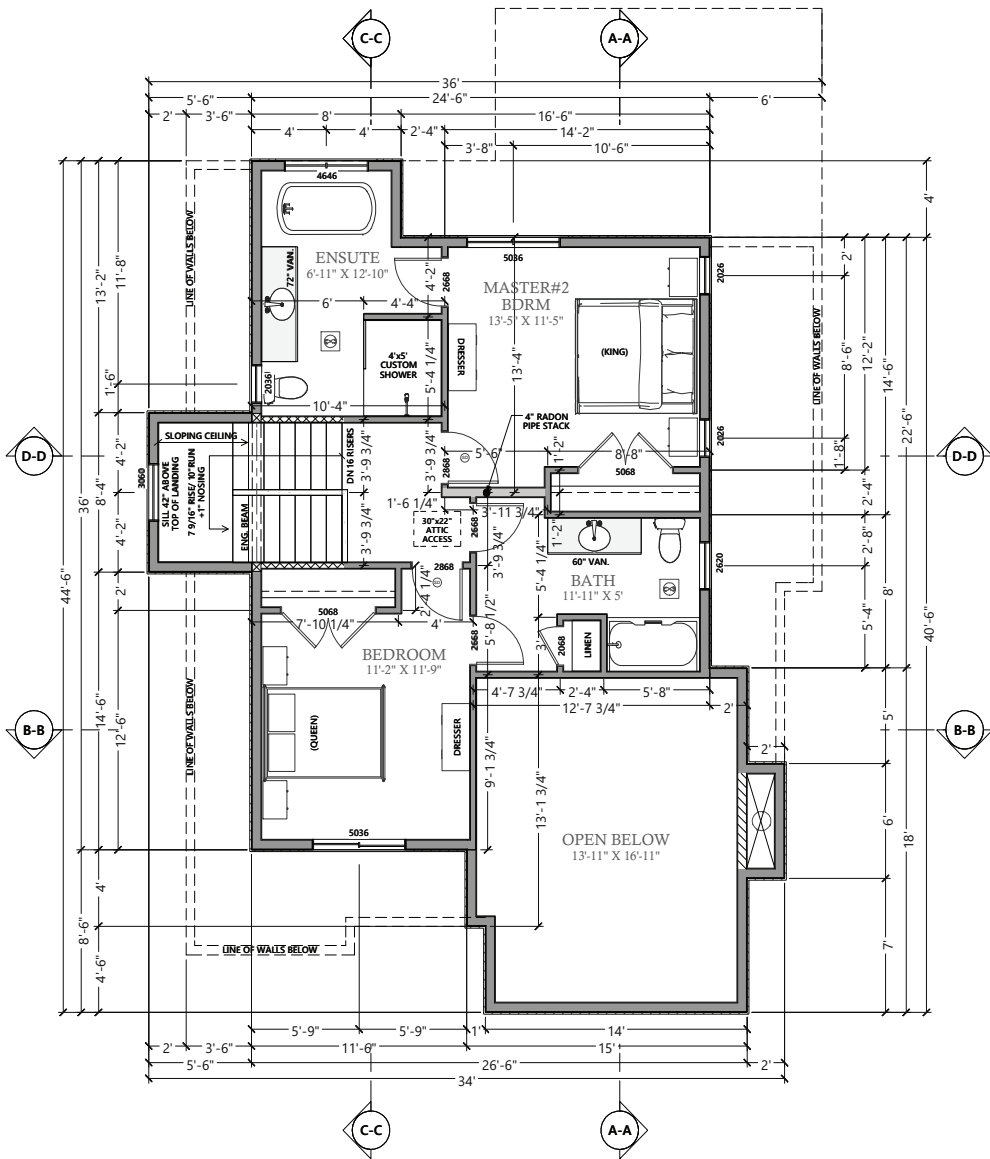
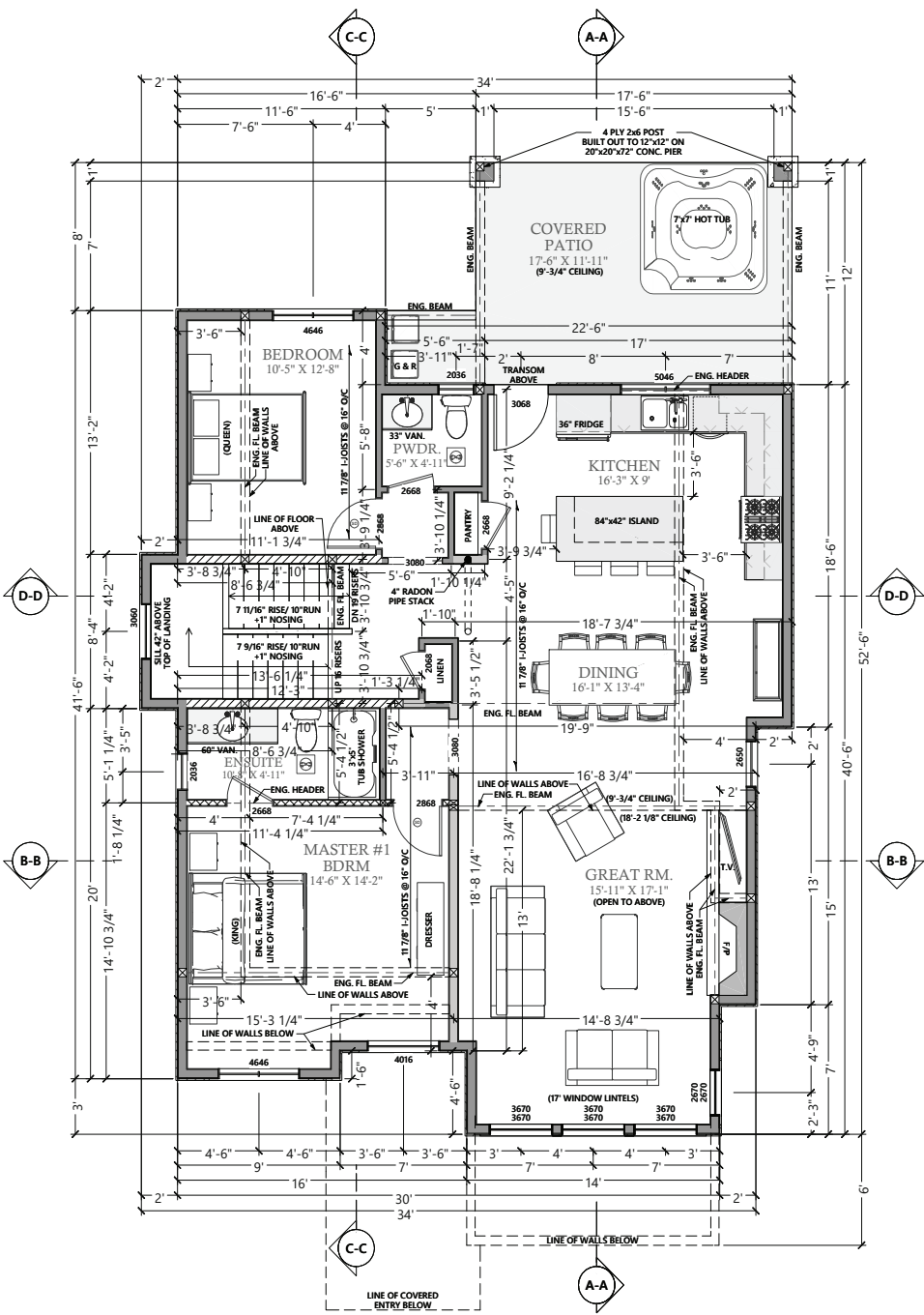


