



CORPORATION OF THE CITY OF VERNON

ADVISORY PLANNING COMMITTEE

TUESDAY, JULY 19, 2022, AT 4:00 PM

COUNCIL CHAMBERS, CITY HALL (OKANAGAN LAKE ROOM)

A G E N D A

1) **CALL TO ORDER**

2) **LAND ACKNOWLEDGEMENT**

As chair of the City of Vernon's Advisory Planning Committee (APC), and in the spirit of this gathering, I recognize the City of Vernon is located in the traditional territory of the Syilx people of the Okanagan nation.

3) **ADOPTION OF AGENDA**

4) **ADOPTION OF MINUTES**

a) June 28, 2022 (attached)

5) **NEW BUSINESS**

- a) **DVP00558 (8841 ADVENTURE BAY ROAD)**
- b) **DVP00577 (9233 KOKANEE ROAD)**
- c) **DVP00521 (9353 EASTSIDE ROAD)**
- d) **DVP00540 (7333TRONSON ROAD)**

6) **INFORMATION ITEMS**

a) Staff Liaison to provide verbal update of APC related items discussed at the last Council meeting.

7) **NEXT MEETING**

The next meeting is tentatively scheduled for **TUESDAY, AUGUST 16, 2022 AT 4:00 PM**

8) **ADJOURNMENT**



THE CORPORATION OF THE CITY OF VERNON

MINUTES OF THE ADVISORY PLANNING COMMITTEE MEETING HELD ON TUESDAY, JUNE 28, 2022, at 4:00 PM COUNCIL CHAMBERS (OKANAGAN LAKE ROOM)

PRESENT Claire Ishoy
Doug Neden (Acting Chair)
Harpreet Singh Nahal
Jamie Paterson
Margo Jarman
Mayor Cumming
Monique Hubbs-Michiel

ABSENT Don Schuster
Joshua Lunn
Lisa Briggs
Mark Longworth (Chair)
Phyllis Kereliuk

STAFF Craig Broderick, Manager, Current Planning
Matt Faucher, Current Planner
Tracy Mueller, Committee Clerk

ORDER The Chair called the meeting to order at **4:00 PM**.

LAND ACKNOWLEDGMENT *As Chair of the City of Vernon's Advisory Planning Committee, and in the spirit of this gathering, I recognize the City of Vernon is located in the traditional territory of the Syilx people of the Okanagan Nation.*

ROUND TABLE INTRODUCTIONS The Chair and Committee welcomed newly appointed member Margo Jarman to the group.

ADOPTION OF AGENDA Moved by **J. Paterson**, seconded by **M. Hubbs-Michiel**:

THAT the Advisory Planning Committee agenda of Wednesday, June 28, 2022, be adopted.

CARRIED

ADOPTION OF MINUTES

Moved by **H. Singh Nahal**, and seconded **M. Jarman**:

THAT the minutes of the Advisory Planning Committee meeting of **May 31, 2022**, be adopted.

CARRIED

NEW BUSINESS:

**DVP00544
(7163 APEX DRIVE)**

M. Faucher, Planner, provided an overview of **DVP00544 (7163 APEX DRIVE)**; an application to vary Section 5.5.5 of Zoning Bylaw 5000 to increase the maximum net floor area of a secondary suite from 90 m² to 100 m² at 7163 Apex Drive.

- The applicant is requesting an increase in the size of the secondary suite.
- The property is located in a developing area; some site preparation was done previously; the new owner is seeking a building permit to construct a single detached dwelling with a secondary suite.

The following comments / questions were posed by members of the Committee:

- In response to a question from the Committee, staff clarified that the subject building is a two-storey structure, and the owner is seeking to include a secondary suite.
- The Committee asked if there were other rental suites in the neighbourhood. Staff noted there were suites in the area and that they are permitted within the zone.

Moved by **M. Hubbs-Michiel**, seconded by **H. Singh Nahal**:

THAT Council support Development Variance Permit Application 00544 (DVP00544) to vary Zoning Bylaw 5000 on LT 30, SEC 13, TWP 8, ODYD, PLAN EPP72337 (7163 Apex Drive) as follows:

- a) Section 5.5.5 to increase the maximum net floor area of a secondary suite from 90 m² to 100 m².

AND FURTHER, that Council's support of DVP00544 is subject to the following:

- a) That the site plan, building elevations and floor plans, intended to illustrate the increased suite size (Attachment 1) in the report titled “Development Variance Permit Application for 7163 Apex Drive” dated June 21, 2022 and respectfully submitted by the Current Planner, be attached to and form part of DVP00544 as Schedule ‘A’.

CARRIED

**DVP00516
(3202 16 AVENUE)**

C. Broderick, Manager, Current Planning, provided an overview of **DVP00516 (3202 16 AVENUE)** an application to vary minimum unit width for the construction of three-plex housing and a housing agreement to provide rental units.

- The recommendation is for Council to enter into a housing agreement to preserve the units as rentals for 20 years (going from 2 - 3 units). The applicant has been working with the city on this project and they have provided road dedication for future expansion of HWY 97.

The following comments / questions were posed by members of the Committee:

- The Committee noted that the “Rationale” (Page 22 of the agenda package) requires clarification regarding the placement of the lane.
- A question was posed regarding the placement of the Radon Exhaust and Vent on Attachment 3 (Page 31 of the agenda package).

Moved by **J. Paterson**, seconded by **M. Hubbs-Michiel**:

THAT Council approve Development Variance Permit 00516 (DVP00516) to vary Zoning Bylaw 5000 for Lot 1, DL 73, ODYD, Plan EPP41416 (3202 16th Avenue) as outlined in the report titled “Development Variance Permit Application for 3202 16th Avenue” dated June 22, 2022 and respectfully submitted by the Current Planner, by decreasing;

- a) Section 9.11.6 minimum unit width from 6.5m to 5.5m for proposed Units 1 and 2;

AND FURTHER, that Council's approval of DVP00516 is subject to the following;

- i. That the proposed development generally complies with the site plans (Attachment 1), by Russell Shortt Land Surveyors, dated February 7, 2022, and by 925R Design, dated February 2, 2022, to be attached to and form part of DVP00516;
- ii. That the proposed development generally complies with building elevations (Attachment 2), by 925R Design, dated February 2, 2022, to be attached to and form part of DVP00516;
- iii. That the proposed development generally complies with the landscape plan (Attachment 8), by Swan Lake Nurseryland, dated July 27, 2016, to be attached to and form part of DVP00516; and

That required landscape areas and installations meet Zoning Bylaw 5000 and Landscape Standards Bylaw 5015;

AND FURTHER, that Council enter into a housing agreement (Attachment 7) with the owner, prohibiting subdivision under the *Land Title Act* and the *Strata Property Act* for a period of 20 years.

CARRIED

INFORMATION ITEMS

Staff provided a brief overview of projects discussed at Council on **Monday, June 27, 2022**, as follows:

- **DVP00557 (3204A 16 Street)** – Request for an over height fence for part of a backyard for East Hill. Council approved the variance.
- **DVP00559 (9169 Smith Road)** - The applicant wanted to build a single family detached home with a retaining wall to be constructed on slopes greater than 30%. Council approved the request.

- **Klinger Road / Okanagan Road** - Variance for slopes and height, down below seasons on Okanagan Landing Road. That variance was for the townhomes. Another part of that file will come to APC re: rezoning on Okanagan Landing Road.
- **PORT OKANAGAN (2525 LAKESHORE & 7295 OKANAGAN LANDING ROAD)** - The Public Hearing was held for Port Okanagan. The following concerns were expressed: potential traffic impact; and that the building renderings appear blocked and look square. Staff clarified that blocked buildings are not representative of the design scheme and that the applicant will provide updated renderings that will be more reflective of the proposed building façade.

NEXT MEETING

The next meeting of the Advisory Planning Committee is tentatively scheduled for **Tuesday, July 19, 2022, at 4:00 PM.**

ADJOURNMENT

The Advisory Planning Committee meeting of June 28, 2022, adjourned, at the call of the Chair, at **4:25 PM.**

CERTIFIED CORRECT:

Chairperson



THE CORPORATION OF THE CITY OF VERNON REPORT TO COUNCIL

SUBMITTED BY: Michelle Austin
Current Planner

COUNCIL MEETING: REG COW I/C
COUNCIL MEETING DATE: August 15, 2022
REPORT DATE: July 5, 2022
FILE: 3090-20 (DVP00558)

SUBJECT: DEVELOPMENT VARIANCE PERMIT APPLICATION FOR 8841 ADVENTURE BAY ROAD

PURPOSE:

To present Development Variance Permit Application 00558 (DVP00558) for Council's consideration to increase the height of a retaining wall on a residential property.

RECOMMENDATION:

THAT Council approve **a modified version of** Development Variance Permit 00558 (DVP00558) to vary Zoning Bylaw 5000 for PCL A (BEING A CONSOLIDATION OF LOTS 7 AND 8 SEE CA9907243) DL 298 ODYD PL EPP44146 (8841 Adventure Bay Road) as outlined in the report titled "Development Variance Permit Application for 8841 Adventure Bay Road" dated July 5, 2022 and respectfully submitted by the Current Planner, by:

- a) Increasing Section 6.5.1.i, the height of a retaining wall, from 1.2m (4.0ft) to 1.5m (5.0ft) along the front and southwest side lot line within the 4.0m front yard setback; and
- b) Increasing Section 6.5.1.ii, the height of a retaining wall, from 2.0m (6.4ft) to 2.5m (8.3ft) along the southwest side lot line behind the front yard setback;

AND FURTHER, that Council's approval of DVP00558 is subject to the following:

- i. That the driveway and proposed residential unit(s) be constructed to utilize the existing grade; and
- ii. That the retaining wall complies with an updated site plan, elevations, and cross sections to be attached to and form part of DVP00558, with the retaining wall being setback three feet from the side property line.

ALTERNATIVES & IMPLICATIONS:

1. THAT Council approve Development Variance Permit 00558 (DVP00558) to vary Zoning Bylaw 5000 for PCL A (BEING A CONSOLIDATION OF LOTS 7 AND 8 SEE CA9907243) DL 298 ODYD PL EPP44146 (8841 Adventure Bay Road) as outlined in the report titled "Development Variance Permit Application for 8841 Adventure Bay Road" dated July 5, 2022 and respectfully submitted by the Current Planner, by:
 - a) Increasing Section 6.5.1.i, the height of a retaining wall, from 1.2m (4.0ft) to 2.5m (8.3ft) along the front and southwest side lot line within the 4.0m front yard setback; and
 - b) Increasing Section 6.5.1.ii, the height of a retaining wall, from 2.0m (6.4ft) to 3.6m (11.7ft) along the southwest side lot line behind the front yard setback;

AND FURTHER, that Council's approval of DVP00558 is subject to the following:

- i. That the retaining wall complies with the site plan (Attachment 2), elevations (Attachment 3), and cross sections (Attachment 5) to be attached to and form part of DVP00558, except that the retaining wall be setback three feet from the property line; and
- ii. That the vertical block concrete wall be stained with a color that blends in with the natural surroundings, to the satisfaction of Administration.

Note: Alternative 1 would allow the owner to build the retaining wall as proposed.

ANALYSIS:

A. Committee Recommendations:

At its meeting of July 19, 2022, the Advisory Planning Committee passed the following resolution:

"(to be cited by the Advisory Planning Committee)."

