

-BOARD OF VARIANCE-

Agenda for the Board of Variance Meeting of the Village of Pemberton to be held Wednesday, October 28, 2020 at 5:00 PM via ZOOM Webinar ID: 885 4126 2453

1.	CALL TO ORDER	Page
2.	MINUTES	
	Minutes of the September 28, 2020 meeting	2
3.	7665 Cerulean Drive - Lot 24 District Lot 211 Lillooet District Plan EPP88381	5
	 Report to Board of Variance: The Applicants are requesting variances to allow for an existing retaining wall structure to facilitate the development of a single detached residential dwelling. The following variances from Sections 4.13 and 7.21 of Zoning Bylaw No. 832, 2018 are requested: To vary Section 4.13(a) viii. in order to allow a retaining wall in excess of 1.2 m in height to be placed on the portion of the site in general compliance with location and height on the Site Plan completed by Doug Bush Survey Services dated October 5th 2020 or in a location approved by Building Permit, not to exceed 43 m in length; and To vary Section 7.21 (a)i. to relax the maximum height of a retaining wall, from 1.2 m to a maximum of 4.32 m, a variance of 3.12 metres. 	
4.	NEW BUSINESS	
5.	NEXT MEETING	

6. ADJOURNMENT



BOARD OF VARIANCE MINUTES

Minutes for the Board of Variance Meeting of the Village of Pemberton held Wednesday, September 30, 2020 at 5:00 PM via ZOOM Webinar ID: 8473 4186 533

IN ATTENDANCE:	Niki Vankerk, Chair Drew Meredith Alan LeBlanc
STAFF IN ATTENDENCE:	Joanna Rees, Planner Gwendolyn Kennedy, Building & Planning Clerk
APPLICANT/PUBLIC:	2 (Applicants)

1. CALL TO ORDER

At 5:02 p.m. the meeting was called to order.

In honour of the Lil'wat7ul, the Village of Pemberton acknowledges that we are meeting within the unceded territory of the Lil'wat Nation.

2. MINUTES

Moved/Seconded

THAT the minutes of the Board of Variance meeting held July 8, 2020 be approved as circulated.

CARRIED

3. 7355 Industrial Way - Lot 2, DL 210, Plan KAP74191

Variance Request:

To accommodate the proposal, the following variances from Zoning Bylaw No. 832, 2018 are requested:

- 1. The projection of the balcony from 0.6 metres as required to 1.143 meters into the front yard setback, a relaxation of 0.542 metres;
- 2. The total combined length of the projection from 40% as required to 53% of the length of the façade, a relaxation of 12.94%;
- 3. The projection of "Roof 1" from 0.6 metres as required to 0.94 metres into the rear yard setback, a relaxation of 0.34 metres; and
- 4. The projection of "Roof 2" from 0.6 metres as requires to 1.04 metres into the rear yard setback, a relaxation of 0.44 metres.

Village of Pemberton Board of Variance Meeting September 30, 2020

2

Joanna Rees, Planner, provided a summary of the application. A notice regarding this application was mailed to owners of all adjacent properties. No comments were received.

Applicant Olivier Godbout invited questions from members.

RESOLUTION

Moved/Seconded

THAT the Board of Variance approve the following variances from Zoning Bylaw 832, 2018 in accordance with the attached drawing submitted with the Board of Variance application:

- 1) The projection of the balcony from 0.6 metres as required to 1.143 meters into the front yard setback, a relaxation of 0.542 metres;
- 2) The total combined length of the projection from 40% as required to 53% of the length of the façade, a relaxation of 12.94%;
- 3) The projection of "Roof 1" from 0.6 metres as required to 0.94 metres into the rear yard setback, a relaxation of 0.34 metres; and
- The projection of "Roof 2" from 0.6 metres as requires to 1.04 metres into the rear yard setback, a relaxation of 0.44 metres.
 CARRIED

4. NEW BUSINESS

Planner Joanna Rees reminded Board members that current Board of Variance member terms expire at the end of December, 2020. Ms. Rees invited members to apply for a subsequent term. The application deadline is November 6, 2020 at 4:00 p.m.

5. NEXT MEETING

The next meeting will be scheduled for October 28, 2020 at 5:00 p.m.

6. ADJOURNMENT

Moved/Seconded THAT the Board of Variance meeting be adjourned. CARRIED

At 5:15 p.m. the meeting was adjourned.

Village of Pemberton Board of Variance Meeting September 30, 2020 3

Chair

This is a true and correct copy of a meeting of the Board of Variance of the Village of Pemberton, held September 30, 2020.





Date: October 28, 2020

From: Joanna Rees, Planner

Subject: 7665 Cerulean Drive – Retaining Wall Variance Request

Applicants: David Russell and Stephanie Nicoll-Russell

PURPOSE

This report provides an overview of an application submitted by David Russell and Stephanie Nicoll-Russell (the "Applicants"), owners of the subject property located at 7665 Cerulean Drive.

The Applicants are requesting variances to allow for an existing retaining wall structure to facilitate the development of a single detached residential dwelling. The following variance from Sections 4.13 and 7.21 of Zoning Bylaw No. 832, 2018 is requested:

- To vary Section 4.13(a) viii. in order to allow a retaining wall in excess of 1.2 m in height to be placed on the portion of the site in general compliance with location and height on the Site Plan completed by Doug Bush Survey Services dated October 5th 2020 or in a location approved by Building Permit, not to exceed 43 m in length; and
- To vary Section 7.21 (a)i. to relax the maximum height of a retaining wall, from 1.2 m to a maximum of 4.32 m, a variance of 3.12 metres.

This variance is to accommodate the existing height and location of the retaining wall. Over and above the variance, if supported, a retaining wall building permit is required for a retaining wall higher than 1.2m including sign off from a geotechnical engineer.

BACKGROUND

The following section outlines the background on the application, including any previous permits or orders that have been issued on the subject lands to date.

On July 31, 2019, Site Alteration Permit No. 2019-11 was issued authorizing the following works:

- Exploratory site grubbing works: this allowed the applicant to clear the site within their building envelope to determine how they would build on the site.
- Construction of retaining walls up to 1.2 m. The Permit specifically stated that any retaining wall 1.2 m or higher required a Retaining Wall Permit.
- Establishment of a driveway: this allowed the applicant to create access to continue building on the site.

On August 25, 2020, Building Permit No. 1951 was issued for construction of a single detached dwelling with a secondary suite. On the building permit plan approved, a retaining wall of less than 1.2 m was shown.

Board of Variance 7665 Cerulean Drive October 28, 2020 Page 2 of 6

The Village of Pemberton Building Bylaw No. 867, 2019 requires a permit for a retaining wall of 1.2 metres or higher. Retaining walls are subject to Section 4.13 and 7.21 of the Zoning Bylaw No. 832, 2018, described below. Retaining walls above 1.2 meters in height require a variance to be constructed.

Upon Staff noticing that the retaining wall built on the property exceeded 1.2 m, a Stop Work Order was issued on September 23, 2020 due to the construction of a retaining wall in contravention of Part 7.21 of the Village of Pemberton Zoning Bylaw No. 832, 2018.

Staff received complaints from two members of the public regarding the retaining wall on September 25 and September 30.

DESCRIPTION OF PROJECT

The subject lands legally described as Lot 24 District Lot 211 Lillooet District Plan EPP88381, are known municipally as 7665 Cerulean Drive. The location of the subject lands is shown on Map 1 of **Appendix A**. The topography of the subject lands is sloped to the South West. A pedestrian path is located adjacent to the rear lot line. The retaining wall is built on site, at the time of the Stop Work Order issued on September 23 no other structures were present.

The subject lands are designated Residential in the Official Community Plan and are zoned Residential Amenity 1, Sunstone (RSA-1) as per Village of Pemberton Zoning Bylaw No. 832, 2018. Adjacent lands are residential.



Figure 1: Photo of the existing retaining wall on the subject lands.