2x6 BEARING WALL

8" x 12'-0" CONCRETE FOUNDATION  
ON 18"x8" CONCRETE STRIP FOOTING  
C/W 2x4 FURRING WALL @ 24" O/C

DATE:
2020-03-11
SCALE:
1/4" = 1'
SHEET:
2/6

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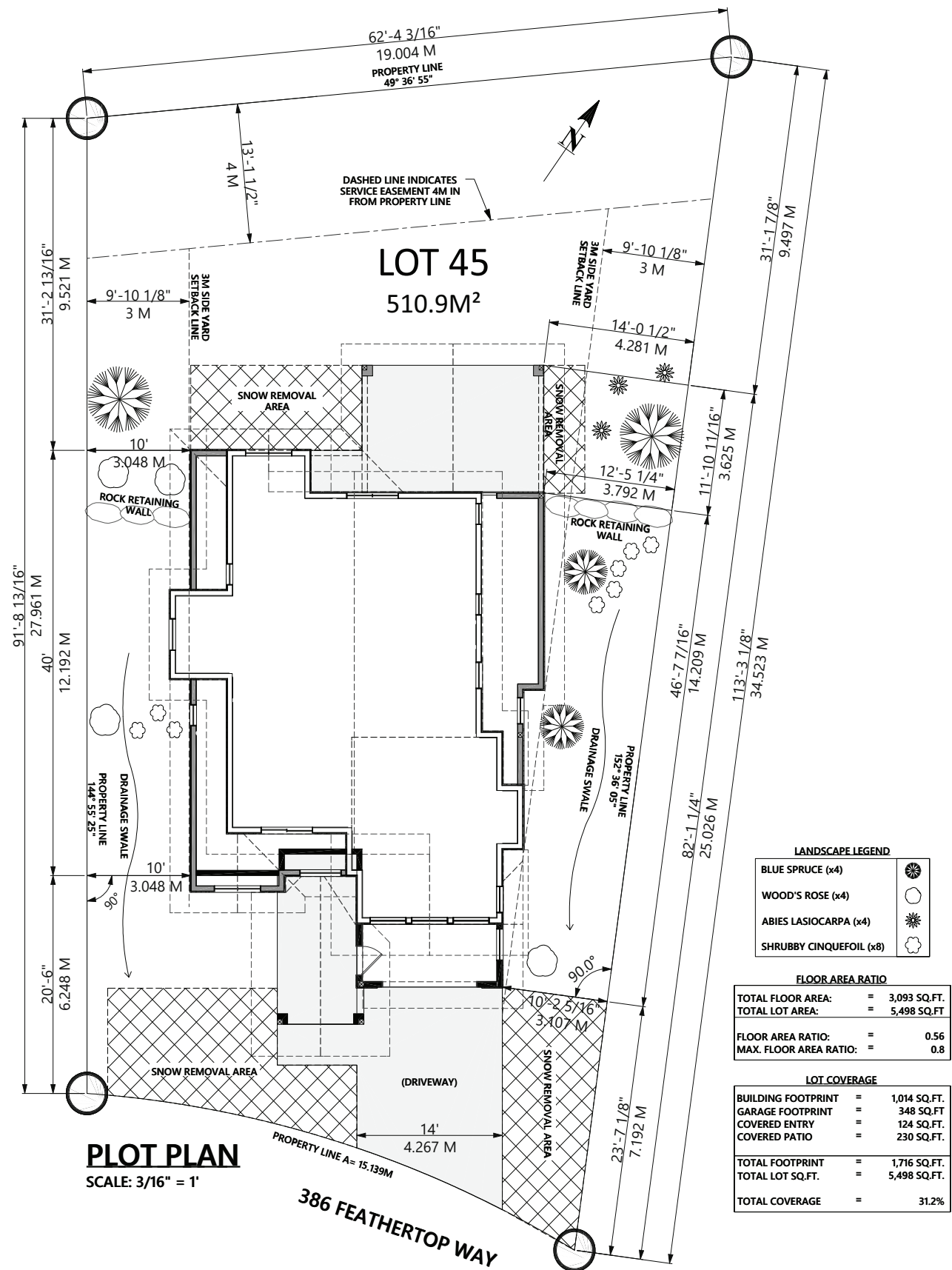
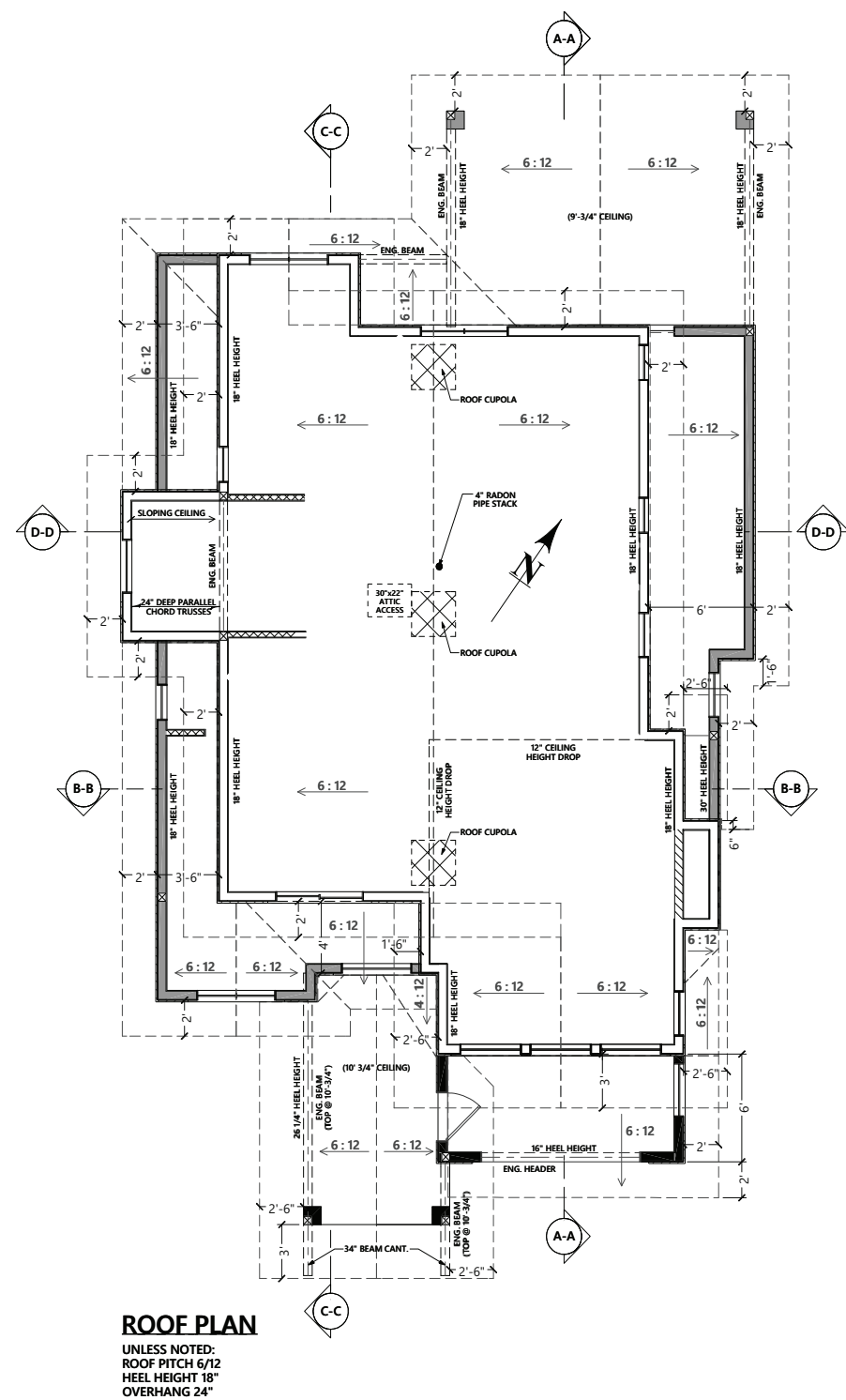


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design@rtistryhomedesign.com  
PH: 250-469-1641

ISSUED PLANS:	
NO.1 PERMIT DRAWINGS	MARCH 12-20
NO.2 SIDING AND PLOT PLAN REV.	MARCH 11-20

PROJECT TITLE:  
386 FEATHERTOP WAY  
LOT 45 - BIG WHITE  
BEVERDELL, BC

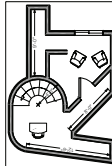
DATE:
2020-03-11
SCALE:
1/4" = 1'
SHEET:
3/6



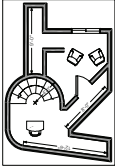
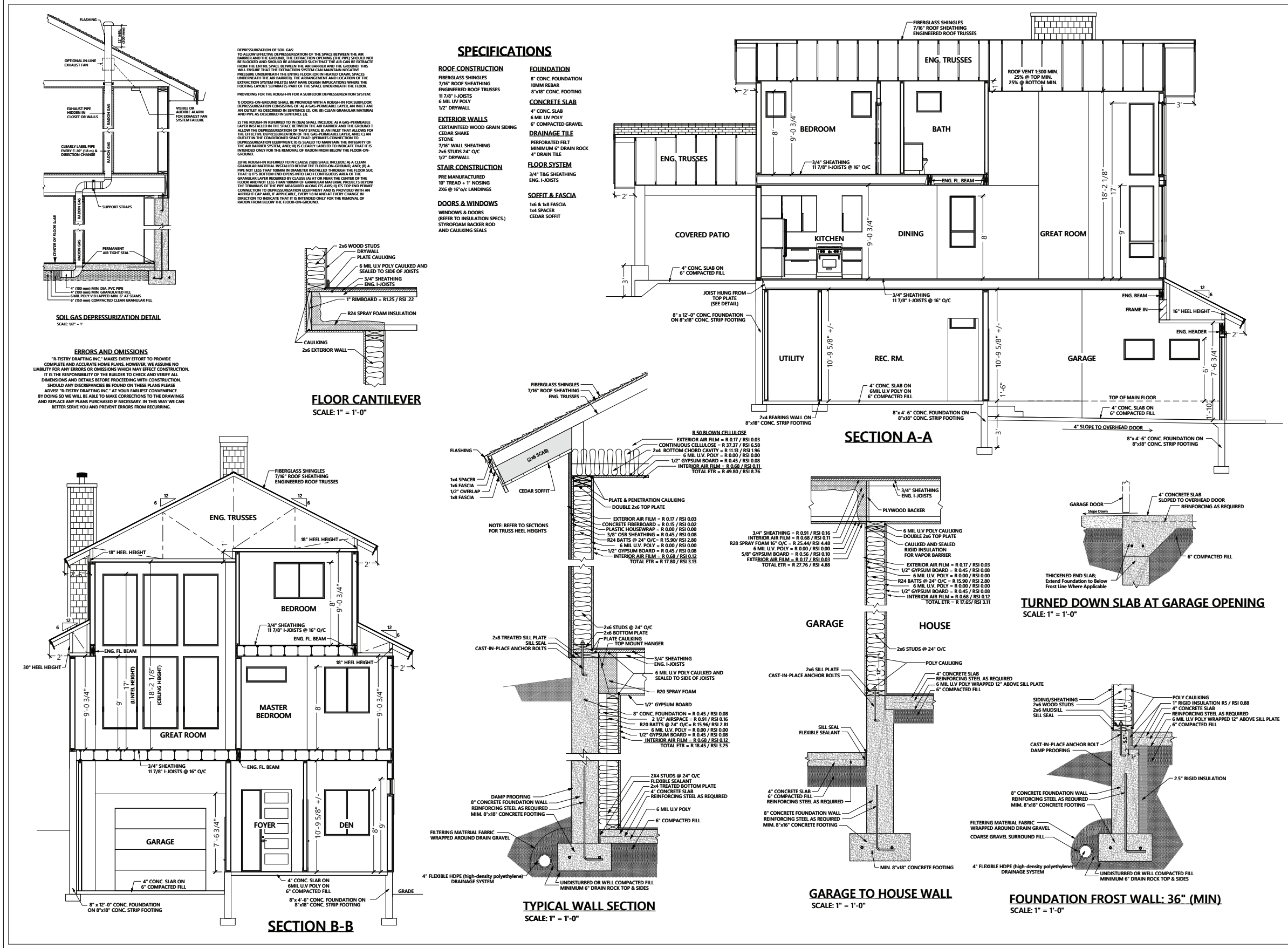
ISSUED PLANS:	
NO.1	PERMIT DRAWINGS MARCH 2-20
NO.2	SIDING AND PLOT PLAN REV. MARCH 11-20

PROJECT TITLE:  
8886 FEATHERTOP WAY  
LOT 45 - BIG WHITE  
BEVERDELL, BC

DATE:
2020-03-11
SCALE:
1/4" = 1'
SHEET:
4/6



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PH: 250-469-1641

**ISSUED PLANS:**

NO.1. PERMIT DRAWINGS	MARCH 12-20
NO.2. SIDING AND PLOT PLAN REV.	MARCH 11-20

**PROJECT TITLE:**

386 FEATHERTOP WAY  
LOT 45 - BIG WHITE  
BEVERDELL, BC

**DATE:**

2020-03-11

**SCALE:**

1/4" = 1'

**SHEET:**

5/6

CODES AND STANDARDS

All workmanship is to be of a standard equal in all respects to good building practice.

At the time of preparation, this plan was drawn in accordance with the current edition of the B.C. Building Code. It is the responsibility of the owner/builder to ensure that changes made to the code are complied with and all amendments are incorporated in the construction of this plan. All work shall conform to local building codes and bylaws which may take precedence.

Prior to proceeding with construction, the owner/builder must verify all information, dimensions and specifications of this plan. Written dimensions always take precedence over scale measurements.

Any variance from structural drawings and specifications or from conditions encountered at the job site, shall be resolved by the owner/builder and such solutions shall be their sole responsibility.

CONCRETE & FOOTINGS

All concrete to have a minimum compressive strength of 2,500 PSI (20 MPa) at 28 days.

All foundation walls 24" (600 mm) and higher should have one horizontal 10 mm reinforcing bar 3" (75 mm) from the top. Corner reinforcing to be lapped minimum 24" (600 mm).

All footings are to have two 1/2" reinforcing bars. The reinforcing bars are to be situated such that one bar is 3" (75 mm) clear of the side and bottom of the footing on both sides of the footing.

Grades shown on elevations are estimated. Adjust on site as required. Retaining walls other than the foundation walls of the residence are beyond the scope of these drawings unless otherwise noted.