B. Rationale:

1. The subject property is located at 8841 Adventure Bay Rd near the end of the cul-de-sac (Figures 1 and 2).
2. The owner recently consolidated two lots to create the existing 701.1 m² lot. It is vacant but has been graded in preparation for construction of a single detached house or a semi-detached building (Attachments 1 and 2), with a one storey level entry at the front and a three storey walk out at the rear. House plans were not submitted with the variance application. The property is zoned R5 (four-plex housing residential). With a lot area of 701.1 m², it can support a maximum of two units: a duplex, a semi-detached building or two single detached homes.
3. Based on the proposed level grade, the owner requests to vary the height of a retaining wall (Attachments 3 – 5) as follows:
 - To increase retaining wall height from 1.2m (4.0ft) to 2.5m (8.3ft) along the front and southwest side lot line within the 4.0m front yard setback; and,
 - To increase retaining wall height from 2.0m (6.4ft) to 3.6m (11.7ft) along the southwest side lot line behind the front yard setback.

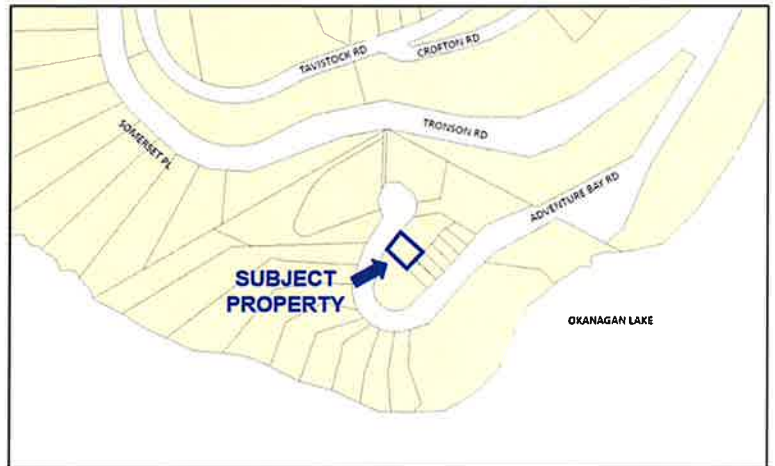


Figure 1: Property Location Map



Figure 2: Aerial View of Property

4. The natural grade of the lot slopes downhill in a southeast direction from Adventure Bay Road, with an average slope of 23%. Historically fill was placed on the lot to raise the building pad approximately 2m (7ft). Approximately 1.2m (4ft) in depth of additional fill is proposed to be placed to further raise the building pad and create a level driveway. The greater the depth of fill, the higher the retaining wall needs to be to support the upslope land.

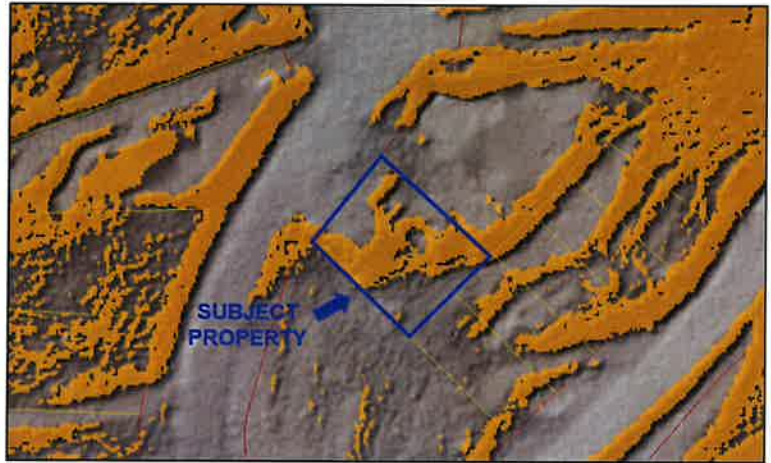


Figure 3: $\geq 30\%$ Slopes & Hillshade

5. The proposed retaining wall consists of grey verti-blocks that are each two feet high, four feet wide, with varying depths

(Attachment 5) (<https://verti-block.com/residential/>). It is possible to color stain these blocks so that they better blend in with the surroundings (<http://verti-crete.com/products/concrete-stain/>).

6. There are potential alternatives available to reduce the necessary height of the retaining wall:

- While a level driveway is desirable, it may not be necessary. The existing grade may be utilized rather than adding more fill to raise the grade to create a level entry to the house. Subdivision and Development Servicing Bylaw #3843 allows a maximum 8% driveway grade within the boulevard. Less fill and a sloping driveway would lower the house and reduce the necessary retaining wall height. Views from the subject property toward the lake would be diminished by lowering the elevation of the house.
- It may be possible to engineer the slope to avoid the use of a retaining wall altogether. This alternative may result in a smaller building pad in order to create a gentler slope along the side property line.

7. Although the proposed retaining wall is considerably high (3.6m/11.7ft), views of it from surrounding properties should be minimal for a couple of reasons: main views face southeast toward the lake as opposed to northeast toward the wall and several of the surrounding properties are still vacant.

8. Administration supports a modified variance to retaining wall height for the following reasons:

- a) It attempts to balance the owner's desire to maximize views, construct a level driveway and a three storey walk out, with maintaining the natural character of the residential neighbourhood.
- b) Although retaining walls are common in hilly areas, it is preferred planning practice to work with the natural slope of the land, avoiding excessive fill and high retaining walls that can impact the neighbours and the residential character of the neighbourhood.
- c) Fill has been already been placed on the property historically raising the elevation of the building platform. There are potential alternatives to a ~12ft high retaining wall including a sloped driveway accessing the main floor of a house at a lower elevation than what is proposed or an engineered slope.

C. Attachments:

- Attachment 1: Photos
- Attachment 2: Site Plan

Attachment 3: Elevations
Attachment 4: Retaining Wall Regulations
Attachment 5: Cross Sections

D. Council's Strategic Plan 2019 – 2022 Goals/Action Items:

The subject application involves the following goals/action items in Council's Strategic Plan 2019 – 2022:

➤ N/A

E. Relevant Policy/Bylaws/Resolutions:

1. Zoning Bylaw 5000, 6.5 Fencing and Retaining Walls

6.5.1 Subject to traffic sight lines, the following height limitations shall apply to fences, walls, chainlink fences and hedges in all Residential zones:

- i) 1.2m (4.0ft) if situated along the lot lines within front yard setbacks;
- ii) 2.0m (6.4ft) if situated behind the front yard setback;
- iii) 2.0m (6.4ft) if situated along the interior and exterior and/or rear yard.

BUDGET/RESOURCE IMPLICATIONS:

N/A

Prepared by:

Approved for submission to Council:

X

Signer 1
Michelle Austin
Planner, Current Planning

Will Pearce, CAO
Date: _____

X

Signer 2
Kim Flick
Director, Community Infrastructure and Development

REVIEWED WITH		
<input type="checkbox"/> Corporate Services	<input type="checkbox"/> Operations	<input type="checkbox"/> Current Planning
<input type="checkbox"/> Bylaw Compliance	<input type="checkbox"/> Public Works/Airport	<input type="checkbox"/> Long Range Planning & Sustainability
<input type="checkbox"/> Real Estate	<input type="checkbox"/> Facilities	<input type="checkbox"/> Building & Licensing
<input type="checkbox"/> RCMP	<input type="checkbox"/> Utilities	<input type="checkbox"/> Engineering Development Services
<input type="checkbox"/> Fire & Rescue Services	<input type="checkbox"/> Recreation Services	<input type="checkbox"/> Infrastructure Management
<input type="checkbox"/> Human Resources	<input type="checkbox"/> Parks	<input type="checkbox"/> Transportation
<input type="checkbox"/> Financial Services		<input type="checkbox"/> Economic Development & Tourism
<input checked="" type="checkbox"/> COMMITTEE: APC (July 19/2022)		
<input type="checkbox"/> OTHER:		



Photo 1: Verti-blocks, site fill and grading and silt fencing (approx. location of retaining wall)



Photo 2: Site fill and grading



Photo 3: View toward lake



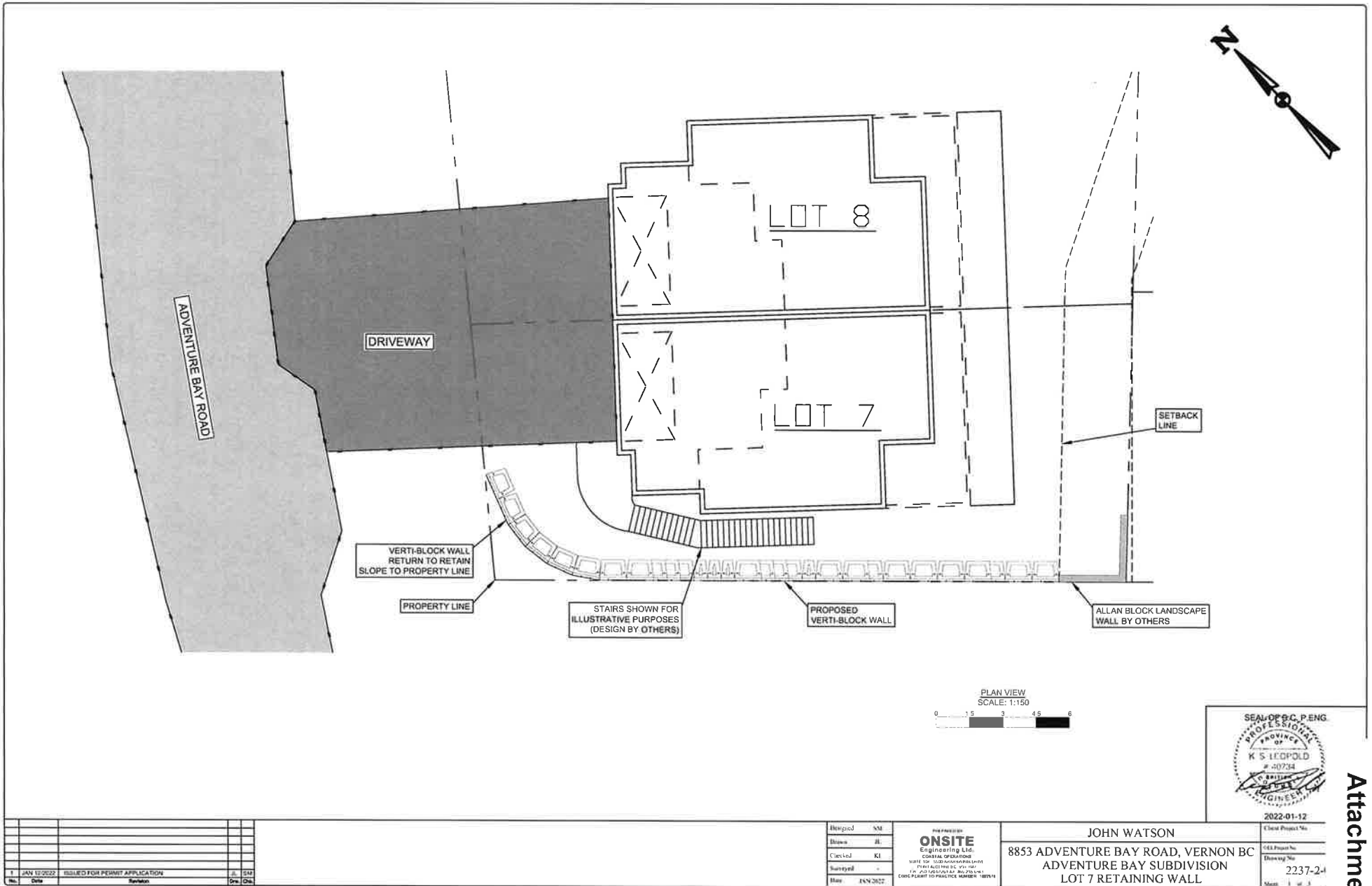
Photo 4: Vacant property adjacent to proposed retaining wall