The retaining wall that was constructed on the subject lands without permit is shown above in **Figure 1**. The siting of the retaining wall is adjacent to the rear and interior lot lines as shown below in green in **Figure 2**. The height of the retaining wall ranges from 0.09 metres on the east interior lot line (next to Lot 23) to 4.32 metres at its maximum height adjacent to the rear lot line to 0.59 metre adjacent to the westerly interior lot line (next to Lot 25).

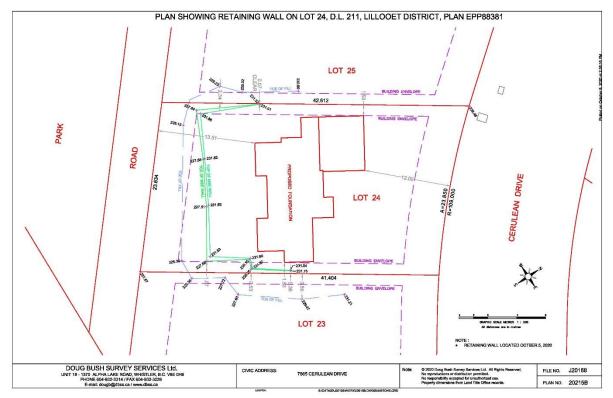


Figure 2: Site Plan Completed by Doug Bush Survey Services Ltd dated October 5, 2020

A rationale for the application was submitted by the Applicants and is attached as **Appendix B**. The applicants submitted a digital rendering of the proposed landscaping, and upon request by Staff, they further submitted a landscape plan completed by Sound Garden Landscape & Design, dated October 11, 2020. The Applicant has advised they are committed to landscaping the retaining wall and creating a landscaped buffer to mitigate visual impacts. The digital rendering is shown below as Figure 3 and the Landscape Plan is included in the application package attached as **Appendix B**.

Board of Variance 7665 Cerulean Drive October 28, 2020 Page 4 of 6



Figure 3: Digital rendering of proposed landscape buffer.

ZONING BYLAW NO. 832, 2018

The following setbacks apply to the subject lands as per the Residential Amenity 1, Sunstone (RSA-1) Zone:

- b) Minimum Front Setback: 5 m
- c) Minimum Rear Setback: 5 m
- d) Minimum Interior Side Setback: 1.5 m
- e) Minimum Exterior Side Setback: 3 m

The existing retaining wall is within the both the easterly and westerly interior lot line setbacks. The retaining wall is 0.38 meters from the easterly lot line and 0.07 meters from the westerly lot line.

Projections into the required setbacks are only permitted in accordance to the following policies of Section 4.13:

- 4.13 Projections into Required Setback and Exceptions to Siting Requirements
- a) Every part of any setback required by this Bylaw shall be open and unobstructed by any building or structure, except that, a setback may contain architectural or functional structures or a building or structure feature such as but not limited to; window sills, sunlight control projections, balconies, cornices, eaves, gutters, chimneys, pilasters, canopies, ornamental features or window bays, provided that:

viii. A retaining wall to a maximum height of 1.2 m may be sited on any portion of a lot

Retaining walls are limited in height in accordance to Section 7.21:

7.21 Retaining Walls

a) In a residential Zone, a single retaining wall shall:

- i. Not exceed a Height of 1.2 m measured from the average natural grade level at its base; and
- ii. Not be located within 0.6 m, measured horizontally, of any other retaining wall.

Therefore, the exisiting retaining wall requires a variance from Sections 4.13a) viii) and 7.21 a) i) of Zoning Bylaw No. 832, 2018.

THE LOCAL GOVERNMENT ACT, R.S.B.C. 2015

The following Section 542(1) of *the Local Government Act* is relevant to the decision making of the Board of Variance and the under this subsection is final:

542 (1)On an application under section 540, the board of variance may order that a minor variance be permitted from the requirements of the applicable bylaw, or that the applicant be exempted from section 531 (1) *[alteration or addition while non-conforming use continued]*, if the board of variance

- a) has heard the applicant and any person notified under section 541,
- b) finds that undue hardship would be caused to the applicant if the bylaw or section 531 (1) is complied with, and
- c) is of the opinion that the variance or exemption does not do any of the following:
 - i. result in inappropriate development of the site;
 - ii. adversely affect the natural environment;
 - iii. substantially affect the use and enjoyment of adjacent land;
 - iv. vary permitted uses and densities under the applicable bylaw;
 - v. defeat the intent of the bylaw;
 - vi. vary the application of an applicable bylaw in relation to residential rental tenure.

As per Section 542(3) of the Local Government Act, the default time frame is that construction must start within two years from the date of the order, this time frame can be altered longer or shorter by the Board of Variance in their decision.

COMMUNICATIONS

A notice regarding this application has been mailed to all adjacent properties as per Section 541 of the *Local Government Act*. If any submissions are received, they will be shared with the Board of Variance the evening before the meeting.

DETAILED PLANS AND DRAWINGS

If the Board of Variance chooses to approve this variance, their approval may refer specifically to the plans that have been included within this application. Staff recommend that if this variance is approved that the Board of Variance reference the landscape plan prepared by Sound Garden Landscape & Design dated October 11 2020 in their resolution to approve the variance.

VARIANCE REQUEST

The following related* variances from Zoning Bylaw No. 832, 2018 are being requested:

- To vary Section 4.13(a) viii. in order to allow a retaining wall in excess of 1.2 m in height to be placed on the portion of the site in general compliance with location and height on the Site Plan completed by Doug Bush Survey Services dated October 5th 2020 or in a location approved by Building Permit, not to exceed 43 m in length; and
- To vary Section 7.21 (a)i. to relax the maximum height of a retaining wall, from 1.2 m to a maximum of 4.32 m, a variance of 3.12 metres.

It should be noted that if one variance is supported, then they are both to be supported as they are intrinsically linked.

OPTIONS

The Board of the Variance has the following options for the variances requested:

- (i) Approve the variances;
- (ii) Approve the variances with conditions; require the variance to be approved on the condition of general compliance with Sound Garden Landscape & Design, dated October 11 2020;
- (iii) Reject the variances; the retaining wall will be required to be modified or removed to comply with the zoning regulations, or the applicant will have the option to seek a Development Variance Permit from Village of Pemberton Council.

NOTICE OF DECISION

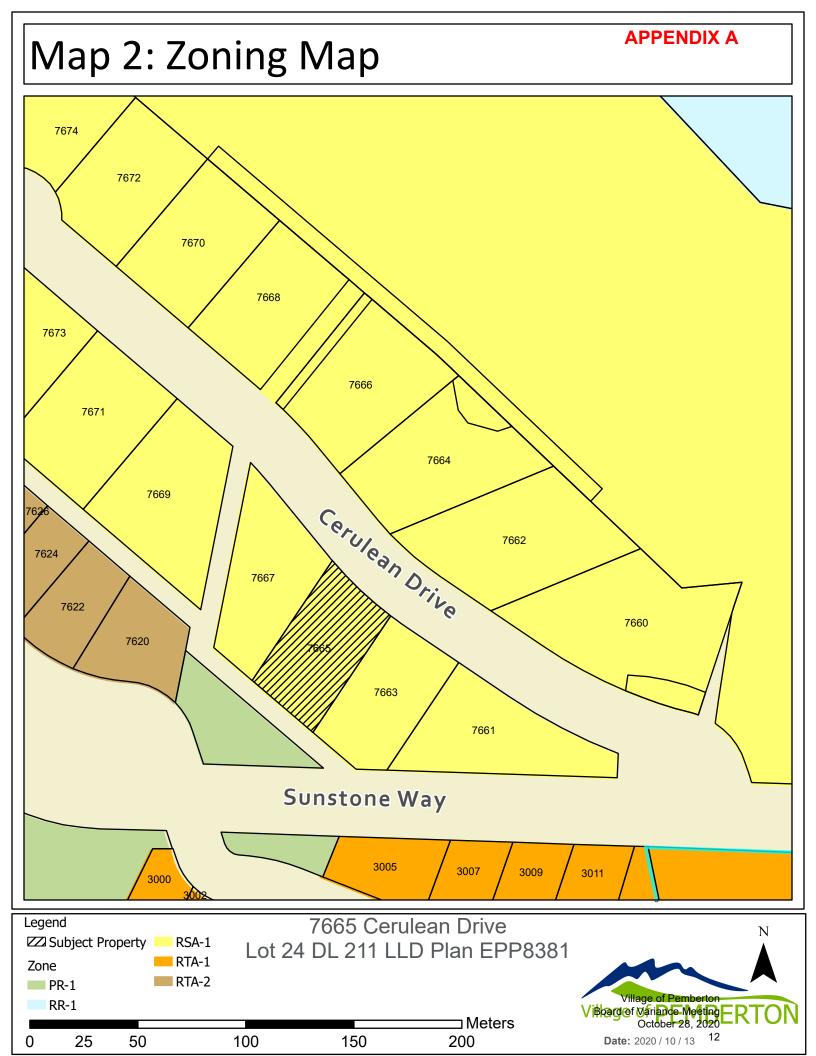
The decision of the majority of the membership shall be the decision of the Board. Village Staff shall, within seven (7) days of a decision, send by mail or otherwise deliver the written decision of the Board to the applicant, all persons who made representation at the hearing, and the Village of Pemberton Building Inspector. Village Staff shall, within seven (7) days of the decision, enter that decision in the record maintained at the local government office.