INSULATION / VENTILATION

Minimum ETR ratings from the BCBC 9.36.2.6 for Zone 5 with out Heat-recovery Ventilator

Ceilings below attics - R 49.23 / RSI 8.67  
Cathedral ceilings and flat roofs - R 36.52 / RSI 6.57  
Exterior ZONE walls - R 17.49 / RSI 3.08  
Floors above unheated spaces - R 26.52 / RSI 4.67  
Foundation walls - R 16.52 / RSI 2.98  
Unheated floors above frost line - R 11.13 / RSI 1.96  
Heated floors above frost line - R 13.17 / RSI 2.32  
Slab on grade with an integral footing - R 11.13 / RSI 1.96

Ceiling insulation may be loose fill type or batt type.

Walls and ceilings between residence and attached garage shall be insulated.

Insulation requirements may vary with heating systems and with local conditions.

All roof spaces shall be ventilated with soffit, roof or gable vents or a combination of these, equally distributed between the top of the roof space and soffits.

ABOVE GRADE MASONRY

All above grade masonry is to conform to the BC Building Code.

If brick veneer is to be installed, counter flashing shall be installed up to 8" (200 mm) behind the building felt and below the bottom course with vertical joints raked clean. Weep holes 24" (600 mm) o.c..

CARPENTRY

Framing lumber shall be number two (2) or better Spruce unless otherwise specified on the plan. All beam and lintel sizes shown on the drawings to be reviewed & confirmed by truss manufacturer and contractor. Any beam or lintel sizes provided by truss/floor manufacturer take precedence.

Joists are to be doubled under parallel partitions.

Joists shall be placed to accommodate plumbing in the event of a discrepancy please contact floor supplier before any alterations or cuts are made.

Wood in contact with concrete shall be dampproofed with 45 lb. felt or a sill plate gasket and pressure treated with a waterborne preservative or other approved method on exterior walls.

Interior framing to be 4" (100 mm) clear of back and sides of firebox and 2" (50 mm) clear of brick chimneys. Frame exterior walls 1" (25 mm) clear from exterior cladding.

Plates are to be anchored to concrete with 1/2" anchor bolts, maximum 6 ft. o.c. or other approved method.

Flush framed wood members shall be anchored with 200 lb. joist hangers unless otherwise specified.

MISCELLANEOUS

Caulk over and around all exterior openings using non-hardening caulking compound.

Flash all changes of materials on exterior walls.

Flash over all exterior openings.

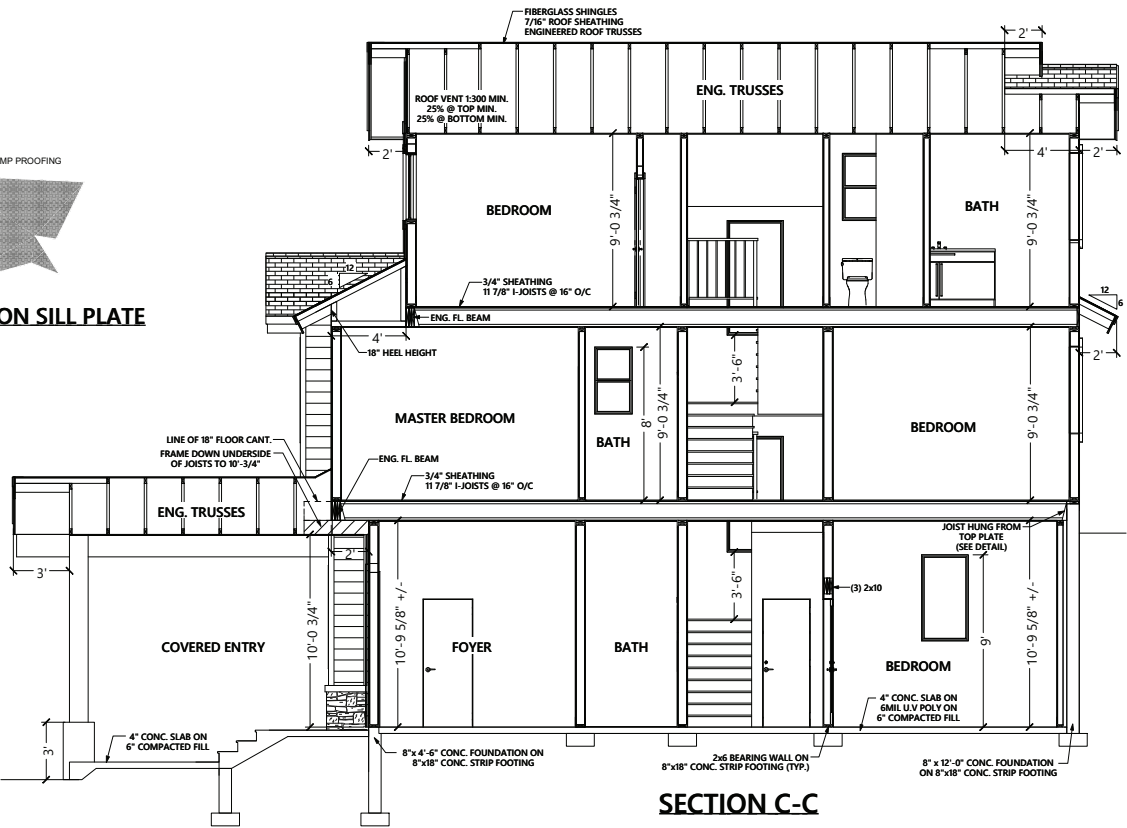
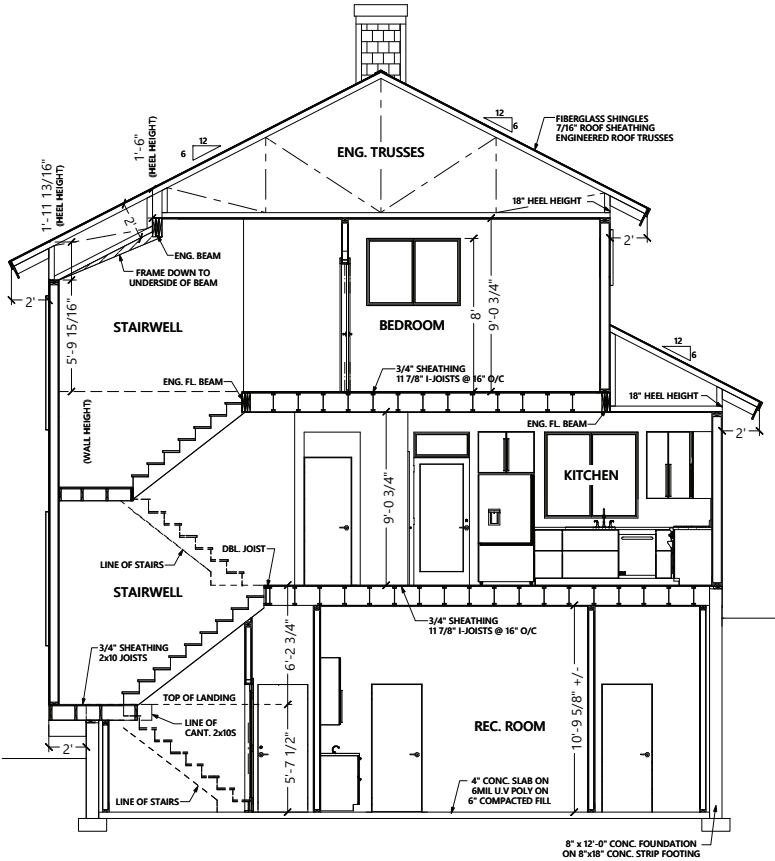
All siding or stucco to be a minimum of 8" (200 mm) above finished grade.

All balcony railings to be 36" (910 mm) in height. Maximum spacing between vertical members is 4" (100 mm). Minimum distance between horizontal rails to be 32" (800 mm). Top rail to sustain outward load of 40 lbs. per linear foot.

Coat and clothes closets shall have at least one roof and shelf with minimum depth of 24" unless otherwise stated. Linen closet shall have 5 adjustable shelves wherever possible. Brown closets shall have on shelf.

FLOOR HUNG FROM FOUNDATION SILL PLATE  
SCALE: 1" = 1'-0"

**ERRORS AND OMISSIONS**  
"R-TISTRY DRAFTING INC." MAKES EVERY EFFORT TO PROVIDE COMPLETE AND ACCURATE HOME PLANS. HOWEVER, WE ASSUME NO LIABILITY FOR ANY ERRORS OR OMISSIONS WHICH MAY EFFECT CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE BUILDER TO CHECK AND VERIFY ALL DIMENSIONS AND DETAILS BEFORE PROCEEDING WITH CONSTRUCTION. SHOULD ANY DISCREPANCIES BE FOUND ON THESE PLANS PLEASE ADVISE "R-TISTRY DRAFTING INC." AT YOUR EARLIEST CONVENIENCE. BY DOING SO WE WILL BE ABLE TO MAKE CORRECTIONS TO THE DRAWINGS AND REPLACE ANY PLANS PURCHASED IF NECESSARY. IN THIS WAY WE CAN BETTER SERVE YOU AND PREVENT ERRORS FROM RECURRING.



**R-tistry Home Design**  
design@rtistryhomedesign.com  
PH: 250-469-1641

ISSUED PLANS:

NO.1	PERMIT DRAWINGS	MARCH 12-20
NO.2	SIDING AND LOT PLAN REV.	MARCH 11-20

PROJECT TITLE:

386 FEATHERTOP WAY  
LOT 45 - BIG WHITE  
BEVERDELL, BC

DATE:

2020-03-11

SCALE:

1/4" = 1'

SHEET:

6/6



Regional District of  
Kootenay Boundary

## Electoral Area Service (EAS) Committee Staff Report

<b>RE:</b>	Development Permit – Mount Baldy – Molachyk		
<b>Date:</b>	April 16, 2020	<b>File #:</b>	E-100s-01371.030 (644-20D)
<b>To:</b>	Chair Grieve and Members of the EAS Committee		
<b>From:</b>	Corey Scott, Planner		

### Issue Introduction

We have received an application from the owners of 331 Buck Road (Lot 7) for an Alpine Residential and Commercial Development Permit in Electoral Area E/West Boundary (see attachments).

Property Information	
<b>Owner(s):</b>	Antony and Tanya Molachyk
<b>Agent:</b>	NA
<b>Location:</b>	331 Buck Road
<b>Electoral Area:</b>	Electoral Area E/West Boundary
<b>Legal Description(s):</b>	Lot 7, DL 100s, SDYD, Plan KAP 82817
<b>Area:</b>	0.07ha (0.16acr)
<b>Current Use(s):</b>	Vacant
Land Use Bylaws	
<b>OCP Bylaw No.: 1335</b>	Wapiti Residential
<b>DP Area:</b>	Alpine Residential and Commercial
<b>Zoning Bylaw No.: 1340</b>	Wapiti Residential 2
Other	
<b>ALR:</b>	NA
<b>Waterfront / Floodplain:</b>	NA
<b>Service Area:</b>	NA
<b>Planning Agreement Area:</b>	NA

### History / Background Information

The subject property is a vacant lot that is located along Buck Road in the Wapiti subdivision at Mount Baldy Ski Resort. It is designated "Wapiti Residential" in the Electoral Area E/Mount Baldy Official Community Plan Bylaw No. 1335 (OCP) and zoned "Wapiti Residential 2" (R2) in Zoning Bylaw No. 1340. The property is also within the Alpine Residential and Commercial Development Permit Area (DPA).