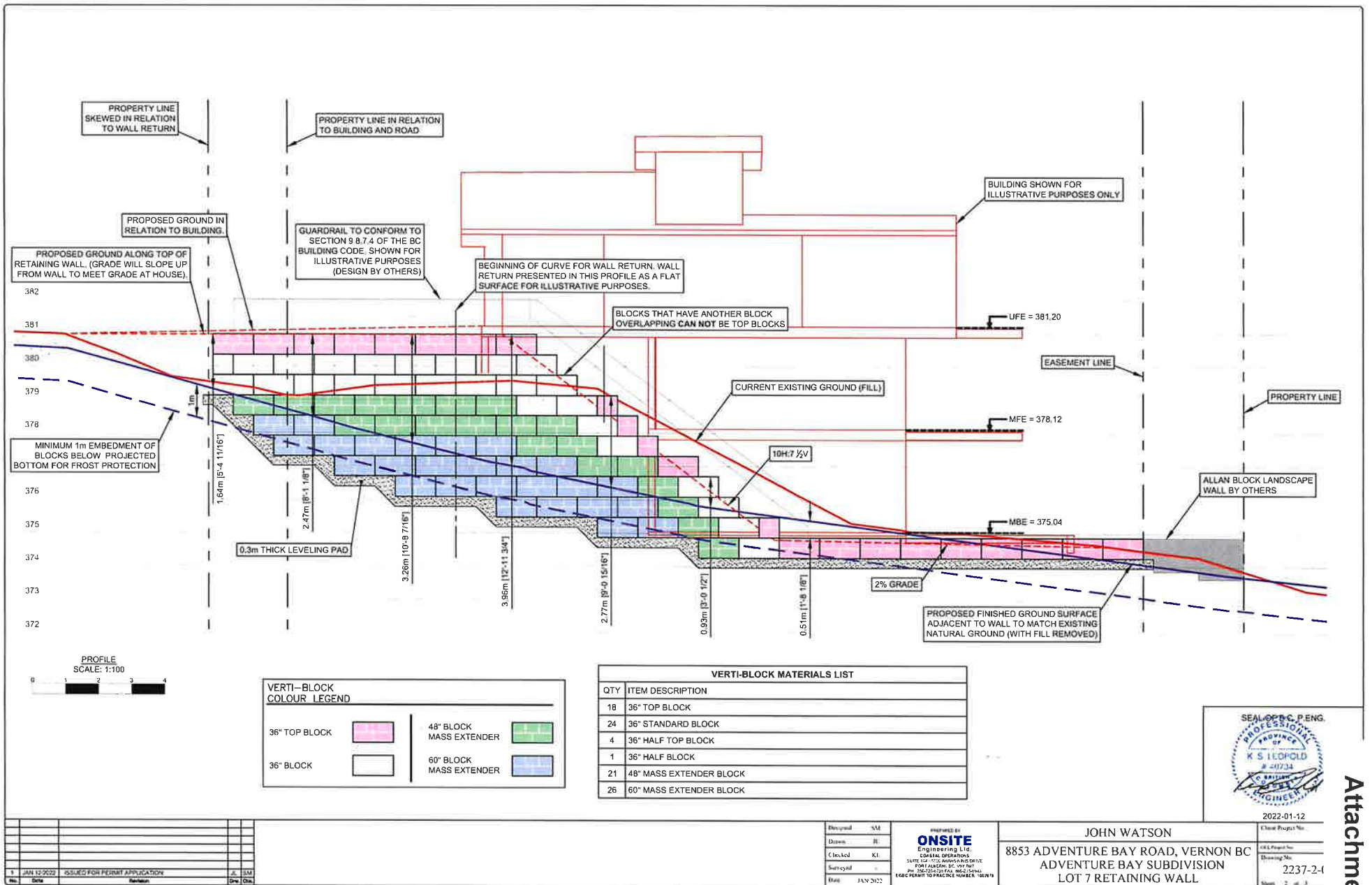
Photo 5: View of graded site at hairpin corner of road



Photo 6: View of graded site just after hairpin

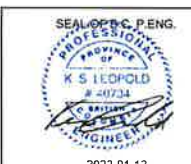


Attachment 2



VERTI-BLOCK COLOUR LEGEND			
36" TOP BLOCK		48" BLOCK MASS EXTENDER	
36" BLOCK		60" BLOCK MASS EXTENDER	

VERTI-BLOCK MATERIALS LIST	
QTY	ITEM DESCRIPTION
18	36" TOP BLOCK
24	36" STANDARD BLOCK
4	36" HALF TOP BLOCK
1	36" HALF BLOCK
21	48" MASS EXTENDER BLOCK
26	60" MASS EXTENDER BLOCK



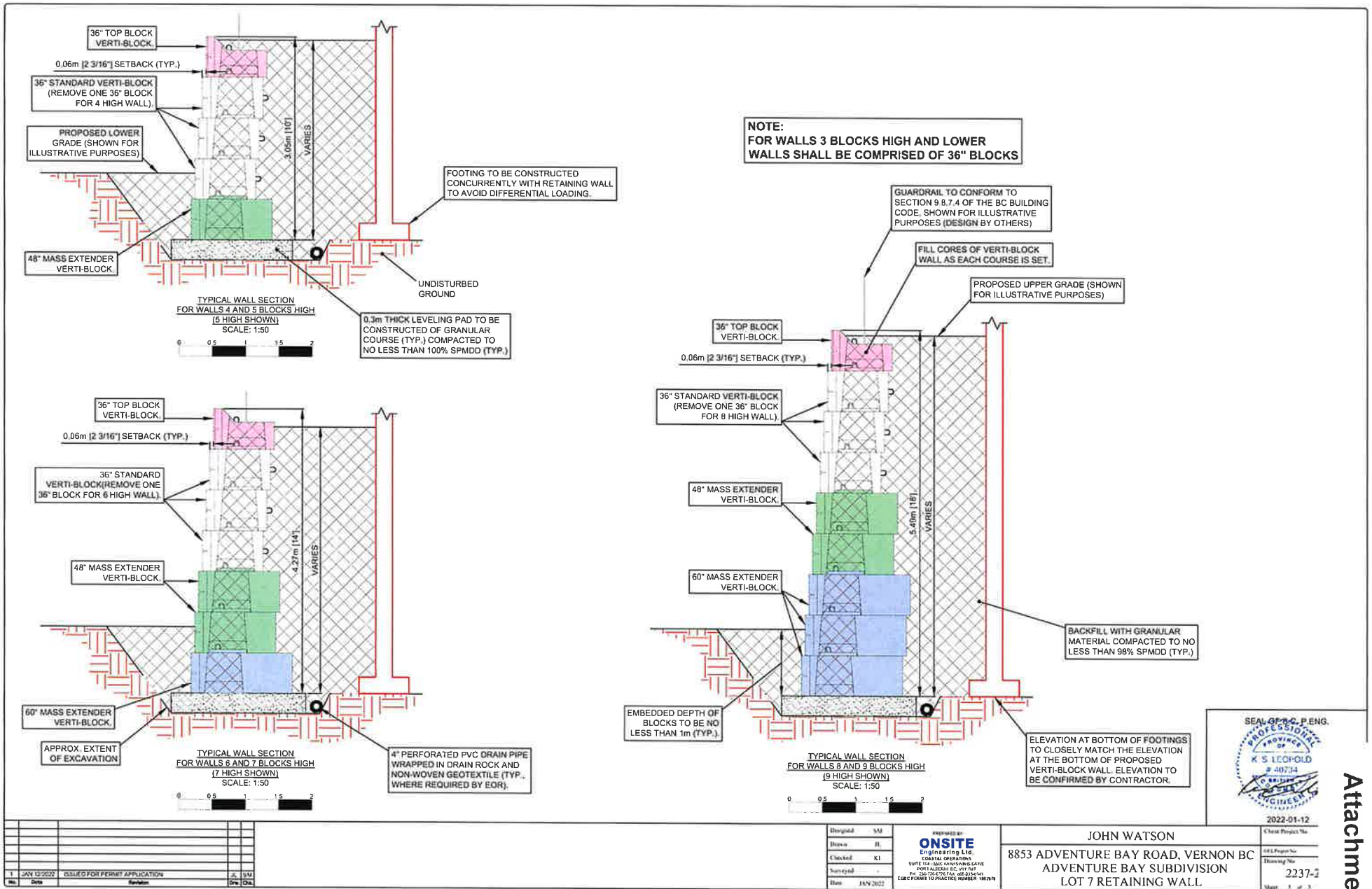
No.	Date	Description	By	Chk
1	JAN 12 2022	ISSUED FOR PERMIT APPLICATION	JL	SM

Reviewed	SM
Drawn	JL
Checked	KL
Soft copy	
Date	JAN 2022

PREPARED BY ONSITE Engineering Ltd. CIVIL OPERATIONS 12100 HANCOCK DRIVE PORT ALBERTA, BC T9T 0R7 PH: 780-253-0141 FAX: 780-253-0142 REG. PERMIT TO PRACTICE NUMBER 10079	2022-01-12 Clear Project No. ULL Project No. Drawing No. 2237-2-1 Sheet 2 of 3
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JOHN WATSON
 8853 ADVENTURE BAY ROAD, VERNON BC
 ADVENTURE BAY SUBDIVISION
 LOT 7 RETAINING WALL

Attachment 3



Attachment 4

No.	Date	Description	By	Chk.
1	JAN 13 2022	ISSUED FOR PERMIT APPLICATION	JM	DA

Drawn: JM
 Design: JL
 Checked: KL
 Approved: [Signature]
 Date: JAN 2022

ONSITE
 Engineering Ltd.
 CONSULTING ENGINEERS
 SUITE 104 4300 WILKINS DRIVE
 PO BOX 4000 VERNON BC V1T 2T1
 TEL: 250-271-7444 FAX: 250-271-7445
 LICENSE NO. 10 PRACTICE NUMBER 18074

2022-01-12
 Client Project No.
 Job/Project No.
 Drawing No. 2237-2
 Sheet 1 of 3

JOHN WATSON
 8853 ADVENTURE BAY ROAD, VERNON BC
 ADVENTURE BAY SUBDIVISION
 LOT 7 RETAINING WALL.

6.5 Fencing and Retaining Walls

6.5.1 Subject to traffic sight lines, the following **height** limitations shall apply to **fences**, walls, chainlink **fences** and hedges in all **Residential zones**:

- i) 1.2m (4.0ft) if situated along the **lot lines** within **front yard setbacks**;
- ii) 2.0m (6.4ft) if situated behind the **front yard setback**;
- iii) 2.0m (6.4ft) if situated along the interior and exterior and/or **rear yard**.