ATTACHMENTS :

Appendix A: Maps 1-2 Appendix B: Application Package



Date: 2020 / 10 / 13 11



September 29, 2020

Village of Pemberton Box 100, Pemberton, BC VON 2LO

SUBJECT: Variance request for retaining wall, 7665 Cerulean Drive, Pemberton, BC VON 2L3

Dear Village of Pemberton staff & Board of Variance committee members;

This letter is to request a Variance for the retaining wall currently erected on our lot at the above address which exceeds the VOP's Building Bylaw for a 1.2m retaining wall.

Please note it was originally not our intent to build a very costly retaining wall, which is why the wall was not shown on our plans. Once we realized how steep our driveway would be and how much of the entire lot was lost after we filled the lot at 2:1 grade a retaining wall was the best solution.

Other reasons for the retaining wall over 1.2m are: ~creating more usable space based on the steepness of the lot, improved drainage, ease of maintenance, preventable landscape erosion in the backyard.

Reasons for the design of the retaining wall ~esthetically pleasing along with foliage. ~same design & amp; colour as our neighbours at 7671 Cerulean Dr.

Also note that building the retaining wall without a permit was not done purposely; it was simply overlooked in a rush to move the project forward after waiting a lengthy time for a final decision by the building department regarding the side set-back issue for the sub division.

I met on-site with Evan Sykes of Kontur GeoTechnical Consultants on two different occasions to discuss possible options for a retaining wall; the size of the existing retaining wall was deemed most appropriate based on fifty foot change in elevation of the lot.

We had the wall engineered before we bought the material to build the wall and built the wall over three weeks. While we can accept the stop work order, we must say it came as a bit of a surprise as onsite discussions with Chris, the building inspector, we held during construction and he drove by numerous times without stressing that a separate permit was required. It wasn't until another two weeks later that a Stop-work order was issued. I except responsibility for not asking for a building permit earlier but I had no idea that a Variance would be needed as I hadn't heard of anyone having to get one out of all the retaining walls in Pemberton over 1.2m.

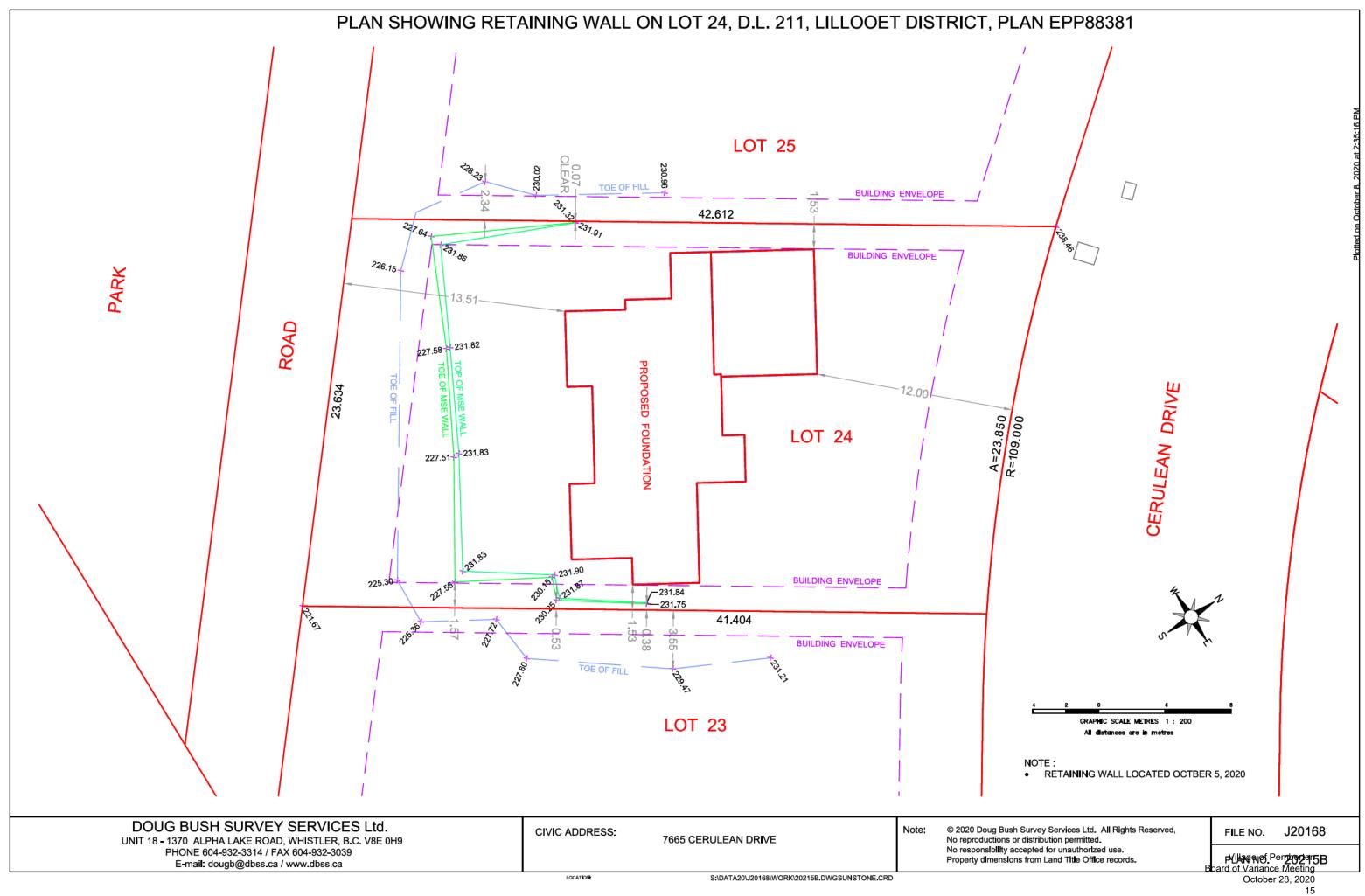
Upon completion of our home build, our objective is to work within the VoP's Hillside Development Design Guidelines to ensure landscaping is completed to minimize the visual impact of the wall.

The retaining wall, see attached photos, has an approved engineered report signed off by Evan Sykes from Kontur. With this application is a copy of the Geotech report. You will notice in the attached photos that the retaining wall is not in obstruction of any of lots, other home builds and view from neighbours.

Thank you for your consideration of what we hope will be a decision in favour of our existing retaining wall.

If you require further information, please do not hesitate to contact us.