## Proposal

The proposal is to construct a 104m<sup>2</sup> (1119ft<sup>2</sup>) cabin and undertake landscape remediation works on the subject property. An Alpine Residential and Commercial Development Permit is required prior to the issuance of a building permit to ensure remediation of the land following disturbance.

## Implications

The applicant has submitted a proposal description and landscape plan as part of their application (see attachments). Their proposal takes building and lighting design, erosion control measures, snow storage and landscape reclamation into consideration.

The proposal will add 25 new Lodgepole Pines and 12 medium-sized shrubs, along with other small groundcover shrubs, to the site, while retaining the existing vegetation that falls outside of the building platform area. Groundcover vegetation is proposed on and adjacent to snow storage areas to provide erosion protection. The applicant is proposing to cover the driveway and parking area with  $\frac{3}{4}$  minus gravel to maintain a permeable surface for drainage.

In terms of building form, the proposal shows a simple roof design and contains modest outdoor lighting on the cabin. Assurance that the roof design will prevent snow shedding will be provided upon application for a building permit. The building proposal is consistent with the requirements of the Zoning Bylaw.

## Advisory Planning Commission (APC)

The Electoral Area E/West Boundary APC considered the application at their April 6, 2020 meeting and provided the following discussion:

- "Vicki explained that the reason we are seeing this application is that the RDKB planning department would like our input into the landscaping of the property;
- The planting of the lodgepole pine in an area where we want to be fire-safe was questioned;
- It was suggested that the judicious planting of deciduous trees might be more appropriate;
- A concern was raised about the suitability of the shingle roof and the retention of snow on the roof;
- Snow removal from the driveway and snow from roofs impacting neighbouring properties were of concern;
- An APC member questioned the wisdom of non-shedding roofs;
- That's a lot of trees; eventually they will be 50-100' tall;
- Concern about trees around snow storage areas; and,
- Suggestion that trees should only be planted along the road."

The APC provided a recommendation for support of the application, conditional upon the applicant addressing their concerns related to snow shedding from the roof and the planting of trees.

## Staff Comments

In response to the APC's landscaping concerns, the applicant has revised their plan to be more consistent with BC Wildfire Service's *FireSmart Begins at Home Manual*. In that manual there are best practices that speak to:

- tree spacing of a minimum of 6m from one another in areas that are within 10m of a building; and,
- planting deciduous trees native to BC that are fire resistant such as poplar, birch, aspen, cottonwood, maple, alder and ash.

The applicant has revised their plan to have 6m tree spacing and is proposing to plant a native species of maple that is drought tolerant to better meet our development permit guidelines. They have also removed trees from the plan to provide more space for snow storage.

With respect to the roof design, our development permit guidelines state "roofs should be simple and designed to retain snow." While no assurance from a professional architect or engineer is required to ensure snow retention at the development permit stage, our Building Department has confirmed that:

"the Ground Snow Load for Mount Baldy exceeds the scope of Part 9 of the *BC Building Code* and professional engineers are required to conduct the design and field review of construction. We require the same level of assurance [at Mount Baldy] as Big White."

This assurance would be required prior to the issuance of a Building Permit.

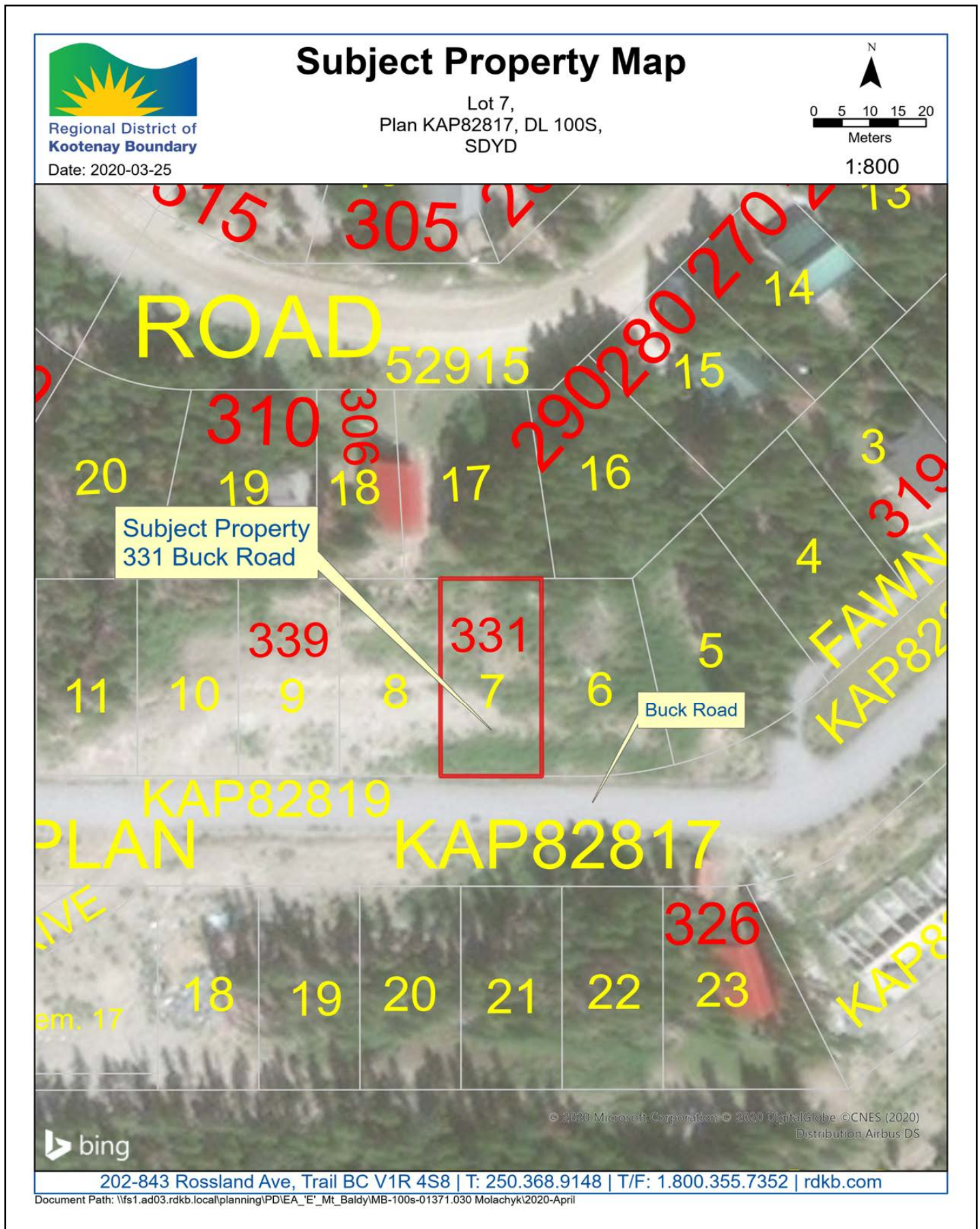
## Recommendation

That the staff report regarding the Development Permit application submitted by Antony Molachyk to construct a cabin, in the Alpine Residential and Commercial Development Permit Area on the parcel legally described as Lot 7, DL 100s, SDYD, Plan KAP 82817, Electoral Area E/West Boundary-Mount Baldy be received.

## Attachments

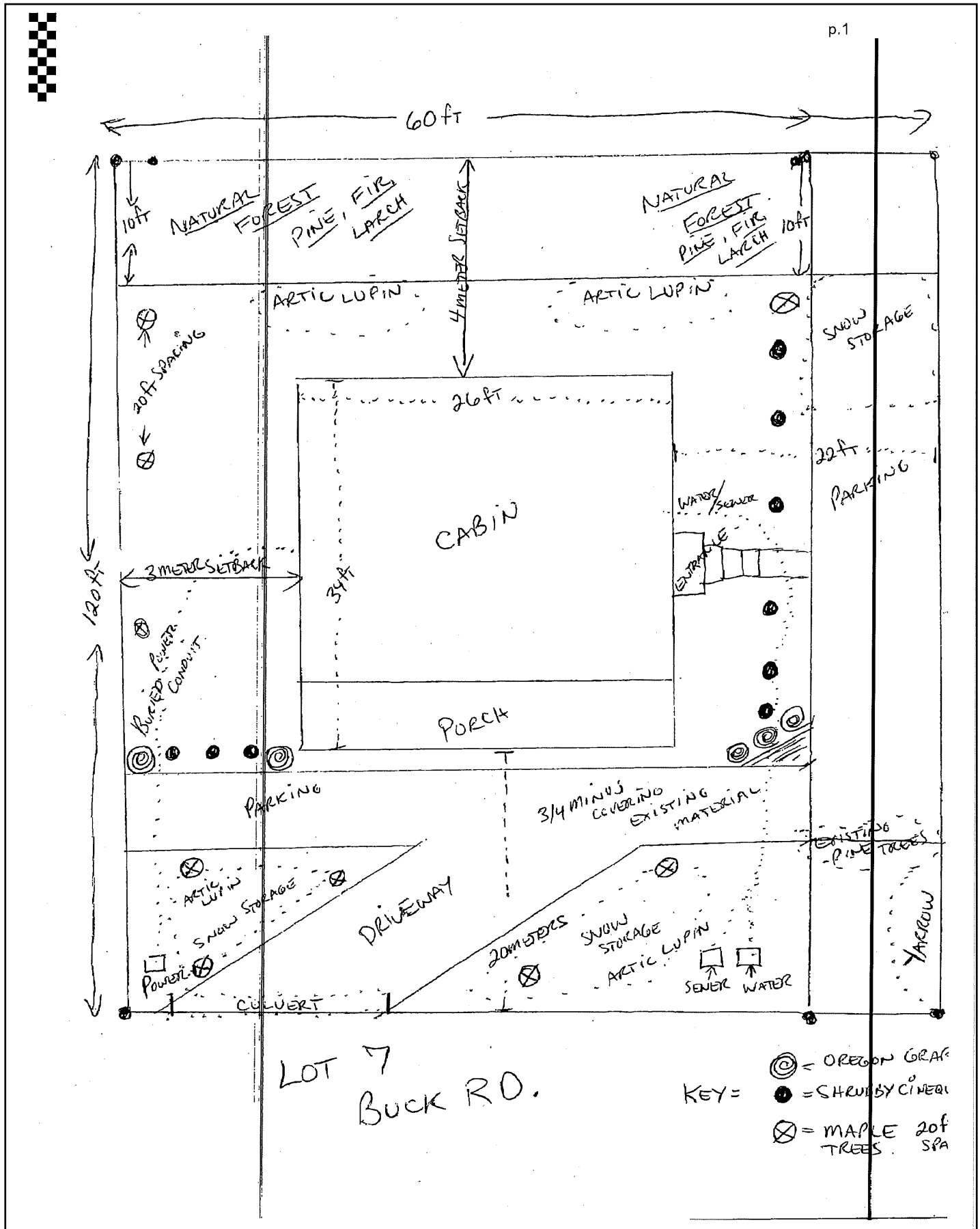
Site Location Map  
Subject Property Map  
Applicant Submission