6.5.2 Screen **fences** shall be consistent with the quality of **building** design and materials of the primary **building**.

6.5.3 Screening **fences** required for outdoor storage areas for temporary shelters shall be a combination of opaque and translucent or lattice design to ensure nature surveillance is permitted into the space. Screen **fences** and walls shall complement **building** design and materials. *(Bylaw 5788)*

6.5.4 Fencing type may be established in neighbourhood plans, building schemes or by precedent from **adjacent** properties.

6.5.5 Wood **fences** shall be designed to a high level of finish with materials of lumber grade standard or better. Wood posts shall be treated against rotting to provide for the longevity of the **fence**. **Fences** shall be constructed with all components of sufficient size, materials, and strength

to prevent sagging and to minimize rot. Along sloping ground, the top of wood **fences** shall be horizontal with vertical drops at the posts.

- 6.5.6 Screening **fences** shall be opaque double-sided **construction**. Where screen **fences** are allowed or required by this Bylaw, they shall be of an opaque or a combination of opaque, translucent or lattice design.
- 6.5.7 No **fence** constructed at the **natural grade** in residential **zones**, shall exceed 2.0m in **height**, except where **abutting** an **agricultural** or **commercial zone** the maximum **height** is 2.4m. No fence shall have pickets or finials extending above the horizontal rail that may pose a danger to wildlife. *(Bylaw 5890)*
- 6.5.8 No **fence** in a **commercial** or **industrial zone** shall exceed 2.4m.
- 6.5.9 **Industrial zones** are to have an opaque 2.4m high **fence** along all **property lines abutting** non-industrial **zones** and around **wrecking yards** that are visible from a **street abutting** the property.
- 6.5.10 No barbed wire or electrified fencing shall be allowed in any **residential, commercial, public** or **industrial zones** except:
- in RR **zone** for **use** in **livestock** enclosures; and
 - in P2 **zone** where the **site** is used for **detention and correctional services**.
- Razor wire fences shall not be permitted in any zone.
- 6.5.11 **Retaining walls** on all residential **lots**, except those required as a condition of **subdivision** approval, must not exceed a **height** of 1.2m measured from grade on the lower side, and must be constructed so that multiple **retaining walls** are spaced to provide at least a 1.2m horizontal separation between them.
- 6.5.12 In the case of a **retaining wall** constructed in accordance with Section 6.5.11, the combined **height** of a **fence** on top of a **retaining wall** at the **property line** or within 1.2m of the **property line** shall not exceed 2.0m, measured from **natural grade** at the **property line** (see Diagram 6.1).
- 6.5.13 Notwithstanding Section 6.5.11, a **retaining wall** may be higher than 1.2m, measured from grade, where the **natural grade** of the subject property is lower than the **abutting** property (see Diagram 6.2).
- 6.5.14 In the case of a **retaining wall** constructed in accordance with Section 6.5.13, the maximum **height** of a **fence**, or portion of **retaining wall** extending above the **natural grade** of the **abutting** higher property, or combination thereof, shall be 2.0m, measured from the **natural grade** of the **abutting** higher property (see Diagram 6.2).

6.5.15 Notwithstanding Section 6.5.14, where an affected property remains at **natural grade** and the subject property **constructs a retaining wall** and a **fence** within 1.2m of the **property line**, the maximum **height** for a **fence** on the affected property shall be no greater than 1.8m above the **height** of the **retaining wall** or 2.0m whichever is less (see Diagram 6.1). (Bylaw 5440)

Diagram 6.1

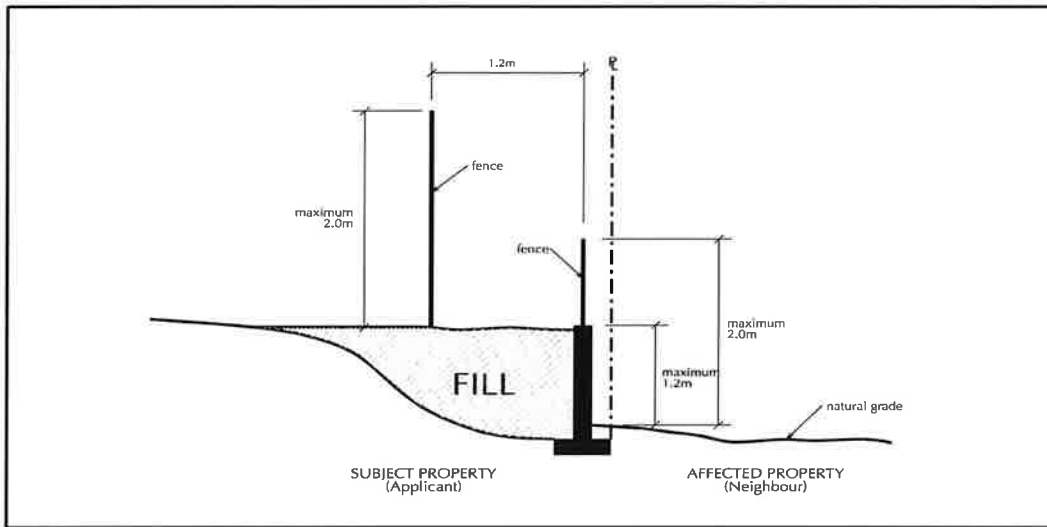
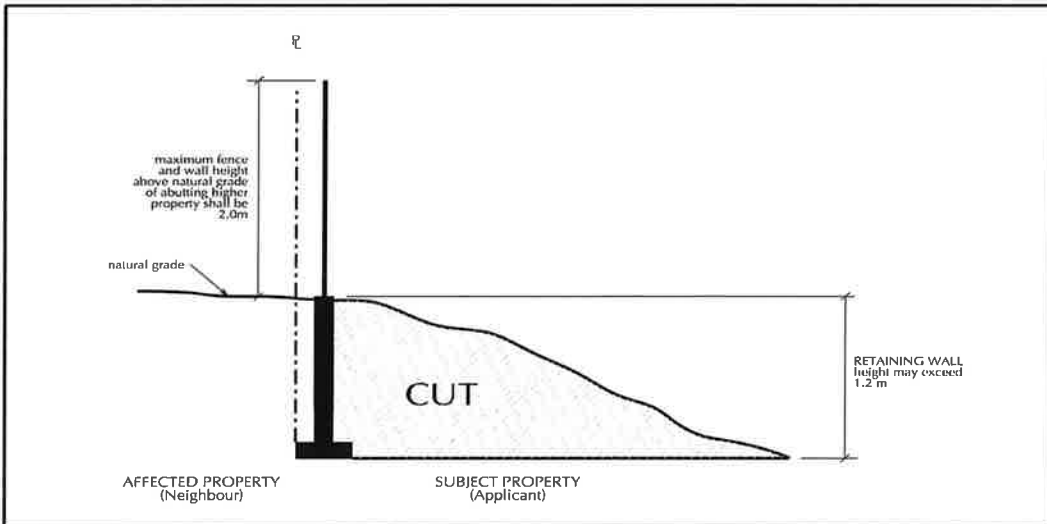


Diagram 6.2





THE CORPORATION OF THE CITY OF VERNON REPORT TO COUNCIL

SUBMITTED BY: Michelle Austin
Planner, Current Planning

COUNCIL MEETING: REG COW I/C
COUNCIL MEETING DATE: August 15, 2022
REPORT DATE: July 12, 2022
FILE: 3360-40 (LUC00023)/3090-20 (DVP00577)

SUBJECT: LAND USE CONTRACT DISCHARGE AND DEVELOPMENT VARIANCE PERMIT APPLICATIONS FOR 9233 KOKANEE ROAD

PURPOSE:

To present for Council's consideration Land Use Contract Discharge and Development Variance Permit applications for the property located at 9233 Kokanee Road for construction of a single detached house and a detached secondary suite.

RECOMMENDATION:

THAT Council support Land Use Contract Discharge 00023 (LUC00023) to discharge Land Use Contract Registration P2461 from the title of LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road) as outlined in the report titled "Land Use Contract Discharge and Development Variance Permit Applications for 9233 Kokanee Road" dated July 12, 2022 and respectfully submitted by the Current Planner;

AND FURTHER, that Council direct Administration to prepare a proposed bylaw and public notice of first reading to discharge Land Use Contract Registration P2461 from the title of LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road);

AND FURTHER, that Council not hold a public hearing on a proposed bylaw to discharge Land Use Contract Registration P2461 from the title of LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road);

AND FURTHER, that Council approve Development Variance Permit 00577 (DVP00577) to vary Zoning Bylaw 5000 for LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road) by:

- a) Varying Section 4.16.1, hillside development areas, to allow construction of a single detached house on a slope $\geq 30\%$;
- b) Increasing Section 5.5.5, maximum footprint, from 90m^2 to 104.1m^2 for a secondary suite located in a secondary building;
- c) Increasing Section 5.5.5, maximum net floor area, from 90m^2 to 180.7m^2 for a secondary suite located in a secondary building; and
- d) Increasing Section 5.5.6, maximum height, from 6.0m to 6.6m to the mid-point of the sloped roof for a secondary suite located in a secondary building;

AND FURTHER, that Council's approval of DVP00577 is subject to the following:

- i. That the proposed development generally complies with the site plan (Attachment 1) and secondary suite elevations and floor plans (Attachment 2) to be attached to and form part of DVP00577;
- ii. That siting of the single detached house complies with the slope analysis and profiles (Attachment 5) to be attached to and form part of DVP00577;

- iii. That a Section 219 Covenant (Wildfire) complying with FireSmart BC guidelines, in favour of the City of Vernon, be registered on the title of LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road); and
- iv. That a Section 219 Covenant, prohibiting the garage from being converted to living space, in favour of the City of Vernon, be registered on the title of LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road).

ALTERNATIVES & IMPLICATIONS:

- 1. THAT Council not support Land Use Contract Discharge 00023 (LUC00023) to discharge Land Use Contract Registration P2461 from the title of LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road) as outlined in the report titled “Land Use Contract Discharge and Development Variance Permit Applications for 9233 Kokanee Road” dated July 12, 2022 and respectfully submitted by the Current Planner;

AND FURTHER, that Council not approve Development Variance Permit 00577 (DVP00577) to vary Zoning Bylaw 5000 for LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road) to:

- a) Increase Section 5.5.5, maximum footprint, from 90m² to 104.1m² for a secondary suite located in a secondary building;
- b) Increase Section 5.5.5, maximum net floor area, from 90m² to 180.7m²; and
- c) Increase Section 5.5.6, maximum height, from 6.0m to 6.6m to the mid-point of the sloped roof for a secondary suite located in a secondary building;

AND FURTHER, that Council approve Development Variance Permit 00577 (DVP00577) for LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road) to vary Zoning Bylaw 5000, Section 4.16.1, hillside development areas, to allow construction of a single detached house on a slope $\geq 30\%$;

AND FURTHER, that Council’s approval of DVP00577 is subject to the following:

- i. That siting of the single detached house complies with the slope analysis and profiles (Attachment 5) to be attached to and form part of DVP00577; and
- ii. That a Section 219 Covenant (Wildfire) complying with FireSmart BC guidelines, in favour of the City of Vernon, be registered on the title of LOT 9 SEC 11 TP 13 ODYD PLAN 31060 (9233 Kokanee Road).