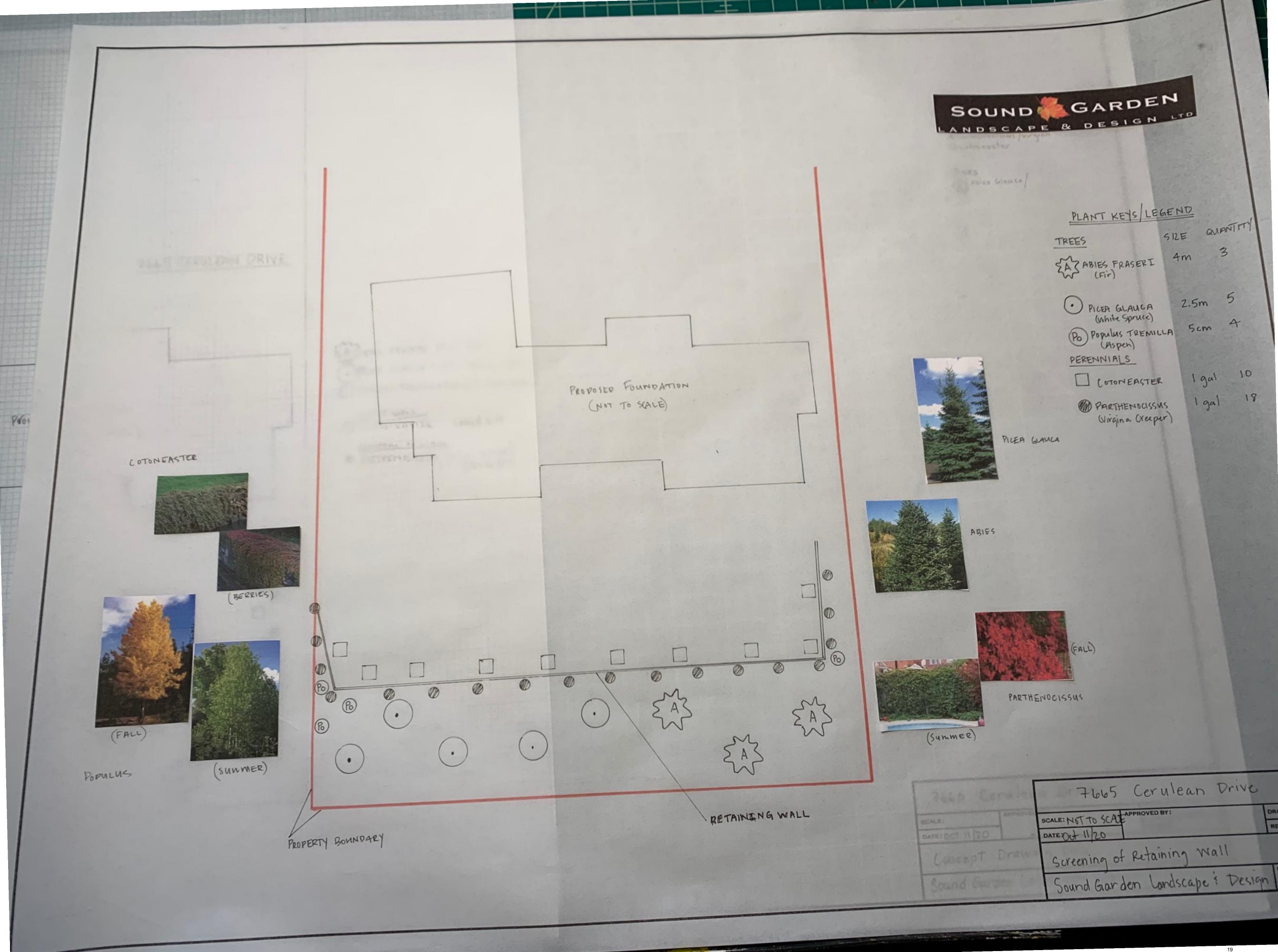
Regards, Dave & Stephanie Russell	
Dave:	
Stephanie:	-











TITLE SEARCH PRINT

File Reference: BP 1951 Declared Value \$329000

****CURRENT AND CANCELLED INFORMATION SHOWN****

Land Title District Land Title Office	Kamloops Kamloops
Title Number From Title Number	CA7398706 CA7260251
Application Received	2019-03-18
Application Entered	2019-03-20
Pegistered Owner in Fee Simple	

Registered Owner in Fee Simple

Registered Owner/Mailing Address:

DAVID FRANCIS RUSSELL, BUILDER STEPHANIE ANNE NICOLL-RUSSELL, PROJECT COORDINATOR P.O. BOX 72 PEMBERTON, BC VON 2L0 AS JOINT TENANTS

Taxation Authority

North Shore - Squamish Valley Assessment Area Pemberton, Village of Pemberton Valley Dyking District

Description of Land

Parcel Identifier: 030-665-469 Legal Description: LOT 24 DISTRICT LOT 211 LILLOOET DISTRICT PLAN EPP88381

Legal Notations

HERETO IS ANNEXED RESTRICTIVE COVENANT CA1132532 OVER LOT 1 PLAN EPP1353

THIS TITLE MAY BE AFFECTED BY A PERMIT UNDER PART 26 OF THE LOCAL GOVERNMENT ACT, SEE CA4415324

THIS TITLE MAY BE AFFECTED BY A PERMIT UNDER PART 26 OF THE LOCAL GOVERNMENT ACT, SEE CA4415329

HERETO IS ANNEXED EASEMENT CA6987764 OVER PART OF LOTS B EPP74427

HERETO IS ANNEXED RESTRICTIVE COVENANT LB319180 OVER LOT 1 PLAN EPP1353

TITLE SEARCH PRINT

File Reference: BP 1951 Declared Value \$329000

Charges, Liens and Interests Nature: Registration Number: Registration Date and Time: Registered Owner: Remarks:	COVENANT CA6503577 2017-12-11 18:40 VILLAGE OF PEMBERTON INTER ALIA
Nature: Registration Number: Registration Date and Time: Remarks:	RESTRICTIVE COVENANT CA6503578 2017-12-11 18:40 INTER ALIA APPURTENANT TO PCL A (DD W34182F PL A21) DL 211 LD
Nature: Registration Number: Registration Date and Time: Remarks:	EASEMENT CA6503589 2017-12-11 18:40 INTER ALIA APPURTENANT TO LOT 8 EPP72101
Nature: Registration Number: Registration Date and Time: Remarks:	STATUTORY BUILDING SCHEME CA7273860 2018-12-31 10:16 INTER ALIA
Duplicate Indefeasible Title	NONE OUTSTANDING
Transfers	NONE
Pending Applications	NONE
Corrections	NONE

TITLE SEARCH PRINT



MEMORANDUM

September 18, 2020 Project No.: **K-191219-00**

То:	Dave Russell Tree Top Homes	By Email:	David.treetophomes@gmail.com
Cc:			
From:	Evan Sykes, P.Eng. Kontur Geotechnical Consultants Inc.		esykes@kontur.ca
Subject	Field Reviews Retaining Wall		

Lot D3, Sunstone Development, Pemberton, BC

As requested, Kontur Geotechnical Consultants Inc. (Kontur) completed intermittent field review during construction of a Mechanically Stabilized Earth (MSE) Wall. A proprietary Atlantic Industries Ltd (AIL) wall system was used for construction of the wall. Subgrade preparations for the MSE wall generally consisted of excavation to below design subgrade elevation removing organics and loose soils to expose dense sand with trace to some silt and some gravel. The exposed sand layer was compacted with a heavy vibratory compactor to a very dense state. Design subgrade elevation was achieved with river sand and gravel (25mm minus), compacted with several passes of a heavy vibratory compactor to achieve at least 95% Modified Proctor Maximum Dry Density (Density reports attached). The fill created a slope with an inclination of about 2H: 1V (Horizontal: Vertical) in front of the wall.

The temporary excavation, where required to allow for space for the geogrid was excavated at an inclination of about 3H: 4V (Horizontal: Vertical).