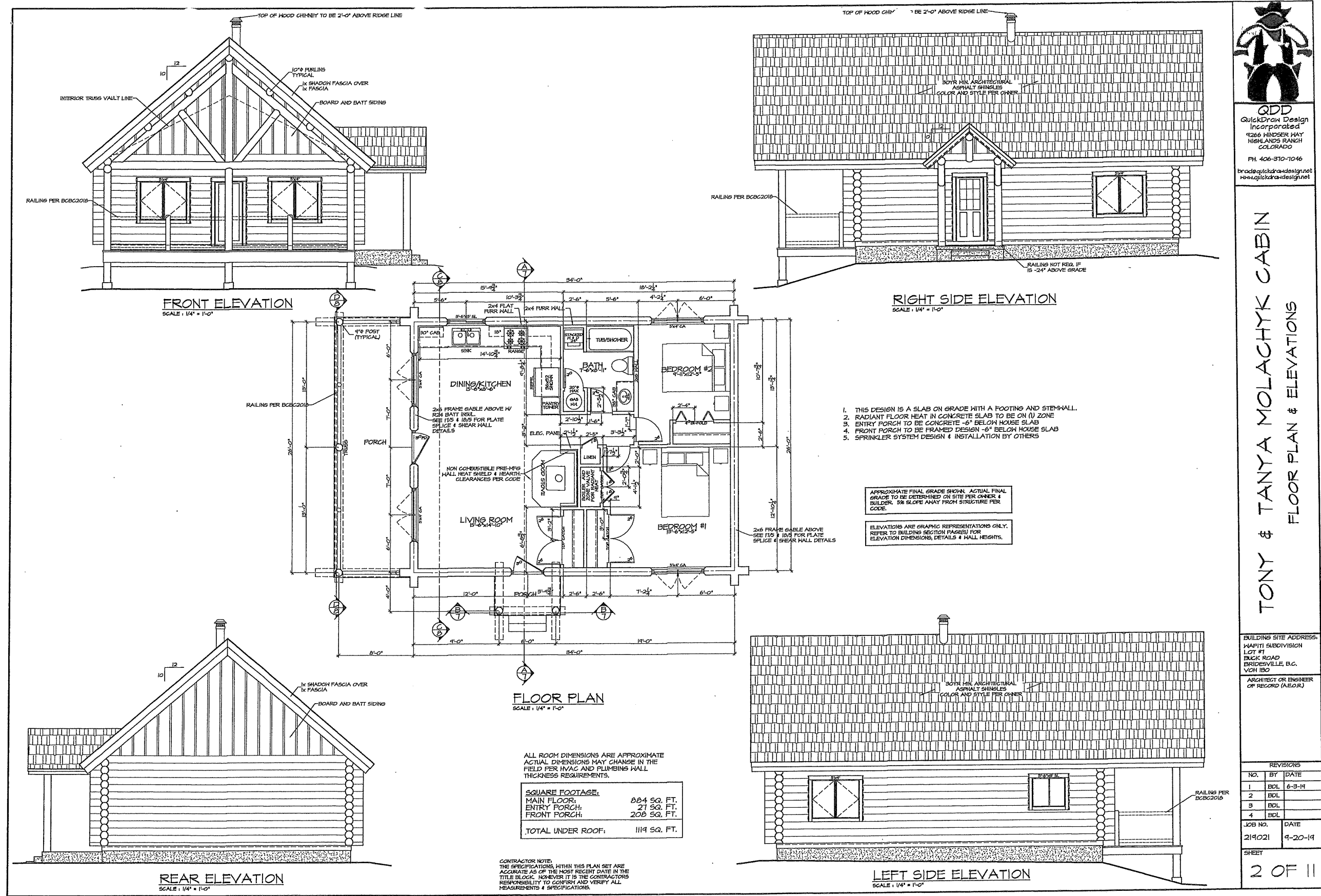




The space below is provided to describe the proposed development. Additional pages may be attached.

BUILD LOG CABIN 1119 SQ FT (SEE DRAWING 2 OF 11)  
 LOT #7 BUCK RD. MT BALDY. ROOF 30YR BLACK ASPHALT SHINGLES  
 THE DRIVEWAY AND PARKING AREAS WILL HAVE A  
 TOPPING OF 3/4 MINUS  
 A CULVERT 18" STEEL WILL BE PLACED AT BOTTOM  
 OF DRIVEWAY + BUCK RD. THERE IS A SEASONAL  
 WATER FLOW SO THE CULVERT WILL PREVENT EROSION OF  
 THE DRIVEWAY.  
 THE SEWER + WATER LINES ARE ON THE RIGHT  
 SIDE OF PROPERTY (LOOKING FROM ROAD) + THE  
 BURIED POWER IS ON THE LEFT. ALL UTILITIES  
 ARE NEAR LOT LINES. SEWER + WATER WILL TRENCH  
 UP RIGHT SIDE TO JUST AFTER ENTRANCE TO CABIN (MARKED  
 ON SCHEMATIC DRAWING). POWER UP LEFT SIDE TO APPROX  
 1/2 WAY OF CABIN LENGTH (MARKED ON DRAWING)  
 THE SNOW STORAGE LOCATIONS ARE CLEARLY MARKED  
 ON THE DRAWING. WE WILL BE BLOWING SNOW INTO  
 THE SNOW STORAGE AREAS  
 ALL EXTERIOR LIGHTING WILL BE FACING DOWN, 2 LIGHTS  
 ON PORCH "CABIN ENTRANCE" 2 LIGHTS ON BIG FRONT PORCH  
 (SEE DRAWING 2 OF 11). THE REAR OF PROPERTY HAS A  
 60' X 10' NATURAL FOREST (MATURE) IT WILL BE RETAINED.  
 ALL EXISTING VEGETATION + TREES + NEW PLANTINGS  
 WILL BE WATERED DURING DROUGHT TIMES IN SUMMER.  
 OUR CABIN WILL BE PROTECTED FROM FIRES INSIDE  
 WITH A SPRINKLER SYSTEM AS PER CODE. OUTSIDE KEEP  
 PROPERTY CLEAN FROM ANY DEBRIS AND GET LOW FLAMABILITY  
 ON LANDSCAPE PLANTING SUCH AS CREEPING OREGON GRAPE,  
 SHRUBBY CINQUEFOIL, PROTECTING FROM EROSION CONTROL  
 THE ARTIC LUPIN + THE YARROW WILL WORK WELL. WE WILL PLANT  
 25 LOGPOLE PINE IN STRATEGIC LOCATIONS (MARKED ON DRAWING)  
 THE PINE WILL BE SEEDLINGS 1 FT HEIGHT.







**Date:** March 10, 2020

**To:** CFOs & Communication Managers

**From:** Union of BC Municipalities

**RE: Federal Gas Tax Fund Compliance**

The federal Gas Tax Fund (FGTF) is now in its 16<sup>th</sup> year of delivering funding to local government infrastructure and capacity building projects in British Columbia. During that time, the fund has transferred over \$2.5 billion to B.C.'s communities.

I am writing to you to provide an update on aspects of the overall compliance framework for local governments in B.C. Like all federal funding programs, the FGTF is subject to evaluation by the Government of Canada to ensure that the program is delivering on its intended outcomes and that recipients are fulfilling their obligations. A high level of compliance is critical for ensuring that this program is retained in its current form and level of funding.

UBCM, through our ongoing administrative discussions with the federal and provincial governments, has identified two areas where we seeking strengthened compliance: communications and project eligibility. We are asking for your support in increasing our current level of compliance in these areas.

### **Communications**

Each local government that receives federal Gas Tax Funds have signed a funding agreement that includes a Communications Protocol ("Schedule E"). The basic aim of the communications protocol is to ensure that B.C. residents are made aware of the contributions provided by the Government of Canada through the program. There are several ways in which this can be achieved: installation of temporary construction signage; formal communications (such as news releases and media events); and social media. I am writing to you to identify minimal goals in each of these areas.

- Guidelines for signage installation along with templates are available on Infrastructure Canada's [website](#). Any project utilizing over \$100,000 from the FGTF should be accompanied with project signage. UBCM gathers data on signage installation in our annual reporting process for the federal government. With the 2020 construction season about to get underway, we are hoping to see a dramatic upturn in signage installation in B.C. communities in the reporting for 2020-21.
- Local governments are reminded that notice should be provided to Canada, BC and UBCM twenty-one days in advance of any formal communications. This requirement can be fulfilled by contacting UBCM.

- Communities receiving annual FGTF allocations greater than \$400,000 and those receiving grants through the Strategic Priorities Fund should undertake at least one formal communication highlighting the use of funds in each year.
- Social media provides an efficient way to update local residents on projects and to acknowledge federal contributions for all recipients of FGTF funding. Please tag UBCM (@GasTaxFundBC) on any posts to your community's Facebook page that recognize projects funded through the FGTF. Please ask staff responsible for social media in your local government to "like" our page. Our aim is to create a living journal of how the FGTF is renewing infrastructure in B.C.'s communities.

### Project Eligibility

There have been a number of recent inquiries in regards to what are considered eligible projects for the use of Community Works Funds.

For projects to be eligible, the following questions should be considered:

1. Is the recipient of funding for the project an "Ultimate Recipient" by definition?
2. Will the project result in a tangible capital asset in BC that is primarily for public use or public benefit?
3. Does the project fall under one of the eligible investment categories?

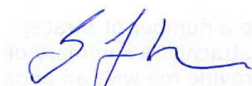
UBCM developed [guidelines for determining project eligibility](#) for more information and examples of eligible and ineligible projects.

The following projects have been deemed an ineligible use of Community Works Funds:

- Fire halls, fire trucks, emergency operations centres
- City halls, public works buildings and other administrative buildings
- Child care centres
- Social housing
- Seniors care facilities and housing
- Health care related infrastructure
- Small equipment purchases as stand-alone projects
- Feasibility studies and detailed design (without additional capital spending)

If you have any questions about either of these compliance areas, please contact Holly Yee, Program Administrator, Gas Tax Program Services, by telephone at 250-356-5134 or via email at [gastax@ubcm.ca](mailto:gastax@ubcm.ca). She will contact you with the appropriate UBCM staff member.