Note: This alternative does not support the request to discharge the Land Use Contract (LUC), thereby prohibiting the construction of a secondary suite at this time. If this alternative is approved, the owners could build a single detached house, without a secondary suite. The property would continue to be governed by the LUC until it is terminated by the Local Government Act (LGA) on June 30, 2024. At that time, the underlying Estate Lot Residential (R1) zone would apply to the property and the owner could construct a detached secondary suite.

ANALYSIS:

A. Committee Recommendations:

At its meeting of July 19, 2022, the Advisory Planning Committee passed the following resolution:

“(to be cited by the Advisory Planning Committee).”

B. Rationale:

1. The subject property is a large (0.46 ha/1.1 ac), vacant lot located at 9233 Kokanee Road (Figures 1 and 2). It is located in Sunset Properties, an established rural subdivision created by a Land Use Contract (LUC) in the 1970s.
2. The subject property is currently undeveloped. Development plans include a single detached house and a detached secondary suite (Attachments 1 and 2). The intent of these applications is to request that Council:

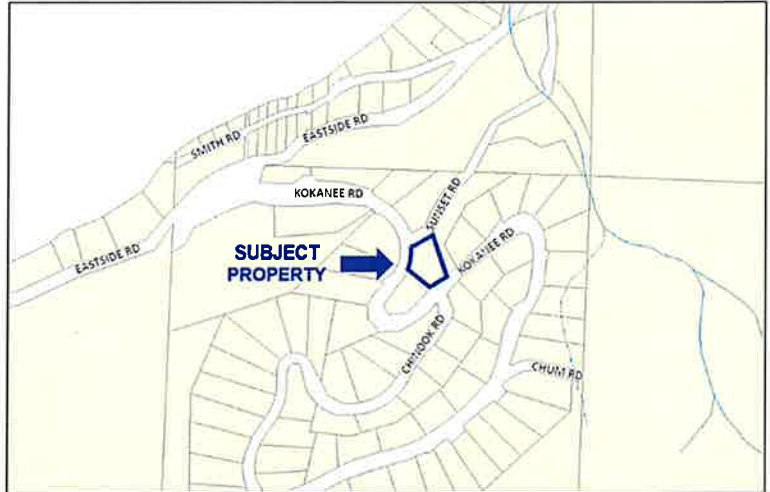


Figure 1: Location Map

- discharge LUC Registration #P2461 (Attachment 3) from the title of the property, allowing the underlying Estate Lot Residential (R1) zone (Attachment 4) to regulate its use and development;
- allow construction of a single detached house on a slope $\geq 30\%$ (Attachment 5); and
- approve the following variance requests for the construction of a detached secondary suite (Attachment 6), to increase maximum:
 - footprint from 90m² to 104.1m²;
 - net floor area from 90m² to 180.7m²; and
 - height from 6.0m to 6.6m to the mid-point of the sloped roof.



Figure 2: Aerial

3. As per Section 547 (1) of the *Local Government Act (LGA)*, all land use contracts will be terminated on June 30, 2024. Administration has been working with applicants to amend (i.e. modify, vary or discharge) LUCs as property owners come forward for redevelopment or improvements, such as the subject application.
4. Section 546 of the *LGA* outlines the process to be followed for discharging an LUC. Section 546 (2) (a) allows an LUC to be amended (which includes being discharged from the title of a property), by bylaw, with agreement from the local government and the owner. If the amendment affects the use or density of the parcel, then the rules around Public Hearings apply as if it were a zoning amendment. The amendment must also be registered in the Land Title Office.
5. Under the LUC regulatory scheme, one single detached house is allowed and secondary suites are prohibited. The R1 zone allows secondary suites within either single detached housing or in a secondary building. Upon expiration of the LUC in two years (on June 30, 2024), a detached secondary suite could be constructed under the underlying R1 zoning and other provisions of Zoning Bylaw 5000.

6. The building site would be at the top of the property for the single detached house and at the bottom for the detached secondary suite. Both units would be accessed by a shared driveway from the lower section of Kokanee Road.

7. Figure 3 shows slope ranges throughout the property. Most of the house would be built on <30% slopes. For the portion of the house on $\geq 30\%$ slope, the steepest calculated slope is 32.8% (Attachment 5). With the exception of a small knoll and a manmade bank from a pre-existing road, the detached secondary suite would be constructed on a $\sim 20\%$ slope. A Geotechnical Engineer completed a site visit for a general soil assessment of the area and did not raise any concerns regarding the slope. A BC Building Code Schedule B has been submitted for geotechnical project oversight and the geotechnical engineer will need to be involved with the building process (i.e. Schedule C-B). Administration has requested a geotechnical report prior to Council consideration.

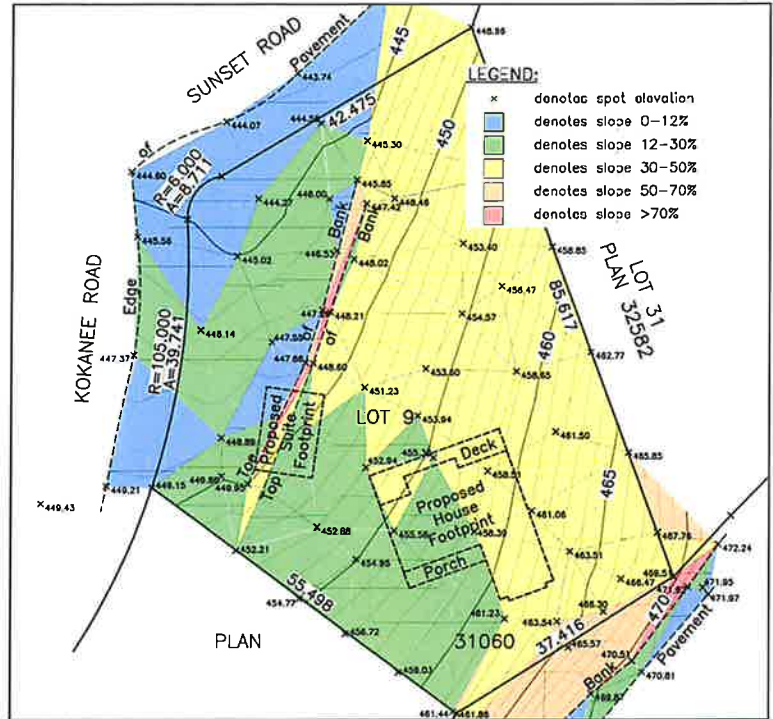


Figure 3: Slope Analysis

8. The requested variances to the detached secondary suite, to increase maximum footprint from 90m² to 104.1m²; net floor area from 90m² to 180.7m²; and height from 6.0m to 6.6m to the mid-point of the sloped roof, are reasonable as explained below:

- a) Maximum footprint and height – given that the lot is large and forested and not within view corridors, a slightly larger footprint (by 14.1m² / 152ft²) and height (by 0.6m / 2ft) should have minimal to no impact on neighbours or neighbourhood character. As most lots within the area have secondary buildings resembling the proposed, it blends in well with the neighbourhood.
- b) Maximum floor area – the intent of the new (June 14, 2021) secondary suite regulations is to allow a total net floor area of 90m² for a detached secondary suite and to ensure that a second storey is never larger than a first storey (the total floor area of 90m² includes carports, garages and basements). This can be accomplished with a single storey or two storey building with or without a carport or garage. If an owner wishes to construct a carport, basement or garage as the first storey, it means that the liveable area must be reduced such that the total floor area for the carport, basement or garage plus the liveable space (i.e. actual suite) is not more than 90m². The regulations may have been written in anticipation of owners illegally converting garage space to living space at a later date. A covenant could be registered on title prohibiting this as an extra layer of assurance.
- c) For the subject application, the garage floor area is 104.1m² and the suite floor area is 76.6m² for a total floor area of 180.7m². It is practical to incorporate a garage into this building containing the secondary suite, particularly because the site is more level on this lower portion of the lot as opposed to the upper. Access to Kokanee Road is also from the lower portion of the property. Further, the lot is large and forested; the secondary suite location is not within any view corridors; and the design is consistent with the development of other lots in the neighbourhood.

9. Administration supports discharging the LUC and DVP applications for the following reasons:

- a) The LGA terminates all LUCs in the province on June 30, 2024. Zoning for the property will default to the R1 zone, which the proposed uses comply with.
- b) legal non-conforming issues may be avoided by proactively discharging the LUC from the subject property and allowing the R1 zoning to apply, rather than waiting for it to be automatically terminated in two years. The property is currently undeveloped.
- c) Many development-related bylaws have no force and effect on properties with LUCs registered on title. Discharging an LUC from the title restores the applicability of such bylaws to the property and its development.
- d) The R1 zone allows a second dwelling unit in the form of a secondary suite. Allowing two households (versus one household under the LUC) to live within the same land area helps to provide housing options, increases affordability and makes more efficient use of land and services.
- e) The variance requests to increase maximum footprint, net floor area and height are reasonable and should have little to no impact on neighbours or neighbourhood character.

C. Attachments:

Attachment 1 – Site Plan
Attachment 2 – Secondary Suite Elevations and Floor Plans
Attachment 3 – LUC Bylaw 291, 1978 – Schedule
Attachment 4 – R1 Zoning Regulations
Attachment 5 – Slope Analysis and Profiles
Attachment 6 – Secondary Suite Regulations

D. Council's Strategic Plan 2019 – 2022 Goals/Action Items:

The subject applications involve the following goals/action items in Council's Strategic Plan 2019 – 2022:

- Review and streamline the residential development approval process.
- Provide more housing options.

E. Relevant Policy/Bylaws/Resolutions:

1. Official Community Plan Bylaw 5470:

- OCP Designation – Residential Low Density (RLD).
- Development District – 3 Hillside Residential and Agriculture.
- Environmental Management Area (EMA) – Low and Medium conservation values. The subject property was subdivided in 1980 and no further subdivision is proposed therefore the development is exempt from the EMA development permit requirement.
- >10% of the property has slopes $\geq 12\%$. Construction of single detached housing and secondary buildings are exempt from the hillside development permit requirement.
- Fire Interface Area – 3 (High). The development may be exempt from the wildfire development permit requirement if it can demonstrate compliance with FireSmart BC guidelines and the Community Wildfire Protection Plan.
- Agricultural Land Reserve (ALR) – N/A.
- Adopted Neighbourhood Plan Area – N/A.

2. Zoning Bylaw 5000:

- Sec. 9.2 R1: Estate Lot Residential.
- Sec. 4.16.1 No construction on ≥30% slopes.
- Sec. 5.5 Secondary Suites.

3. Local Government Act:

- Division 3 – Public Hearings on Planning and Land Use Bylaws.
- Sec. 464 – Requirement for public hearing before adopting bylaw.
A local government is not required to hold a public hearing on a proposed rezoning bylaw if an OCP is in effect for the area that is the subject of the zoning bylaw, and the bylaw is consistent with the OCP.
- Sec. 466 – Notice of first reading of bylaw.
- Sec. 467 – Notice if public hearing not held.
- Sec. 468 – Posting notices respecting proposed bylaws.