The MSE wall was constructed with Miragrid 10XT Geogrid extending at least 5.5m behind the wall face in the upper two rows and 4.5m for the lower rows. Wall heights at the front of the wall were about 4.5m.

A drainage pipe consisting of 100mm perforated PVC pipe was installed near the back of the geogrid outletting to the side of the wall. The pipe was surround by at least 150mm of 19mm clear crushed gravel wrapped in non-woven filter fabric. Backfill for the wall generally consisted of 50mm minus dredged river sand and gravel placed in lifts abut 300mm thick compacted to a very dense state with several passes of a heavy vibratory compactor.

The retaining wall was considered to have been constructed in general compliance with Kontur's drawings and recommendations.

Kontur trusts that the information described above meets your current requirements. If you should have any concerns or questions, please do not hesitate to contact the undersigned.

September 18, 2020 Project No.: K-180219-00 Filed Reviews Retaining Wall Lot D3, Sunstone Development, Pemberton, BC

Sincerely,

Kontur Geotechnical Consultants Inc.

Per:



Principal Geotechnical Engineer

Attachments: Photographs Sieve Analysis Report Field Density Report

Reviewed by:

J.Y. (Yoshi) Tanaka, P.Eng. **Principal Geotechnical Engineer**

Metro Testing + Engineering



1278 Stonemount Place

SIEVE ANALYSIS REPORT 8 16 30 50 SERIES

Squamish, BC, V8B 0R7

то TREETOP HOMES 7709 PEMBERTON MEADOWS ROAD PEMBERTON, BC VON 2L0

ATTN: MR. DAVID RUSSELL

PROJECT RESIDENTIAL AT LOT # 24 CERULEAN DR. SOILS. OTHERS. CONTRACTOR TREE TOP HOMES

LOT # 24 CERULEAN DR. SUNSTONE PEMBERTON

SIEVE TEST NO. 1

DATE RECEIVED 2020. May. 21 DATE TESTED 2020. May. 23 DATE SAMPLED 2020. May. 21

PROJECT NO.M W 34433

C.C.

CLIENT TREETOP HOMES

PERCENT PASSING	100 ³ ² 90 80 <u>100</u> <u>100</u>	1%" 1" 3/4" 2 1%" 1" 3/4" 2 19 mm 37.5 mm	2.38° #4 #8	616 630			0 10 20 90 90 90 90 90 90 90 90 90 9
GRAVE	L SIZES	PERCENT PASSING	GRADATION LIMITS	SAND SIZE	S AND FINES	PERCENT PASSING	GRADATION LIMITS
3" 2" 1 1/2" 1" 3/4" 1/2" 3/8"	75 m 50 m 37.5 m 25 m 19 m 12.5 m 9.5 m	n 93.7 n 92.1 n 87.3 n 79.5 n 71.3	100.0- 100.0 70.0-100.0 50.0-100.0	No. 4 No. 8 No. 16 No. 30 No. 50 No. 100 No. 200	4.75 mm 2.36 mm 1.18 mm 600 μm 300 μm 150 μm 75 μm	57.4 52.8 46.7 27.8 11.7 4.7 2.5	22.0- 100 10.0- 85.0 2.0- 8.0
OMMENTS			71				

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Metro Testing + Engineering

1278 Stonemount Place

FIELD DENSITY REPORT

Squamish, BC, V8B 0R7

PROJECT NO.M W 34433 CLIENT TREETOP HOMES C.C.

TREETOP HOMES 7709 PEMBERTON MEADOWS ROAD PEMBERTON, BC VON 2L0

ATTN: MR. DAVID RUSSELL

PROJECT RESIDENTIAL AT LOT # 24 CERULEAN DR. SOILS. OTHERS.

LOT # 24 CERULEAN DR. SUNSTONE PEMBERTON

REPORT NO. 1 NO. OF DENSITIES 3 TESTED BY DS DATE TESTED2020.May.21

CONTRACTOR	TREETOP HOMES	
AREA	SUNSTONE RIDGE - PEMBERTON	1
CONSTRUCTION TYPE	MATERIAL FILL FOR FOUNDATION	

DENSITY		LAB REFERENCE	MOIS	STURE	OVERSIZE	DRY D	ENSITY	COMPACTION
NUMBER	LOCATION	AND MATERIAL TYPE	FIELD	OPTIMUM	MATERIAL	FIELD	LAB	COMPACTION %
1	3" MINUS MATERIAL FILL – LOT #24 CERULEAN DRIVE	Proctor 1 75MM SILT	6.0	11.0	0.0	1920	1970	98
2	3" MINUS MATERIAL FILL – LOT #24 CERULEAN DRIVE	Proctor 1 75MM SILT	5.0	11.0	0.0	1906	1970	97
3	3" MINUS MATERIAL FILL – LOT #24 CERULEAN DRIVE	Proctor 1 75MM SILT	5.9	11.0	0.0	1936	1970	98
ROCK CO		roctor ASTM Field Dens:				SPECIFIED LOW DENS		TION 95 CATED WITH *
COMMENT	ΓS	21						
Page 1			Engineerir	ng	PER		2010	
Reporti	ng of these test results constitutes a testing	service only. Engineeri	ng interpret	tation or eva	uation of test	t results _{il} is p	sovrided and	on written reques

September 18, 2020 Project No.: K-180219-00 Filed Reviews Retaining Wall Lot D3, Sunstone Development, Pemberton, BC