Regards,



Brant Felker  
Gas Tax Policy & Program Manager, Victoria Office



March 18, 2020

File: 0280-30

Ref: 190925

All local and treaty first nation governments with land in the Agricultural Land Reserve:

**Re: Bill 15 – Agricultural Land Commission Amendment Act, 2019 (Exclusions, Statutory Rights-of-Way and Application Fee Process)**

The purpose of this letter is to provide additional information on recent regulations that have brought into effect changes to the *Agricultural Land Commission Act* (ALCA). As part of recent public engagement undertaken by the Province, many local governments provided feedback that they would benefit from additional guidance and information from the BC Ministry of Agriculture on any significant legislative changes that are made.

On March 12, 2020, an Order in Council was made bringing Bill 15 – *Agricultural Land Commission Amendment Act, 2019* into force in two phases (see information bulletin at <https://news.gov.bc.ca/releases/2020AGRI0012-000465>). At the request of the Agricultural Land Commission (ALC), the first phase of Bill 15 amendments was brought into force on March 12, 2020. These amendments enhance the efficiency of the ALC's decision making by strengthening its governance and independence and by providing greater flexibility in how ALC structures decision-making panels to local and regional needs.

The second phase of Bill 15 amendments will come into force September 30, 2020. This will provide time for local and treaty first nation (TFN) governments, the public and other stakeholders to become familiar with, prepare for, and adapt to those changes. Phase two includes changing the exclusion process for both private and public landowners, requiring notice be provided to the ALC for the registration of statutory rights-of-way in the Agricultural Land Reserve (ALR), and simplifying the ALC application fee process. These changes will impact both private and public landowners.

Appendix 1 of this letter provides additional information on these changes and Appendix 2 provides a summary of what changes will occur in each phase.

.../2

**Ministry of Agriculture  
Agriculture, Science and Policy  
Division**

Office of the  
Assistant Deputy Minister

Mailing Address:  
PO Box 9120 Stn Prov Govt  
Victoria BC V8W 9B4

Telephone: 778 974-3844  
Facsimile: 250 356-7279

Location:  
5<sup>th</sup> Floor, 545 Superior Street  
Victoria BC V8V 1T7

Web Address: <http://www.gov.bc.ca/agri/>

-2-

If you have any questions regarding Bill 15 and the revitalization of the ALC and ALR, please contact Arlene Anderson, Director of Legislation, BC Ministry of Agriculture, at [Arlene.Anderson@gov.bc.ca](mailto:Arlene.Anderson@gov.bc.ca).

If you have questions about the administration of the ALR and the new processes for exclusion applications and statutory rights-of-way, please contact the ALC at [ALCBurnaby@Victoria1.gov.bc.ca](mailto:ALCBurnaby@Victoria1.gov.bc.ca).

Sincerely,



James Mack  
Assistant Deputy Minister

Appendices (2)

pc: Gary MacIsaac, Executive Director  
Union of BC Municipalities

Kim Grout, Chief Executive Officer  
Provincial Agricultural Land Commission

Tara Faganello, Assistant Deputy Minister, Local Government Division  
Ministry of Municipal Affairs and Housing

## Appendix 1: Summary of Recent Changes

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### Local or TFN Government Initiated Exclusion Applications

As of September 30, 2020, a local or TFN government may initiate an exclusion application to the ALC for one, or any combination of the following:

1. **Local or TFN government owned land**

Local or TFN governments may continue to submit exclusion applications to the ALC for land that it owns anywhere in the Province. (see: Owner Exclusion Applications below)

2. **Privately owned land identified in a planning exercise**

Local or TFN governments may continue to submit exclusion applications to the ALC for privately owned land within its jurisdiction.

3. **Privately owned land requested for exclusion consideration by a landowner**

Private landowners<sup>1</sup> will no longer be able to make their own application to exclude their land from the ALR. In response to this change, private landowners may ask their local or TFN government to make an application to exclude the private landowners' land on their behalf.

A local or TFN government has the discretion to determine its response to these private landowner requests. There is no legislative requirement for a local or TFN government to initiate an exclusion application at the request of a landowner. A local or TFN government's response to a private landowner's request can be as diverse and unique as the community in which the land is located in. Consultations with local and TFN governments indicated that communities will likely address exclusion requests from private landowners in diverse ways.

A few examples of how communities may address these private landowner exclusion requests include:

- Establishment of a policy to decline to consider these exclusion requests because they do not align with the community's land use plan or planning process.
- Establishment of a policy to collect private landowner's exclusion requests and review these requests every three years to assess whether any of them fit within the community's land use or community plan and, for those that do, incorporate them in a local or TFN government's exclusion application.
- Establishment of a policy to consider these requests more frequently but require that the requests clearly demonstrate that the request reflects the community's land use or

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<sup>1</sup> Private landowners are persons who are not the Province, local or TFN nation governments, or public bodies prescribed by regulation.

community plan prior to incorporating the land into a local or TFN government's exclusion application.

In deciding how to address private landowner requests to have their land in the community's exclusion application, a local and TFN government should be aware that the exclusion application requirements and its ALC application fee will be the responsibility of the local or TFN government ultimately making the exclusion application. It will also be the body responding to any requests for further information from the ALC and the recipient of any information the ALC might share with any applicant.

Exclusion applications are best considered within the context of a community's land use planning exercises. A community's long-term land planning vision is critical to determine what land is contained within a local or TFN government's exclusion application. This is important to assist in reducing potential urban/residential conflict with farming activities when land is excluded from the ALR. ALC staff are available to work with local and TFN government staff as part of these planning exercises to evaluate the suitability of potential exclusion areas.

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### **Owner Exclusion Applications**

As of September 30, 2020, only public landowners (i.e., the Province, local governments, TFN governments, and prescribed public body landowners) will be able to make owner applications to exclude land from the ALR. Private landowners will no longer be able to make their own applications to exclude land from the ALR, nor will their consent be required for land to be excluded.

Public landowners who apply to exclude their land will be required to hold a public hearing as part of the notification requirements of the application process. This change was made to provide community members and others the opportunity to comment on exclusions proposed by public landowners.

### **Public Landowners: Province, local government, TFN government, and prescribed public bodies**

1. **Provincial ministries and agencies** who administer land in the Province may continue to apply for exclusion. These applications continue to require approval of the local or TFN government in which the land is located before they can proceed to the ALC for decision.
2. **Local or TFN governments** may continue to apply for the exclusion of land it owns. The local or TFN government in which the land is located must approve the application before it can be considered by the ALC.

3. **Prescribed public bodies** may continue to apply for exclusion. These applications continue to require approval of the local or TFN government in which the land is located before they can be considered by the ALC. Public bodies are prescribed by regulation and include improvement districts, health authorities, school districts, etc.

Local and TFN governments retain the authority to determine how they will address exclusion applications from the public landowners listed above. For example, a local or TFN government may or may not support an application if the proposal does not reflect the local jurisdiction's land use plan. These communities may resolve not to forward an application to the ALC for consideration and decision. This reflects the longstanding process and is not changed by Bill 15.

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### **Statutory Rights-of-Way**

As of September 30, 2020, Bill 15 changes the requirements for notifying the ALC of statutory rights-of-ways (SRW) in the ALR. Under the new requirements, the registrant for a proposed SRW will be required to notify the ALC of the SRW. A Registrar of Titles at the Land Title and Survey Authority (LTSA) will be unable to register an SRW in the ALR unless the registrar is satisfied that the ALC has been notified in the form and manner required by the ALC. The ALC is currently working with the LTSA to develop the 'Receipt of SRW Notification' document that will be provided to the registrant upon submitting notification through the ALC Application Portal in a new 'Notification of SRW' submission.

Successful registration with the Land Title and Survey Authority still requires the SRW registrant or any other person to obtain ALC approval for most non-farm use within the SRW (e.g. construction). The SRW registrant will still be required to obtain ALC approval before engaging in a non-farm use related to the SRW. This change will provide an opportunity for SRW registrants to be reminded by the ALC that its approval continues to exist in relation to any land use or construction on the SRW in the ALR.

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### **Application Fee Collection Process**

As of March 12, 2020, Bill 15 simplifies the fee collection process for the applicable ALC applications (i.e. subdivision, non-farm use, soil/fill use, non-adhering residential use, and exclusion) by establishing that the local or TFN government must only collect its portion of the ALC application fee. If the local or TFN government decides to support an application and forwards it to the ALC for consideration and decision, it is the applicant that will be responsible for paying the ALC directly for its portion of the application fee.

This change removes the current obligation on local and TFN governments to collect the total application fee and then remit to the ALC its portion for all applications the local or TFN government supports and forwards to the ALC for consideration and decision.

The ALC will be updating the Application Portal to reflect the changes to the application fee payment process so both the applicant/agent and the local government is advised first when the application is submitted to the local government, and second, if the local government forwards the application to the ALC (i.e. the auto email notifications).

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### **Reasons for Changes**

The changes made by the *Agricultural Land Commission Amendment Act, 2018* (Bill 52) and Bill 15 build on recommendations of the Minister's Independent Advisory Committee (the Committee) to revitalize the ALR and the ALC, focusing on four targeted areas:

- protecting the ALR land base into the future;
- preserving the productive capacity of the ALR;
- improving governance of the ALR; and
- supporting farmers and ranchers in the ALR.

From February 4 to April 30, 2018, the Committee held stakeholder consultation meetings in nine communities across BC with representatives from 29 local governments and over 110 individuals representing farming and ranching associations and other agricultural organizations and stakeholder groups. The Committee also hosted an online public survey, receiving over 2300 completed surveys during that period, as well as over 270 written submissions.

Feedback collected from this public engagement demonstrated that British Columbians believe the ALR is fundamental to the economic performance of the Province's agriculture sector and to the Province's food security. They value the ALR because it ensures viable agricultural land is available, affordable, and in production now and into the future. There is strong support from British Columbians for protecting the ALR.

The first stage of legislative changes to revitalize the ALR and the ALC were made by the *Agricultural Land Commission Amendment Act, 2018* (Bill 52). The amendments in Bill 52 were brought into force in February 2019, and made changes in three key areas:

- Restricting the removal of soil and placement of fill; and, increasing penalties for the dumping of construction debris and other harmful fill in the ALR.
- Directly addressing mega-mansions and speculation in the ALR by limiting principal residence size on ALR land and empowering the ALC to approve additional residences if they are necessary for farm use.

- Reunifying the ALR as a single zone, ensuring consistent rules with strong protections for all ALR land across the province.

These critical amendments were needed immediately to preserve the viability and productive capacity of the ALR through addressing the detrimental nature of mega-mansion builds and the abuse of soil and fill on the ALR. Further, Bill 52 confirmed that all land in the ALR is valuable by removing the two-zone approach. It was vital that government eliminate the perception that there is higher and lower priority agricultural land in BC.

Bill 15 continues the government's commitment to revitalize the ALR and ALC. The part of Bill 15 that strengthens the independence and governance of the ALC was brought into force on March 12, 2020. The remainder of Bill 15 will be brought into force on September 30, 2020. On and after this date, the exclusion process will change as described above to ensure that these exclusions reflect a local or TFN government's broader long-term land use planning goals. This change will help farmers by preserving a more contiguous land base in the ALR and lessening conflict between urban and agricultural land uses.