BUDGET/RESOURCE IMPLICATIONS:

N/A

Prepared by:

Approved for submission to Council:

X

Please install the DocuSign Signature Appliance Client. Refer to <http://www.docusign.com>

Craig Broderick
Manager, Current Planning

Will Pearce, CAO

Date: _____

X

Please install the DocuSign Signature Appliance Client. Refer to <http://www.docusign.com>

Michelle Austin
Planner, Current Planning

X

Please install the DocuSign Signature Appliance Client. Refer to <http://www.docusign.com>

Kim Flick
Director, Community Infrastructure and Development

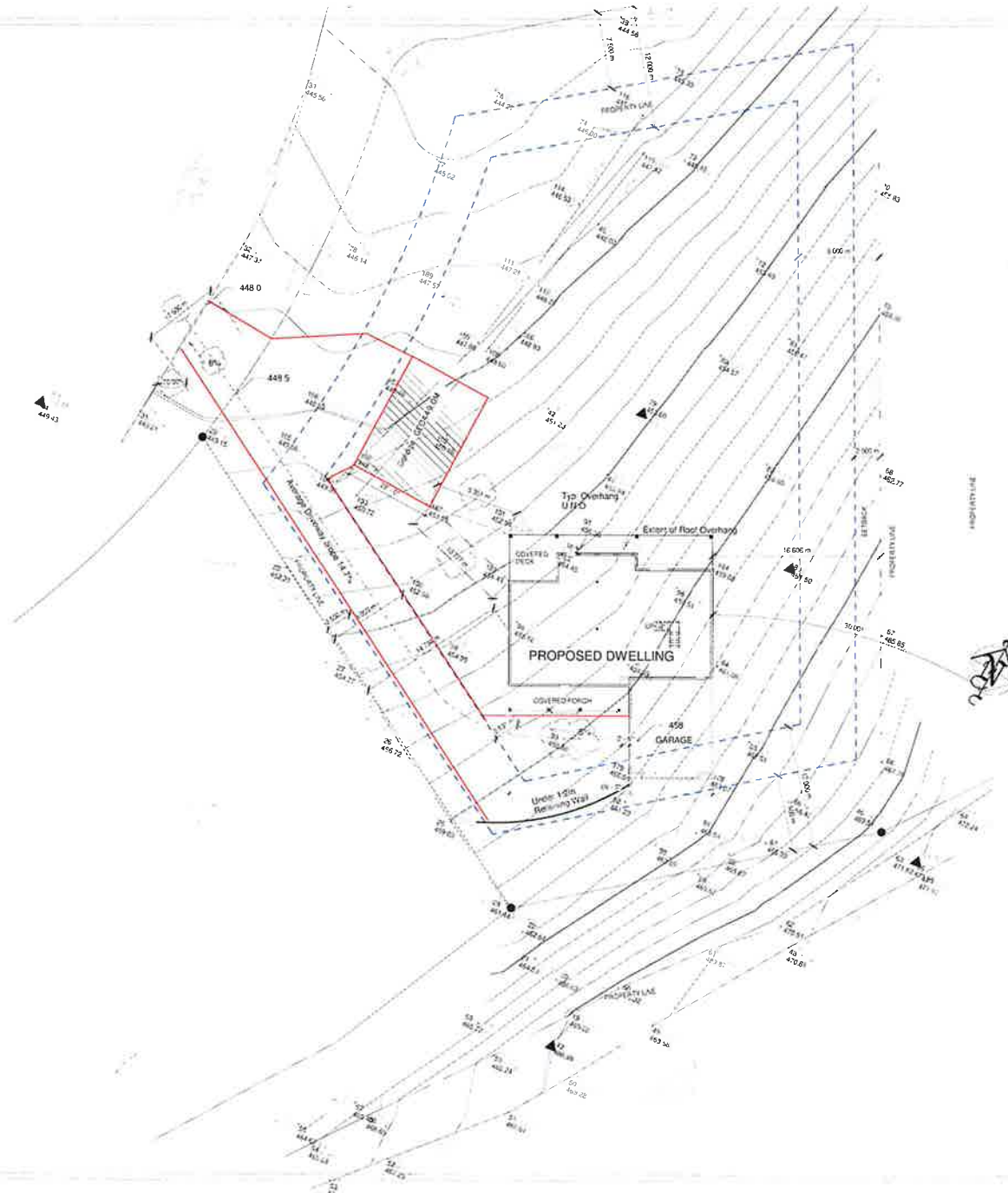
REVIEWED WITH

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| <input type="checkbox"/> Bylaw Compliance | <input type="checkbox"/> Public Works/Airport | <input type="checkbox"/> Long Range Planning & Sustainability |
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| <input type="checkbox"/> RCMP | <input type="checkbox"/> Utilities | <input type="checkbox"/> Engineering Development Services |
| <input checked="" type="checkbox"/> Fire & Rescue Services | <input type="checkbox"/> Recreation Services | <input type="checkbox"/> Infrastructure Management |
| <input type="checkbox"/> Human Resources | <input type="checkbox"/> Parks | <input checked="" type="checkbox"/> Transportation |
| <input type="checkbox"/> Financial Services | | <input type="checkbox"/> Economic Development & Tourism |
| <input checked="" type="checkbox"/> COMMITTEE: APC (July 19/2022) | | |
| <input type="checkbox"/> OTHER: | | |

G:\3000-3699 LAND ADMINISTRATION\3360 ZONING AND REZONING\40 Land Use Contracts\LUC00023\2 PROC\Rpt\APC Rpt\220712_ma_APC Rpt_LUC00023_DVP00577.docx



250.307.6118 - S25RDesign.com
 No. Description Date
 01. E-Plan Permit Jan 23, 2022
 02. Locals Feb 22, 2021
 03. Dims Added JUNE 23, 2021



Gordey
 9233 Kokanee Rd

LOT COVERAGE
 SITE: 49,461.6SF
 HOUSE FOOTPRINT: 3,345SF (6.76%)