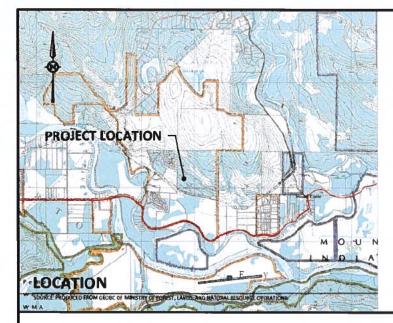




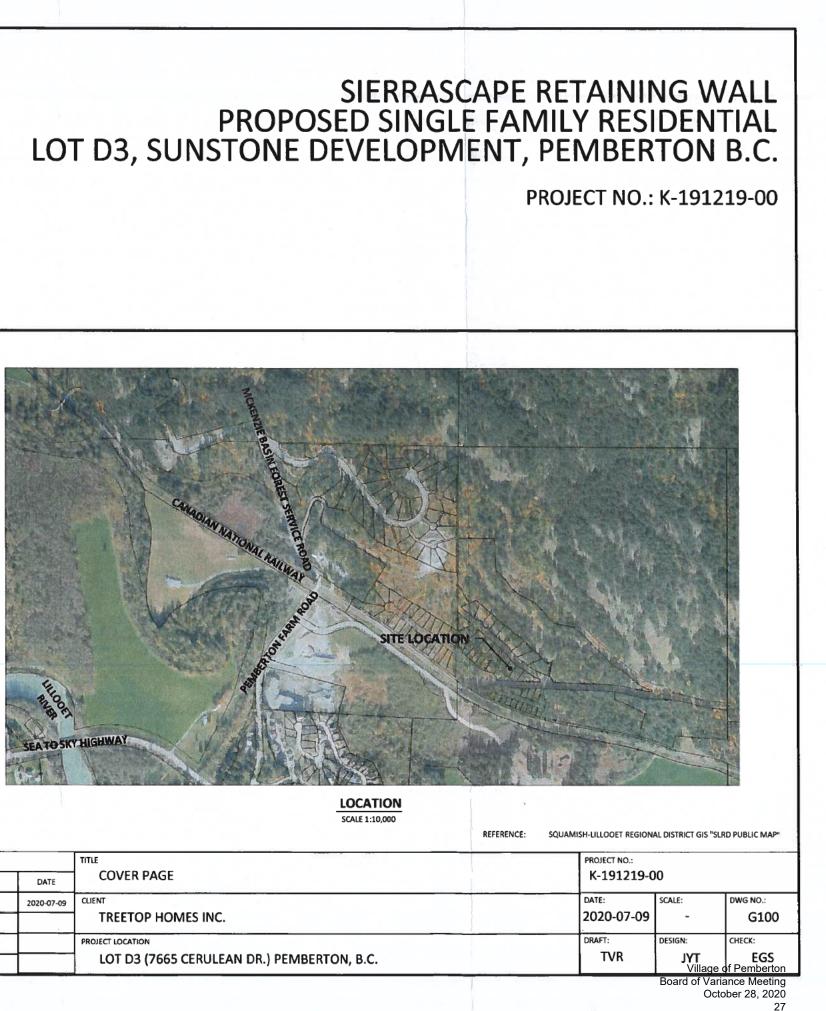
Photograph 1 - Wall Backfill



Photograph 2 - Subgrade Preparation



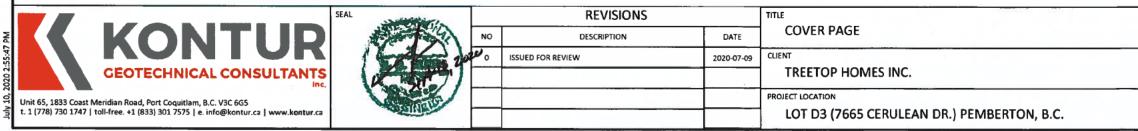
DRAWING NO.	VERSION	DRAWING NAME
G100	0	COVER PAGE
G101	0	GENERAL SITE PLAN
G102	0	SIERRASCAPE WALL CROSS-SECTION A (MAX 4.5m HEIGHT)
G103	0	TYPICAL SIERRASCAPE RETAINING WALL NOTES
G104	0	TYPICAL SIERRASCAPE RETAINING WALL DETAILS

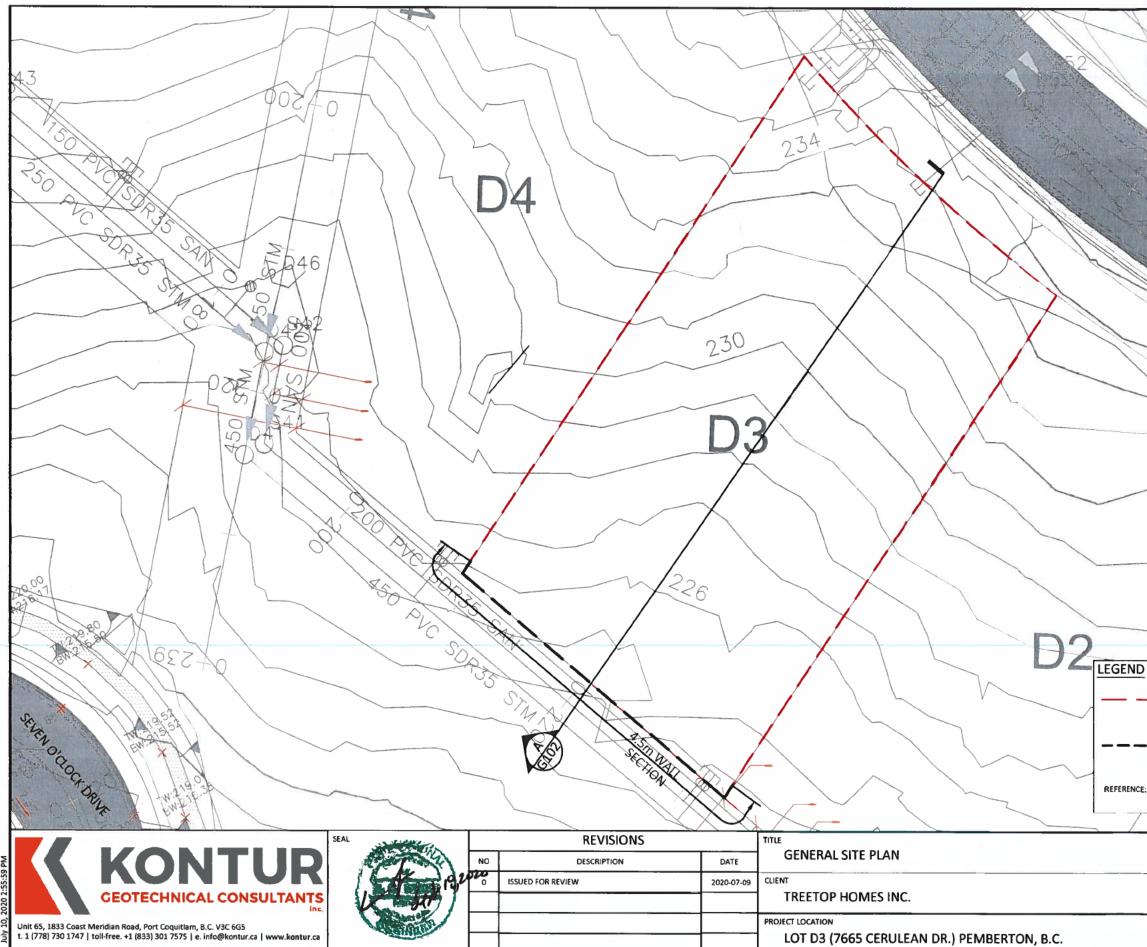


CONTACT INFORMATION

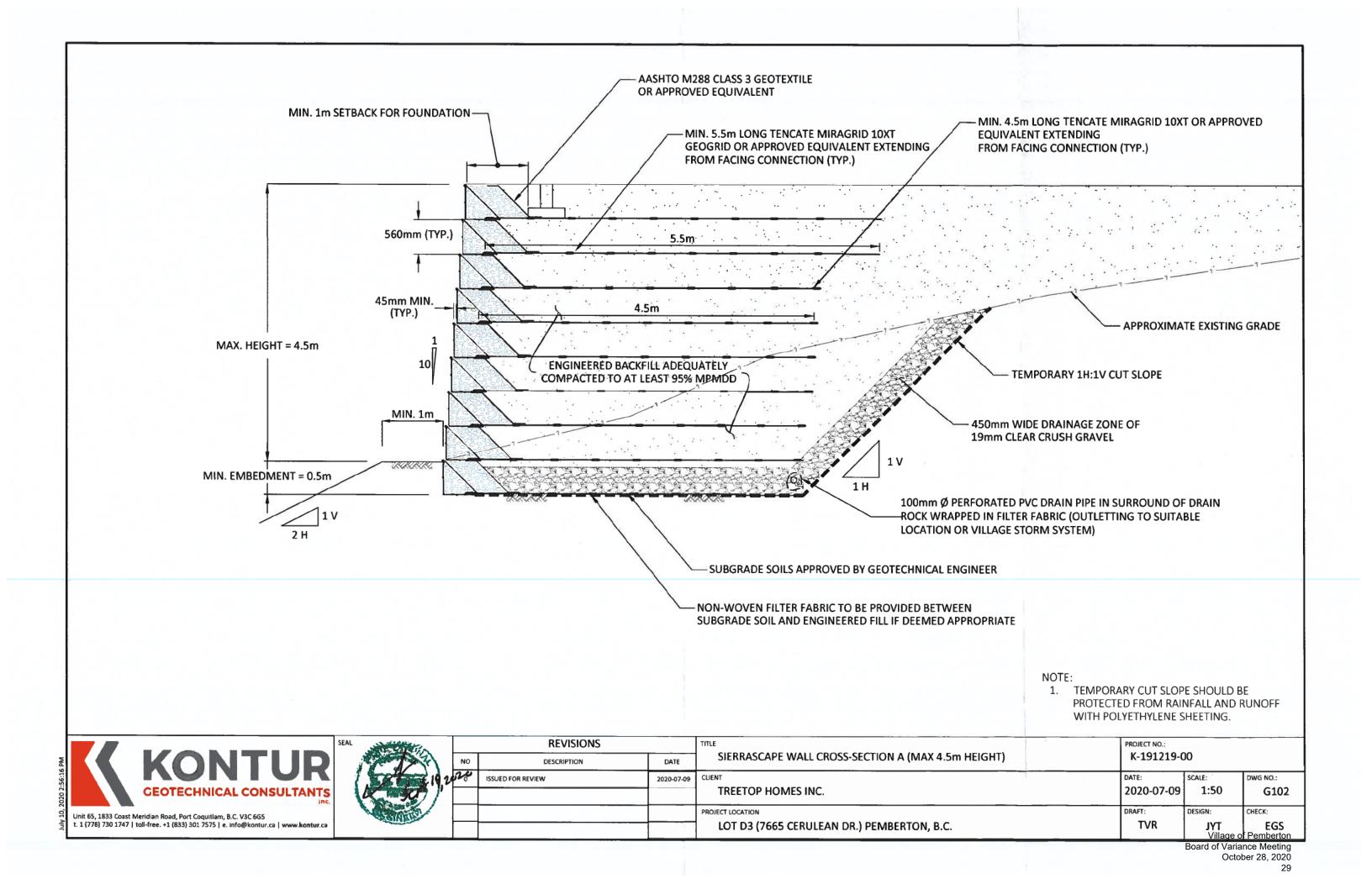
Client:	David Russell	
	Treetop Homes II	nc.
	t. 604.905.0609	e. david@treetophomes.com