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### **Role of the Agricultural Land Commission**

The ALC is the independent administrative tribunal dedicated to preserving agricultural land and encouraging farming in BC in collaboration with other communities of interest. The ALC administers the ALR in accordance with the ALCA and its regulations.

The appointed commissioners review land use plans, create operational policies, and decide land use applications. ALC staff support the commissioners through administration, planning, mapping, and compliance and enforcement of legislation and orders. The ALC and its staff anticipate working with stakeholders throughout implementation of the Bill 15 changes in order to provide operational and administrative guidance. ALC staff will provide local governments with information updates through the ALC update emails, information bulletins, process guidelines, updates to the ALC website and application Portal, and educational materials with respect to Bill 15.

### **Role of the Ministry of Agriculture**

The Ministry of Agriculture establishes government's policy and legislative framework for the ALC and the ALR. To encourage farming and promote the development of the industry, the Ministry provides agricultural land use planning support and information material for local and TFN governments across the Province through its Strengthening Farming Program and Regional Agrologist network.

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## **Appendix 2: Effective dates for recent legislative changes**

### **Effective: March 12, 2020**

#### **Bill 15**

- Sections brought into force to:
  - simplify the application fee process such that local or TFN governments need only receive payment of their portion of the ALC application fee, while applicants pay the ALC its portion of the application fee if the local or TFNs government forwards the application to the ALC;
  - bring more rigour to the reconsideration process by clarifying the circumstances under which reconsiderations will proceed;
  - enable the ALC to register remediation orders with the Land Title Office, thereby providing notice to prospective buyers of any outstanding issues for which subsequent owners will be liable;
  - replace the current fixed ALC governance model with a more flexible model that allows for panels to be created as needed rather than relying on fixed regional panels;
  - provide the Chair input on commissioner appointments made by the Minister; and,
  - introduce criteria that the ALC must consider when exercising any power or performing a duty under the ALCA.

#### **Agricultural Land Reserve General Regulation (current)**

- Retitled the Agricultural Land Reserve Transitional Regulation
- Partially repealed

#### **Agricultural Land Reserve General Regulation (new)**

- Sections brought into force to:
  - restore a requirement for the ALC to give notice of permissions issued for use or subdivision applications (rather than only non-farm, non-adhering or residential use);
  - allow notice of public hearings to be given in other forms if newspaper publication is not practical;
  - require that pre-hearing notice be given not less than 3 days and not more than 10 days before the date of a hearing; and
  - give the ALC the ability to determine notice requirements for applications, exclusions, meetings and public hearings.

**Effective: September 30, 2020****Bill 15**

- Sections brought into force to:
  - change the exclusion application process so that only the Province, local and TFN governments and certain prescribed public bodies can make exclusion applications;
  - remove the requirement for owner consent before land can be excluded from the ALR;
  - enable the ALC to register remediation orders with the Land Title and Survey Authority (LTSA), thereby making all prospective buyers aware of any outstanding issues regarding ALR land; and
  - require persons who are registering a statutory right of way charge at the LTSA to give notice of the charge to the ALC if the charge is on ALR land.

**Agricultural Land Reserve Transitional Regulation (current ALR General Regulation)**

- Repealed

**Agricultural Land Reserve General Regulation (new)**

- Remainder of provisions brought into force to:
  - prescribe the public bodies that can apply for exclusion from the ALR, such as health authorities, school districts, improvement districts, post-secondary institutions and some Crown corporations (local and TFN governments are also considered public bodies when applying to remove land outside their jurisdiction);
  - require that notice of applications for statutory rights of way be given in a form acceptable to the ALC, and require that an applicant provide a Registrar of Titles with the proof of that notice, as issued by the ALC; and
  - make consequential changes reflecting amendments to the Act in Bill 15.

Director Ali Grieve, Electoral Area 'A'		Grants-In-Aid 2020
Balance Remaining from 2019		437.00
2020 Requisition		47,163.00
Less Board Fee 2020		(1,651.00)
<b>Total Funds Available</b>		<b>\$ 45,949.00</b>

RESOLUTION	DATE	RECIPIENT	DESCRIPTION	AMOUNT
26-20	15/Jan	Okanagan Nation Alliance	Columbia Fish in Schools Program 757F	1,000.00
54-20	24/Jan	Beaver Valley May Days Society	Beaver Valley May Days Events	4,000.00
		Beaver Valley May Days Society	Return of Funds, event cancellation	(4,000.00)
54-20	24/Jan	BV Recreation	Seniors Dinner	1,600.00
54-20	24/Jan	LCCDTS/Sustainable Agriculture Committee	Trails Incredible Farmers Market	700.00
89-20	12/Feb	Beaver Valley Cross Country Ski Club	To assist with Routine Expenses	2,000.00
119-20	27/Feb	Beaver Valley Thrift Shop	To assist with Window Replacement	1,000.00
119-20	27/Feb	Kidney Walk, Kootenay West	To assist with Event Costs	100.00
119-20	27/Feb	Village of Fruitvale	To assist with Candy Cane Lane Event	1,500.00
119-20	27/Feb	Village of Fruitvale	Remembrance Day Programs & Refreshments	500.00
119-20	27/Feb	West Kootenay Rebels U14B Girls Fastball	To assist with Expenses	500.00
119-20	27/Feb	Zone 6 BC Seniors Games	Athlete Training & Participation	500.00
134-20	11/Mar	JL Crowe Senior Boys Basketball	Provincial Championship Transportation	500.00
	31/Mar	Beaver Valley Blooming Society	Plantings, Supplies for Community Areas	2,000.00
	31/Mar	Beaver Valley Dynamic Aging Society	To assist with Sips & Sparkle	2,000.00
	31/Mar	JL Crowe Secondary School	RDKB Area A Director's Memorial Award	750.00
<b>Total</b>				<b>\$ 14,650.00</b>
<b>Balance Remaining</b>				<b>\$ 31,299.00</b>

Electoral Area 'B' /Lower Columbia-Old Glory		Grants-In-Aid 2020
Balance Remaining from 2019		511.41
2020 Requisition		30,701.00
Less Board Fee 2020		(1,075.00)
<b>Total Funds Available</b>		<b>\$ 30,137.41</b>

RESOLUTION	DATE	RECIPIENT	DESCRIPTION	AMOUNT
26-20	15/Jan	Okanagan Nation Alliance	Columbia Fish in Schools Program 757F	1,500.00
54-20	24/Jan	LCCDTS/Sustainable Agriculture Committee	Trails Incredible Farmers Market	700.00
54-20	24/Jan	Rossland Society for Environmental Action	3D Portable Model of Cambridge Wetland/Violin Lake Area	1,000.00
119-20	27/Feb	Kidney Walk, Kootenay West	To assist with Event Costs	400.00
119-20	27/Feb	West Kootenay Rebels U14B Girls Fastball Team	TO assist with Expenses	500.00
119-20	27/Feb	Zone 6 BC Seniors Games	To assist with Athlete Training & Participation	750.00
134-20	11/Mar	JL Crowe Senior Boys Basketball	To assist with Provincial Championship Transportation	500.00
134-20	11/Mar	West Kootenay Smoke N Steel Auto Club	To assist with Event Expenses	800.00
	31/Mar	JL Crowe Secondary School	To assist with RDKB Area B Directors Memorial Reward	750.00
	31/Mar	U14B West Kootenay Rebels	To assist with Equipment & Uniforms	1,000.00
<b>Total</b>				<b>\$ 7,900.00</b>
<b>Balance Remaining</b>				<b>\$ 22,237.41</b>

Electoral Area 'C'/Christina Lake		Grants-In-Aid 2020
Balance Remaining from 2019		1,941.25
2020 Requisition		72,822.00
Less Board Fee 2020		(2,549.00)
<b>Total Funds Available</b>		<b>\$ 72,214.25</b>

RESOLUTION	DATE	RECIPIENT	DESCRIPTION	AMOUNT
26-20	15/Jan	Okanagan Nation Alliance	Columbia Fish in Schools Program 757F	1,000.00
54-20	24/Jan	Christina Lake Community Association	Christina Lake Community Hall Rental Funding	1,500.00
54-20	24/Jan	Little Lakers Learning Centre Society	Day Care Expenses	3,500.00
86-20	12/Feb	Boundary 4-H Multi Club	To assist with Club Activities	500.00
119-20	27/Feb	Grand Forks ATV	To assist with Stewart & Gilpin Area Trail	10,000.00
134-20	11/Mar	Christina Lake Stewardship Society	To assist with Aquatic Invasive Species Billboard	2,436.00
<b>Total</b>				<b>\$ 18,936.00</b>
<b>Balance Remaining</b>				<b>\$ 53,278.25</b>

Electoral Area 'D'/Rural Grand Forks		Grants-In-Aid 2020		
Balance Remaining from 2019				34,144.50
2020 Requisition				38,342.00
Less Board Fee 2020				(1,342.00)
<b>Total Funds Available</b>				<b>\$ 71,144.50</b>

RESOLUTION	DATE	RECIPIENT	DESCRIPTION	AMOUNT
26-20	15/Jan	City of Grand Forks	Family Day 2020 Event	2,000.00
26-20	15/Jan	Okanagan Nation Alliance	Columbia Fish in Schools Program 757F	1,000.00
54-20	24/Jan	Grand Forks Community Christmas Dinner	Groceries	1,000.00
54-20	24/Jan	Grand Forks Figure Skating Club	Year-End Expenses	1,000.00
54-20	24/Jan	Kettle Valley Food Coop	Commercial Refrigeration/Freezer Units	5,000.00
86-20	12/Feb	Boundary 4-H Multi Club	To assist with Club Activities	500.00
86-20	12/Feb	Grand Forks Art Gallery Society	To assist with Replacement Computer Workstations	5,000.00
119-20	27/Feb	Boundary Girls Fastpitch	To assist with ongoing costs	250.00
119-20	27/Feb	Zone 6 BC Seniors Games	To assist with Athlete Training & Participation	300.00
134-20	11/Mar	Grand Forks ATV	To Assist with Trails Reconstruction	5,000.00
<b>Total</b>				<b>\$ 21,050.00</b>
<b>Balance Remaining</b>				<b>\$ 50,094.50</b>

Electoral Area 'E'/West Boundary		Grants-In-Aid 2020
Balance Remaining from 2019		52,580.63
2020 Requisition		86,425.00
Less Board Fee 2020		(3,025.00)
<b>Total Funds Available</b>		<b>\$ 135,980.63</b>