SETBACKS:
 FRONT: 7.5M
 SIDES: 2.5M
 REAR: 7.5M

ZONING: R1-ESTATE LOT RESIDENTIAL

Site

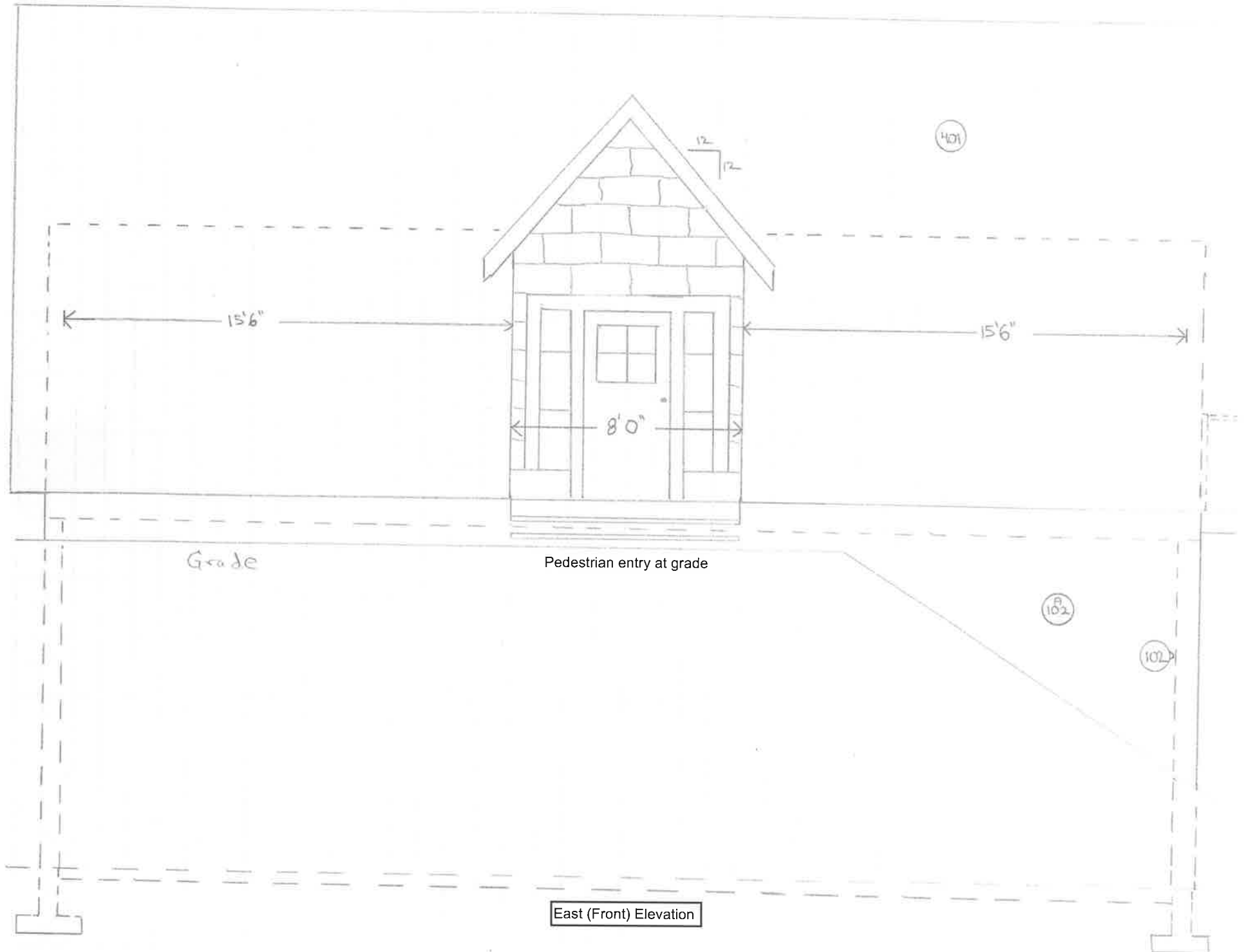
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 Project No
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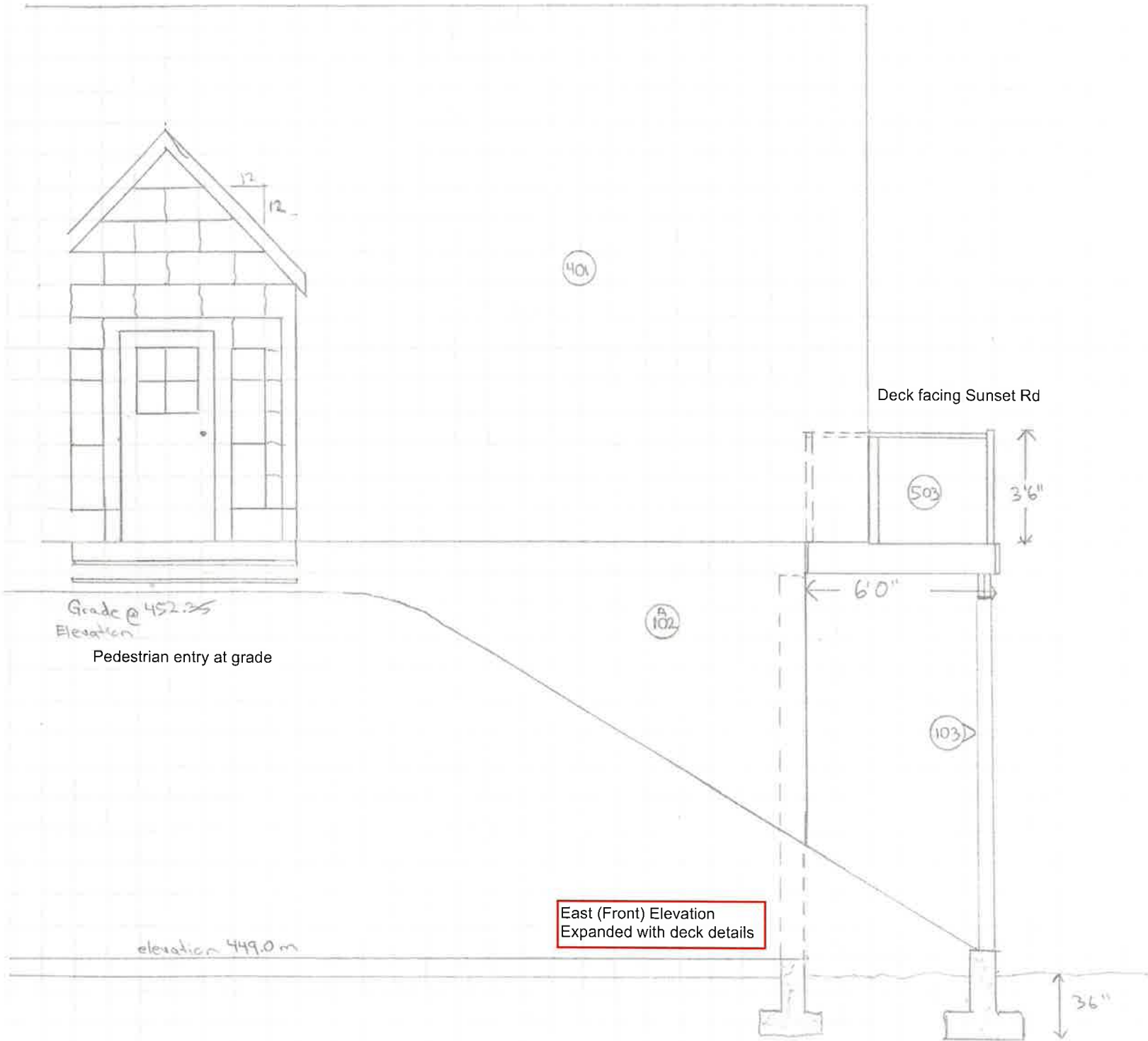
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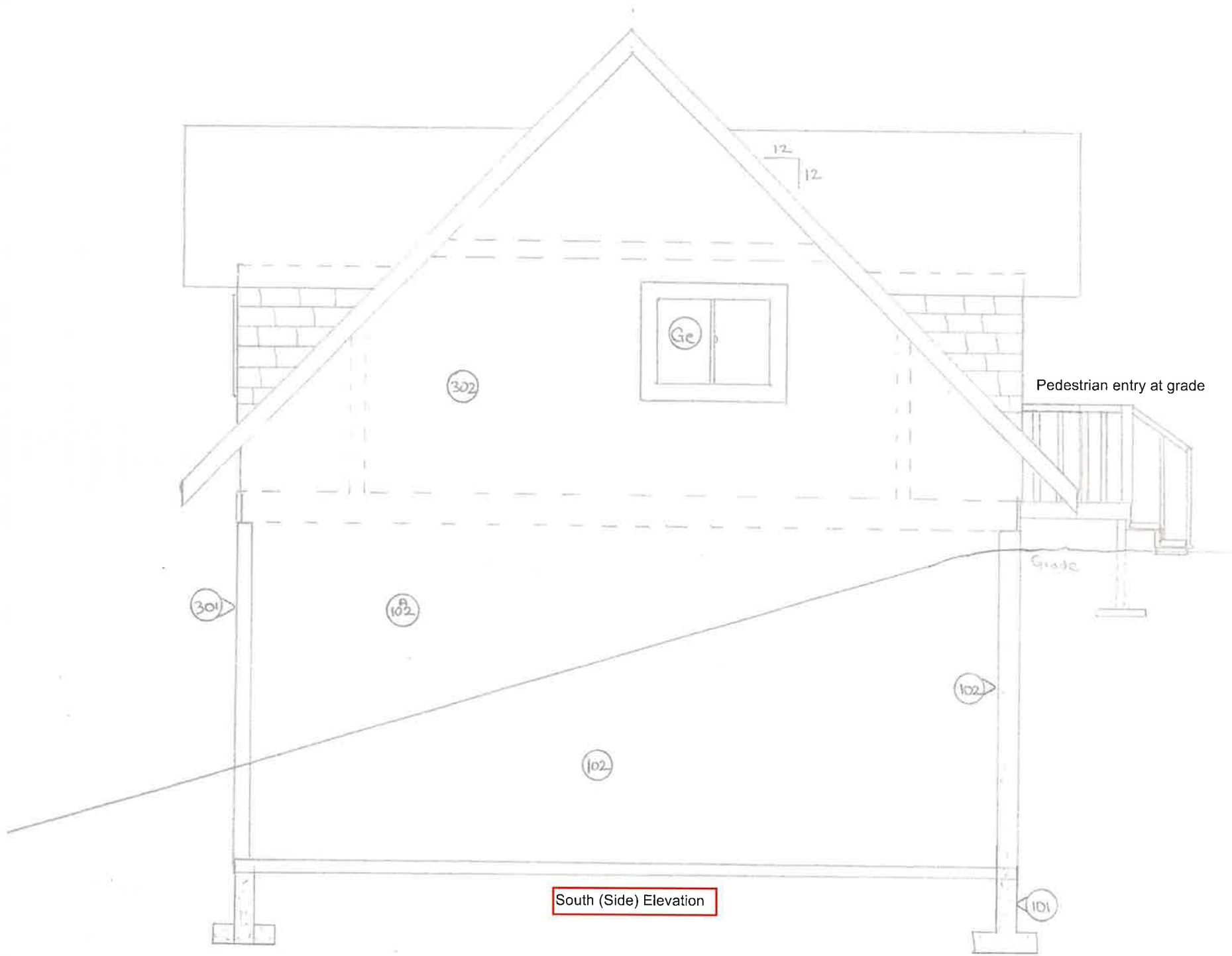
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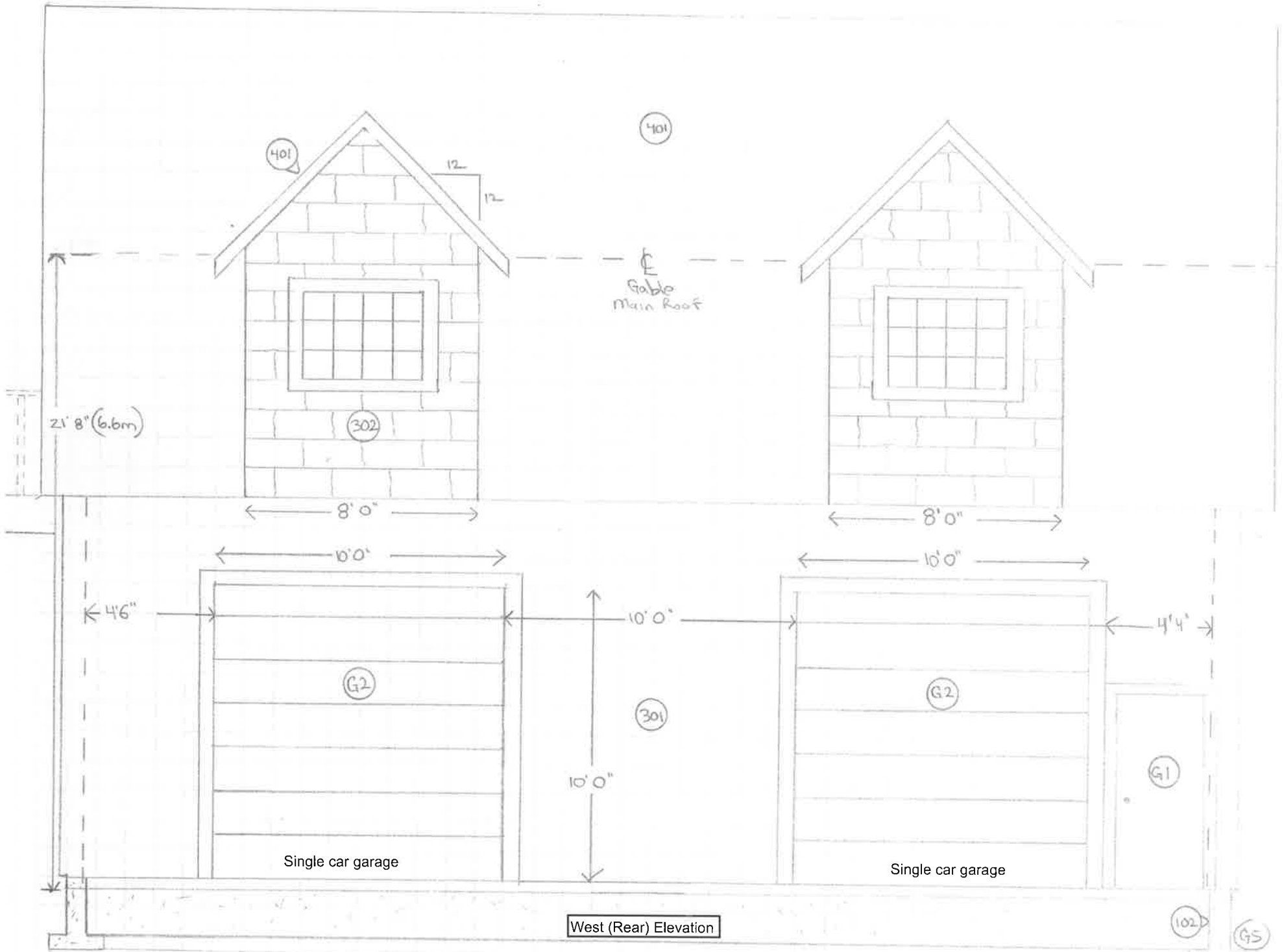