Engineer: Evan Sykes, P.Eng. Kontur Geotechnical Consultants Inc. t. 778.730.1747 d. 778.730.1722 e. esykes@kontur.ca





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PROPERTY BOU	AINING WALL WING "(2019-09-11) 39 PROJECT NO.:	904-BASE-MODEL.DV	VG"
PROPERTY BOU	AINING WALL WING "(2019-09-11) 39 PROJECT NO.: K-191219-0 DATE:	004-BASE-MODEL.DV	DWG NO.:



RETAINING WALL PLAN NOTES & SPECIFICATIONS

CONTACT INFORMATION

Owner:	David Russell
	Treettop Homes Inc.
	david@treetophomes.com t. 604.905.0609
Engineer:	Mr. Evan Sykes
	Kontur Geotechnical Consultants Inc.
	t. 778.730.1747 d. 778.730.1722 e. esykes@kontur.ca
Contractor	TRD

Contractor: TBD

PART A - GENERAL REQUIREMENTS

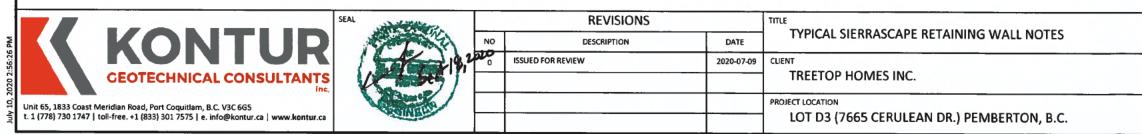
- 1. The work shall be carried out in accordance with all applicable bylaws an regulations for this site, including WorkSafe BC Regulations and Guidelines.
- 2. The work described in this plan should be completed in reference to the Geotechnical Report prepared by Kontur Geotechnical Consultants Inc. (Kontur) for this project.
- This plan shall not be used to layout the retaining wall. Layout of the proposed retaining wall is to be completed based on the appropriate survey and architectural information and drawings.
- The Contractor is responsible for and shall:
- 4.1. All relevant permits from governing authorities must be in place prior to start of construction.
- 4.2. If applicable, permission from adjacent property owners must be obtained and written confirmation of such permission forwarded to Kontur at least 2 days prior to commencing work on the adjacent properties.
- 4.3. Provide all necessary labour, materials, and equipment, to carry out the work as specified in this plan and by the Geotechnical Engineer. The retaining wall should be constructed as shown on the drawings included in this plan.
- 4.4. Provide adequate temporary drainage control in and around the proposed retaining wall in a manner that does not detrimentally influence surroundings lands.
- 4.5. Take all necessary steps to protect all instrumentation, equipment, and apparatuses, from damage and/or disturbance due to any causes, such as on-site operations, vandalism/theft, and/or weather
- 4.6. Repair or replace any instrumentation, equipment, and/or apparatuses, that are damaged or disturbed (as a result of the Contractor's operations or failure to provide adequate protection) to the satisfaction of the Engineer. This will be done at no additional cost to the Owner.
- 4.7. Cooperate fully with the Engineer, Surveyor, and Owner to provide all reasonable assistance as necessary.
- 4.8. The contractor will undertake proper survey control to ensure the proposed retaining wall is constructed according to the design drawings with respect to property lines, building lines, ground surface, and finished grades. Report any dimensional discrepancies to Kontur Geotecnical Consultants Inc.
- 4.9. Provide an appropriate 'as-built' upon completion. This is to be completed by a Professional Land Surveyor registered in British Columbia.
- 4.10. The Owner shall be responsible for the repair of any sidewalks, paved surface /roads, buried utility services, and any other structures/buildings, that may be influenced by the construction of the proposed retaining wall as described in this plan. It is recommended as part of the due diligence process, that a pre-construction and post-construction assessment be completed to visually document the condition of theses surfaces, structures/ and or buildings.
- 4.11. Site to be enclosed by fencing or hoarding prior to start of excavation. Hoarding/fencing to be acceptable to municipal bylaws.
- 4.12. The Contractor shall maintain the overall responsibility for site safety.
- 4.13. All blasting must be completed by a certified blaster. Blasting may not occur within 10 feet of adjacent buildings. Notification of blasting must be provided to the excavation engineer 24 hours prior to blasting to allow installation of monitoring equipment. Unless otherwise indicated in the soils report, material which can be removed by excavation or ripping with a Caterpillar 345 excavator or equivalent with a single ripper tooth, with a production rate of at least 10 cubic yards per hour is not considered to require blasting for removal.

PART B - MATERIAL REQUIREMENTS

- 1. ENGINEERED BACKFILL should consist of free-draining structural fill with less than 5% (by dry weight) passing the No. 200 sieve. The material should be free of any saturated and unsuitable materials. Samples of the proposed Engineered Backfill should be submitted to the Engineer for testing, review, and approval, well in advance of placement on-site.
- 2. COMPACTION REQUIREMENTS. Unless indicated otherwise directed by the Geotechnical Engineer in writing, fill materials should be compacted to at least 95% of the materials' Modified Proctor Maximum Dry Density value as approved by the Engineer. Fill materials should be place in lifts no thicker than 300mm and be compacted near the material's optimum moisture content.
- SIERRASCAPE Retaining Wall Unit to be supplied by Atlantic Industries Limited. 3.
- 4 GEOGRID panels should consist of new uniaxial and biaxial geogrids such as TENSAR UX 1500MSE / UX1600MSE / BX1120 as supplied by Nilex Inc. or approved equivalent.
- Filter Fabric should consist of a new non-woven filter fabric such as Nilex4545 as supplied by Nilex Inc., or approved equivalent,
- 6. Composite turf reinforcement mat should consist of a new VMax C350 Turf Reinforcement supplied by Nilex., or approved equivalent.