RESOLUTION #	DATE	RECIPIENT	DESCRIPTION	AMOUNT
26-20	15/Jan	Big White Mountain Community Development Association	Winter Wellness Program	1,850.00
26-20	15/Jan	Boundary Metis Community Association	Snowy Tribal Trails 2020 Celebration Feast	1,200.00
26-20	15/Jan	Greenwood Community Association	Christmas Day Dinner	300.00
26-20	15/Jan	Greenwood Public Library	Meeting Space Rental	200.00
26-20	15/Jan	Trails to the Boundary Society	General Administration	1,000.00
26-20	15/Jan	Trails to the Boundary Society	West Boundary Connect Website	2,295.74
26-20	15/Jan	West Boundary Community Services Co-operative Association	Start-Up Office Expenses	2,000.00
26-20	15/Jan	West Boundary Community Services Co-operative Association	Riverside Centre Start-Up Legal Costs	2,332.34
54-20	24/Jan	Rock Creek Community Medical Society	Canada Day Community BBQ	599.48
54-20	24/Jan	Rock Creek Community Medical Society	Meeting Room Rentals	200.00
86-20	12/Feb	Village of Midway	Spreader for Road Rescue Vehicle Extrication	5,000.00
134-20	11/Mar	West Boundary Community Services Co-Op Association	To assist with Start-up Legal Costs	537.60
134-20	11/Mar	West Boundary Community Services Co-Op Association	To assist with Destination BC Tourism Training	805.35
134-20	11/Mar	West Boundary Community Services Co-Op Association	To assist with Destination BC Visitor Centre Training	1,502.00
	31/Mar	Boundary Woodlot Association	Emergency Preparedness Fair	1,037.04
	31/Mar	Kettle River Lions Club	Food for Emergency Preparedness Fair	552.00
	31/Mar	West Boundary Community Services Co-Op Association	Development of Riverside Centre Website	5,000.00
	31/Mar	West Boundary Sustainable Foods & Resources Society	Catering for Emergency Preparedness Fair	284.00
<b>Total</b>				<b>\$ 26,695.55</b>
<b>Balance Remaining</b>				<b>\$ 109,285.08</b>

<p align="center"><b>Regional District of Kootenay Boundary</b>  <b>Status Report - Gas Tax Agreement</b>  <b>April 8, 2020</b></p>
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**Revenue:**

Area A	\$ 1,297,865.68
Area B	\$ 966,361.64
Area C	\$ 943,860.54
Area D	\$ 2,177,929.01
Area E	\$ 1,441,226.43

TOTAL AVAILABLE FOR PROJECTS

**\$ 6,827,243.30****Expenditures:**

Area A	\$ 709,155.48
Area B	\$ 723,137.75
Area C	\$ 591,210.17
Area D	\$ 837,360.54
Area E	\$ 971,381.32

TOTAL SPENT OR COMMITTED

**\$ 3,832,245.26****TOTAL REMAINING****\$ 2,994,998.04**

Earmarked Funding (All Areas)

\$ 105,000.00

**TOTAL UNCOMMITTED REMAINING****\$ 2,889,998.04**

**Regional District of Kootenay Boundary  
Status Report - Gas Tax Agreement  
April 8, 2020**

**ELECTORAL AREA 'A'**

	Description	Status	Allocation	
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**Revenue:**

Per Capital Allocation of Gas Tax Grant:

Allocation 2007-2017	Received	\$	934,426.18
Allocation to Dec 31, 2018	Received		91,749.50
Allocation to Dec 31, 2019	Received		181,719.75
Allocation to Dec 31, 2020	Estimated		89,970.25

TOTAL AVAILABLE FOR PROJECTS

**\$ 1,297,865.68****Expenditures:**

Approved Projects:

Completed Projects Approved Prior to 2015		\$	339,155.48
17-15	Beaver Creek Park - Band Shell/Arbour	Funded	100,000.00
61-17	Fruitvale Elementary Playground -PAC LEAP Project	Completed	20,000.00
126-17	RDKB BVPART (Electrical Upgrade BV Family Park)	Funded	5,327.25
	RDKB BVPART (Electrical Upgrade BV Family Park)	Pending or	
		Committed	4,672.75
153-17	Village of Fruitvale (Fruitvale RV Park)	Completed	70,000.00
		Pending or	
73-18	Village of Fruitvale (Construction of Replica Train Static	Committed	150,000.00
166-19	Champion Lakes Golf & Country Club (New Metal Roof	Completed	15,000.00
		Pending or	
158-20	Beaver Valley Golf & Recreation Society (Lighting Upgr	Committed	5,000.00

TOTAL SPENT OR COMMITTED

**\$ 709,155.48**

TOTAL REMAINING

**\$ 588,710.20**

Earmarked Funding:

*(Applications not yet received and/or Board approved)*

Sept-19	Village of Fruitvale Middle School Re-development	Ltr of Support	\$	100,000.00
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TOTAL UNCOMMITTED REMAINING

**\$ 488,710.20**

Regional District of Kootenay Boundary  
Status Report - Gas Tax Agreement  
April 8, 2020

ELECTORAL AREA 'B' / LOWER COLUMBIA/OLD GLORY



	Description	Status	Allocation	
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Revenue:

Per Capital Allocation of Gas Tax Grant:				
	Allocation 2007-2017	Received	\$	689,217.40
	Allocation to Dec 31, 2018	Received		69,964.45
	Allocation to Dec 31, 2019	Received		138,572.12
	Allocation to Dec 31, 2020	Estimated		68,607.67
	TOTAL AVAILABLE FOR PROJECTS		\$	966,361.64

Expenditures:

Approved Projects:				
	Completed Projects Approved Prior to 2015		\$	365,590.67
251-15	Castlegar Nordic Ski Club (Paulson Cross Country Ski Trail Upgrade)	Completed		10,000.00
252-15	Black Jack Cross Country Ski Club Society (Snow Cat)	Completed		10,000.00
253-15	Rivervale Water & Streetlighting Utility (LED Streetlights)	Completed		14,417.00
254-15	Rivervale Oasis Sewer Utility (Flow Meters)	Completed		90,000.00
190-16	Rivervale Oasis Sewer Utility - RDKB (Wemco Booster Pumps)	Completed		-
221-16	Area 'B' Recreation - RDKB (Rivervale Shed)	Completed		8,632.00
152-17	Rossland Historical Museum and Archive Association (Rossland Museum Upgrades)	Completed		25,000.00
296-17	Visions for Small Schools Society (Broadband Installation)	Completed		13,381.80
111-18	Birchbank Golf Club (Upgrade Irrigation Satellite Controller)	Completed		50,000.00
102-19	Silver City Trap Club (Electrical System Upgrades)	Completed		20,886.28
165-19	Silver City Trap Club (Used Tractor)	Completed		20,330.00
600-19	Casino Waterworks District (Water System Upgrades)	Pending or Committed		70,000.00
601-19	Silver City Trap Club (Develop Wheel Chair Access)	Funded		18,675.00
	Silver City Trap Club (Develop Wheel Chair Access)	Pending or Committed		6,225.00
	TOTAL SPENT OR COMMITTED		\$	723,137.75
	TOTAL REMAINING		\$	243,223.89



Status Report - Gas Tax Agreement Electoral Area 'C' / Christina Lake		
72-18	RDKB Kettle River Watershed Authority (Drought Management Plan) (\$11,303.33 is Approx Amount; Actual Allocation To Be Determined )	Funded 9,739.66
	RDKB Kettle River Watershed Authority (Drought Management Plan) (\$11,303.33 is Approx Amount; Actual Allocation To Be Determined )	Pending or Committed 1,563.67
231-19	RDKB CL PARTS (Pickle Ball Courts)	Funded 78,488.18
	RDKB CL PARTS (Pickle Ball Courts)	Pending or Committed 21,511.82
TOTAL SPENT OR COMMITTED		\$ 591,210.17
TOTAL REMAINING		\$ 352,650.37



Status Report - Gas Tax Agreement Electoral Area 'D' / Grand Forks Rural		
	RDKB Kettle River Watershed Authority (Drought Management Plan) (\$11,303.33 is Approx Amount; Actual Allocation To Be Determined )	Pending or Committed1,563.67
112-18	Grand Forks Community Trails Society (North Fork Trans Canada Trail Surface Installation)	Funded37,500.00
	Grand Forks Community Trails Society (North Fork Trans Canada Trail Surface Installation)	Pending or Committed12,500.00
258-18	Boundary Museum Society (Black Hawk Livery Addition (40' x 60') Phase 1)	Completed60,000.00
298-18	RDKB Grand Forks Curling Rink (Facility Condition Assessment)	Funded4,450.00
	RDKB Grand Forks Curling Rink (Facility Condition Assessment)	Pending or Committed4,550.00
361-19	RDKB - Boundary Transit (2018 Leasing Transit Vehicles)	Completed9,965.00
361-19	RDKB - Boundary Transit (2019 Leasing Transit Vehicles)	Completed10,086.00
362-19	Boundary Area Disc Athletic Sports Society (Signage & Baskets)	Funded9,381.00
	Boundary Area Disc Athletic Sports Society (Signage & Baskets)	Pending or Committed3,127.00
TOTAL SPENT OR COMMITTED		\$ 837,360.54
TOTAL REMAINING		\$ 1,340,568.47



Status Report - Gas Tax Agreements Electoral Area 'E' / West Boundary			
166-17	Beaverdell Community Club & Recreation Commission (Bleachers Beaverdell Ball Park)	Funded	7,718.82
	Beaverdell Community Club & Recreation Commission (Bleachers Beaverdell Ball Park)	Pending or Committed	1,853.04
198-17	Westbridge Recreation Society (Replace Kitchen Westbridge Hall)	Completed	20,699.41
468-17	RDKB (Boundary Trails Master Plan)	Funded	16,478.13
	RDKB (Boundary Trails Master Plan)	Pending or Committed	3,521.87
72-18	RDKB Kettle River Watershed Authority (Drought Management Plan) (\$11,303.33 is Approx Amount; Actual Allocation To Be Determined )	Funded	9,739.66
	RDKB Kettle River Watershed Authority (Drought Management Plan) (\$11,303.33 is Approx Amount; Actual Allocation To Be Determined )	Pending or Committed	1,563.68
152-18	Westbridge Recreation Society (Door Upgrades/ LED Conversion/Curtains & Tracking System)	Completed	7,023.06
154-18	Bridesville Community Club (Hall Addition)	Completed	70,000.00
296-18	Rock Creek & Boundary Fair Association (Assembly Hall Upgrades)	Completed	20,000.00
297-18	Kettle River Museum (Bunkhouse Upgrades)	Completed	20,000.00
467-18	King of Kings New Testament Church (H/E Commercial Dishwasher)	Completed	6,608.51
566-18	Westbridge Recreation Society (Construction of New Building)	Funded	30,637.30
	Westbridge Recreation Society (Construction of New Building)	Pending or Committed	10,212.43
47-19	Kettle Valley Golf Club (Clubhouse Window Replacement)	Completed	7,945.95
271-19	West Boundary Community Services Co-Operative (Rock Creek Community Hub)	Completed	100,000.00
423-19	Kettle Wildlife Association (Safety upgrades & Increased Capacity)	Funded	7,514.33
	Kettle Wildlife Association (Safety upgrades & Increased Capacity)	Pending or Committed	2,504.77
159-20	Westbridge Recreation Society (Construction of New Building Increase)	Pending or Committed	4,289.64
TOTAL SPENT OR COMMITTED			\$ 971,381.32
TOTAL REMAINING			\$ 469,845.11
Earmarked Funding:			
62-19	Westbridge Recreation Society	Resolution of Support	\$ 5,000.00
TOTAL UNCOMMITTED REMAINING			\$ 464,845.11