PART C - EXECUTION OF THE WORK

- 1. The Contractor shall submit details of the proposed construction schedule, methods, and equipment to the Engineer well in advance of the anticipated start date of the work.
- 2. Site Preparation
- 2.1. The Contractor shall utilize suitable construction equipment to property perform the work.
- 2.2. All existing buried services/structures, building foundations, concrete, debris, and/or unsuitable materials, should be stripped and removed from the site and appropriately disposed of off-site.
- 2.3. All vegetation and other unsuitable materials within the proposed retaining wall area are to be completely stripped and removed, and properly disposed of off-site.
- 2.4. Retaining walls should be placed on a properly stripped and prepared subgrade surface approved by the Geotechnical Engineer.
- 3. Retaining Wall Construction
- 3.1. Backfill behind the SIERRASCAPE Retaining walls to a distance equal to the length of the geogrid and to the top of the highest geogrid shall consist of free-draining granular material
- 3.2. Off-site Considerations. the Contractor is responsible for street clean up to meet municipal requirements.
- 3.3. Geogrids shall be installed at the lengths, elevations, and locations shown on the drawings herein. Changes to geogrid layout are not permissible without the express written consent of the Geotechnical Engineer. Geogrid reinforcement shall be continuous throughout their embedment length. Geogrid-to-Geogrid connection is not allowed
- 3.4. Geogrid shall be rolled out perpendicular to the facing units and placed over the SIERRASCAPE Wall connection loops. The transverse bar of the geogrid (across the roll width) that bears on the connection loop must be cut in at least five locations on each roll of geogrid. Cutting is necessary to ensure that the transverse bar properly bears on the connection loop. The cuts shall be made at the non-load bearing apertures. Two cuts shall be made close to each outer edge edge of the roll. One cut shall be made towards the middle of the roll. Additional cuts may be necessary at other non-loading bearing apertures. Two roll widths of geogrid shall be attached to each facing unit. Thread the connection rod through the connection loops over the geogrid ribs.



reinforcement.

aeogrid reinforcement. 4. Engineering Review In order to sign off on the work, Kontur should complete the necessary field reviews and materials testing during key construction stages of the work. Kontur should be notified at least 48 hours prior to the start of the work. While not limited to, the following key construction

stages may include:

3.5. Tracked construction equipment shall not be operated directly on the geogrid reinforcement. A minimum backfill thickness of 150mm is required for operation of tracked vehicles over the geogrid reinforcement. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and/or geogrid

3.6. A minimum of 75mm of engineered fill shall be placed between overlapping layers of

4.1. Review of proposed engineered backfill material

4.2. Review of Stripping and excavation works;

4.3. Review of exposed/prepared subgrade surface;

4.4. Review placement and compaction of fills;

4.5. Review of construction of retaining wall

Materials testing services will be required in order to assist with confirming the suitability and placement of engineered fills. This may include in-situ compaction, grain size analysis, and moisture density (proctor) tests.

PROJECT NO.: K-191219-00		
DATE:	SCALE:	DWG NO .:
2020-07-09	-	G103
DRAFT:	DESIGN:	CHECK:
TVR	JYT Village o	EGS f Pemberton
	Board of Varia Octol	nce Meeting ber 28, 2020
		30

BRITISH COLUMBIA BUILDING CODE 2018

SCHEDULE B

Forming Part of Subsection 2.2.7., Division C of the British Columbia Building Code

Building Permit Number (for authority having jurisdiction's use)

ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW

Notes: (i) This letter must be submitted prior to the commencement of construction activities of the components identified below. A separate letter must be submitted by each registered professional of record.

- (ii) This letter is endorsed by: Architectural Institute of BC, Association of Professional Engineers and Geoscientists of the Province of BC, Building Officials' Association of BC, and Union of BC Municipalities.
- (iii) In this letter the words in italics have the same meaning as in the British Columbia Building Code.

To: The authority having jurisdiction

Village of Pemberton

Name of Jurisdiction (Print)

Re: Retaining Wall

Name of Project (Print)

Lot D3, Sunstone Development, Pemberton, BC

0

Address of Project (Print)

The undersigned hereby gives assurance that the design of the

(Initial those of the items listed below that apply to this registered professional of record. All the disciplines will not necessarily be employed on every project.)

ARCHITECTURAL	Contraction of the
STRUCTURAL	
MECHANICAL	
PLUMBING	
FIRE SUPPRESSION SYSTEMS	15-
ELECTRICAL	(Professional's Seal and Signature)
GEOTECHNICAL temporary	-(0)
GEOTECHNICAL - permanent	September 18, 2020
The Main	Date

components of the plans and supporting documents prepared by this registered professional of record in support of the application to the building permit as outlined below substantially comply with the British Columbia Building Code and other applicable enactments respecting safety except for construction safety aspects.

The undersigned hereby undertakes to be responsible for field reviews of the above referenced components during construction, as indicated on the "SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS" below.

CRP's Initials

1 of 4

British Columbia Building Code 2018

BRITISH COLUMBIA BUILDING CODE 2018

Schedule B - Continued

Building Permit Number (for authority having jurisdiction's use)

Lot D3, Sunstone Development, Pemberton, BC

Project Address

Geotechnical Discipline SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS (Initial applicable discipline below and cross out and initial only those items not applicable to the project.) ARCHITECTURAL 1.1 Fire resisting assemblies 1.2 Fire separations and their continuity Closures, including tightness and operation 1.3 1.4 Egress systems, including access to exit within suites and floor areas Performance and physical safety features (guardrails, handrails, etc.) 1.5 1.6 Structural capacity of architectural components, including anchorage and seismic restraint Sound control 1.7 1.8 Landscaping, screening and site grading 1.9 Provisions for firefighting access 1.10 Access requirements for persons with disabilities 1.11 Elevating devices 1.12 Functional testing of architecturally related fire emergency systems and devices 1.13 Development Permit and conditions therein 1.14 Interior signage, including acceptable materials, dimensions and locations 1.15 Review of all applicable shop drawings 1.16 Interior and exterior finishes 1.17 Dampproofing and/or waterproofing of walls and slaps below grade-1.18 Roofing and flashings 1.19 Wall cladding systems Seal and Signature) (Professional's 1.20 Condensation control and cavity ventilation 1.21 Exterior glazing September 18, 2020 1.22 Integration of building envelope components 1.23 Environmental separation requirements (Part 5) Date 1.24 Building envelope, Part 10, ASHRAE, NECB or Energy Step Code requirements 1.25 Building envelope, testing, confirmation or both as per Part 10 requirements STRUCTURAL 2.1 Structural capacity of structural components of the building, including anchorage and seismic restraint 2,2 Structural aspects of deep foundations Structural aspects of deep foundations Beview of all applicable shop drawings 2.3 Structural aspects of unbolided post-tensioned concrete design and construction MECHANICAL 3.1 HVAC systems and devices, including high building requirements where applicable 3.2 Fire dampers at required fire separations 3.3 Continuity of fire separations at HVAC penetrations 3.4 Functional testing of mechanically related fire emergency systems and devices 3.5 Maintenance manuals for mechanical systems Structural capacity of mechanical components, including anchorage and seismic restraint 3.6 Review of all applicable shop drawings 3.7 3.8 Mechanical systems, Part 10 - ASHRAE, NECB or Energy Step Code requirements Mechanical systems, testing, confirmation or both as per Part 10 requirements 3.9 CRP's Initials 3 of 4

British Columbia Building Code 2018



Box #275, Suite #400 - 555 Burrard Street Vancouver, B.C. V7X 1M8 Telephone: 604-683-5583 Toll Free: 1-800-690-7475 Facsimile: 604-683-8032 www.mpib.com

TO: Treetop Homes David Russell 76655 Cerulean Dr Pemberton, B.C.

THIS IS TO CERTIFY THAT insurance has been effected as shown below:

- **INSURED:** Kontur Geotechnical Consultants Inc. and other insureds who may be identified in the policy.
- INSURER: XL Specialty Insurance Company
- POLICY NO: DPX9460923

POLICY EXPIRY: February 19, 2021; 12:01 A.M. Local Standard Time

COVERAGE: <u>PROFESSIONAL LIABILITY INSURANCE</u>

LIMIT OF LIABILITY: CAN \$1,000,000. Each claim and in the Aggregate annually CAN \$1,000,000.

This certificate is valid at the date of issuance. The policy is subject to change, expiration or cancellation without notice to the certificate-holder.

This certificate is issued for information only, and confers no rights on any holder and imposes no liability upon the insurer, which assumes no responsibility whatsoever in furnishing this certificate.

The Policy contains all the terms and conditions of coverage. The policy is not limited to claims by or in connection with the above-noted certificate-holder. The limit of liability may be inclusive of damages and claims expenses; the aggregate limit is the maximum available for all covered claims.

METRIX PROFESSIONAL INSURANCE BROKERS INC.

Authorized Representative

Dated: February 24, 2020