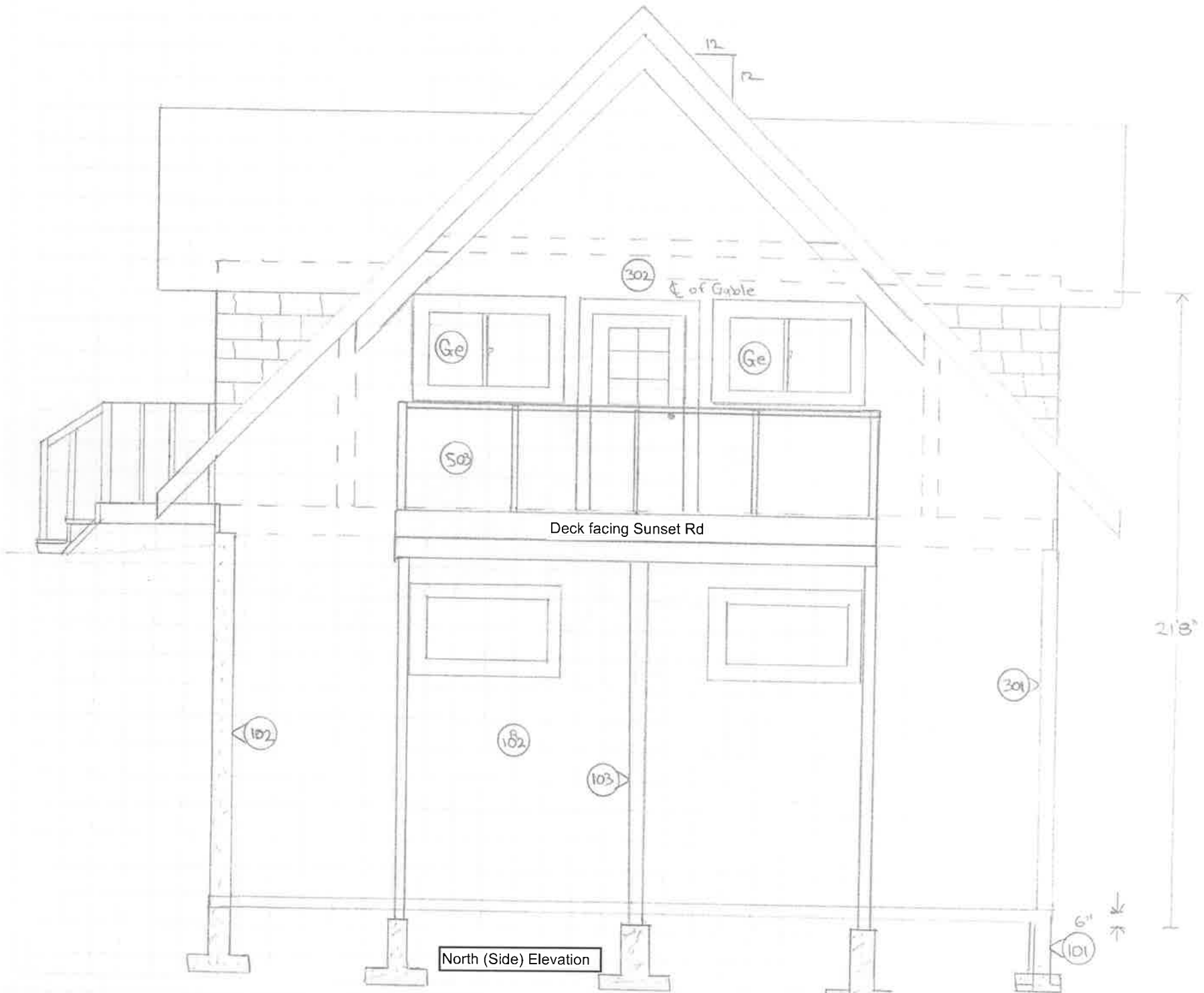
Footprint 28'x40' = 1120 sf
suite floor area = 825 sf



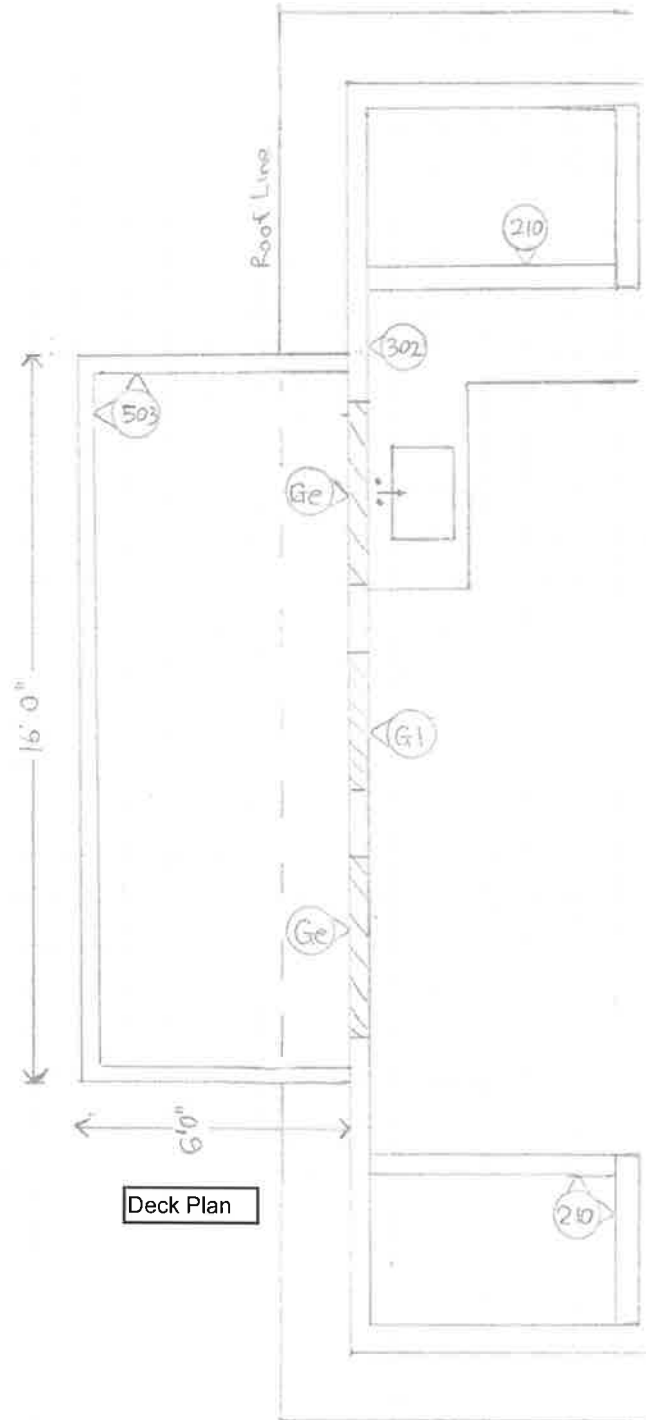








North (Side) Elevation



G2a

SCHEDULE "A"

To Land Use Contract No.: 14 - 76

Subdivision

1. No lot or parcel in the lands created by the subdivision referred to in paragraph 2.2 and Schedule "B" (hereinafter called the "Lot") shall be subdivided or partitioned into two or more Lots or any Lots or any Lots consolidated into one or more Lots.

Permitted uses

2. The following uses, as defined by the by-laws of the District and no others shall be permitted;

- (a) Single family dwelling;
- (b) Accessory residential;
- (c) Restricted agricultural.

Buildings per Lot

3. The number of buildings allowed per Lot for each of the above mentioned permitted uses shall be not more than:

- (a) One (1) single family dwelling;
- (b) Two (2) accessory residential buildings;
- (c) Two (2) restricted agricultural buildings.

Floor Area

4. The floor areas shall be as follows:

- (a) The floor area for a single family dwelling shall be not less than 60 m² (645.6 square feet).
- (b) The floor area for an accessory residential building shall not be greater than 55m² (591.8 square feet) with no horizontal dimension exceeding 9 m (29.53 feet);

Height of Buildings and Structures

5. The height of buildings and structures shall not exceed:

- (a) 5 m (16.40 feet) for accessory residential use;
- (b) 8 m (26.25 feet) for residential use;
- (c) 10 m (32.81 feet) for restricted agricultural use.

Lot Coverage

6. Lot coverage shall be not greater than thirty percent (30%) of the Lot area.

Off-Street Parking

7. Off-street parking shall be provided and maintained in accordance with the provisions of Schedule "B" of By-law 801 of the By-laws of the District and the number of parking spaces required to be provided on a Lot or Lots, shall be determined by the use or uses being carried on on such Lot or Lots from time to time.

Setbacks

8. (Subject to the special building line setback provisions of Section 407 of the By-laws of the District)

(a) **Front Yard:**

A front yard free of all buildings and structures shall be provided with a depth of not less than:

(i) 12 m (39.37 feet) for single family dwellings, and accessory residential use;

(ii) 15 m (49.21 feet) for restricted agricultural use;

(iii) 30 m (98.43 feet) for restricted agricultural use involving buildings used for the keeping of animals.

(b) **Other Buildings:**

Buildings shall not be sited within 3 m (9.843 feet) of any other building, except that buildings for restricted agricultural use involving the keeping of animals shall not be sited within 30 m (98.43 feet) of any residential dwelling not sited on the same Lot.

(c) Rear Yard:

A rear yard free of all buildings and structures shall be provided with a depth of not less than 8 m (26.25 feet), except that rear yards free of all buildings and structures used for keeping of animals shall be provided with a depth of not less than 30 m (98.43 feet) where the use abuts a Residential Zone.

(d) Side Yards:

Side yards free of all buildings and structures shall be provided with a width of not less than 8 m (26.25 feet), except that side yards free of buildings and structures used for keeping animals shall be provided with a width of not less than 30m (98.43 feet) where the use abuts a Residential zone.

Exterior side yards free of buildings and structures shall be provided with a width of not less than:

- (i) 12 m (39.37 feet) for single family dwellings, two family dwellings, mobile homes, and accessory residential use;
- (ii) 15 m (49.21 feet) for restricted agricultural use;
- (iii) 30 m (98.43 feet) for restricted agricultural use involving buildings used for the keeping of animals.

- 5 -

(e) Water Bodies:

Setbacks from water bodies and the natural boundary of any natural watercourse or source of water shall be in accordance with Section 406 of this By-law.

Restricted Agricultural Use

9. A restricted agricultural use shall be restricted to the cultivation of land and the keeping of animals for the personal use of the owner only, provided that this does not create a nuisance by reason of sound, sight, or smell and shall not include feed lots, mushroom growing, boarding and breeding kennels, or the keeping of swine or fur bearing animals.

Tree Cutting

10. No trees now standing on the Lands shall be cut or removed from the Lands unless the person desiring to cut any tree or trees makes written application to the District Planning Director for a tree cutting permit and states therein the following:

- (a) The reason for the proposed tree cutting;
- (b) The number, species and location of the tree or trees to be cut; and,
- (c) A tree survey if a building permit is being applied for.

10.1 The planning Director may, upon receipt of written application for the reasons therein specified pursuant to paragraph 10(a), issue a tree cutting permit. If the reason so stated pursuant to paragraph 10(a) is for a use pursuant to paragraph 2 herein, the Planning Director shall issue a tree cutting permit.

10.2 For purposes of paragraph 10 "Tree" means:

A member of any evergreen or deciduous species which has only a single leader (trunk) arising from the root mass, which will have a diameter at breast height ("DBH") of not less than 7.5 cm, and which is capable of growing to a height exceeding 3.5 m at maturity, and includes species in clump form having more than one leader per root mass.

9.2 R1 : Estate Lot Residential

9.2.1 Purpose

The purpose is to provide a **zone** for **single detached housing**, and compatible uses, on larger urban serviced **lots**. The R1c sub-zoning district allows for **care centre, major** as an additional use. The R1h sub-zoning district allows for **home based business, major** as an additional use. *(Bylaw 5467)*

9.2.2 Primary Uses

- **care centre, major** *(use is only permitted with the R1c sub-zoning district)*
- **single detached housing**

9.2.3 Secondary Uses

- **boarding rooms**
- **bed and breakfast homes** *(in single detached housing only) (Bylaw 5498)*
- **care centres, minor**
- **group home, minor**
- **home based businesses, minor**
- **home based businesses, major** *(use is only permitted with the R1h sub-zoning district)*
- **secondary suites**
- **seniors supportive housing**

9.2.4 Subdivision Regulations

- Minimum **lot width** is 24.0m.
- Minimum **lot area** is 740m², or 10,000m² if not serviced by a **community sewer system**.
- Maximum **density** is 30.0 units per gross hectare (12.0 units/gross acre).

9.2.5 Development Regulations

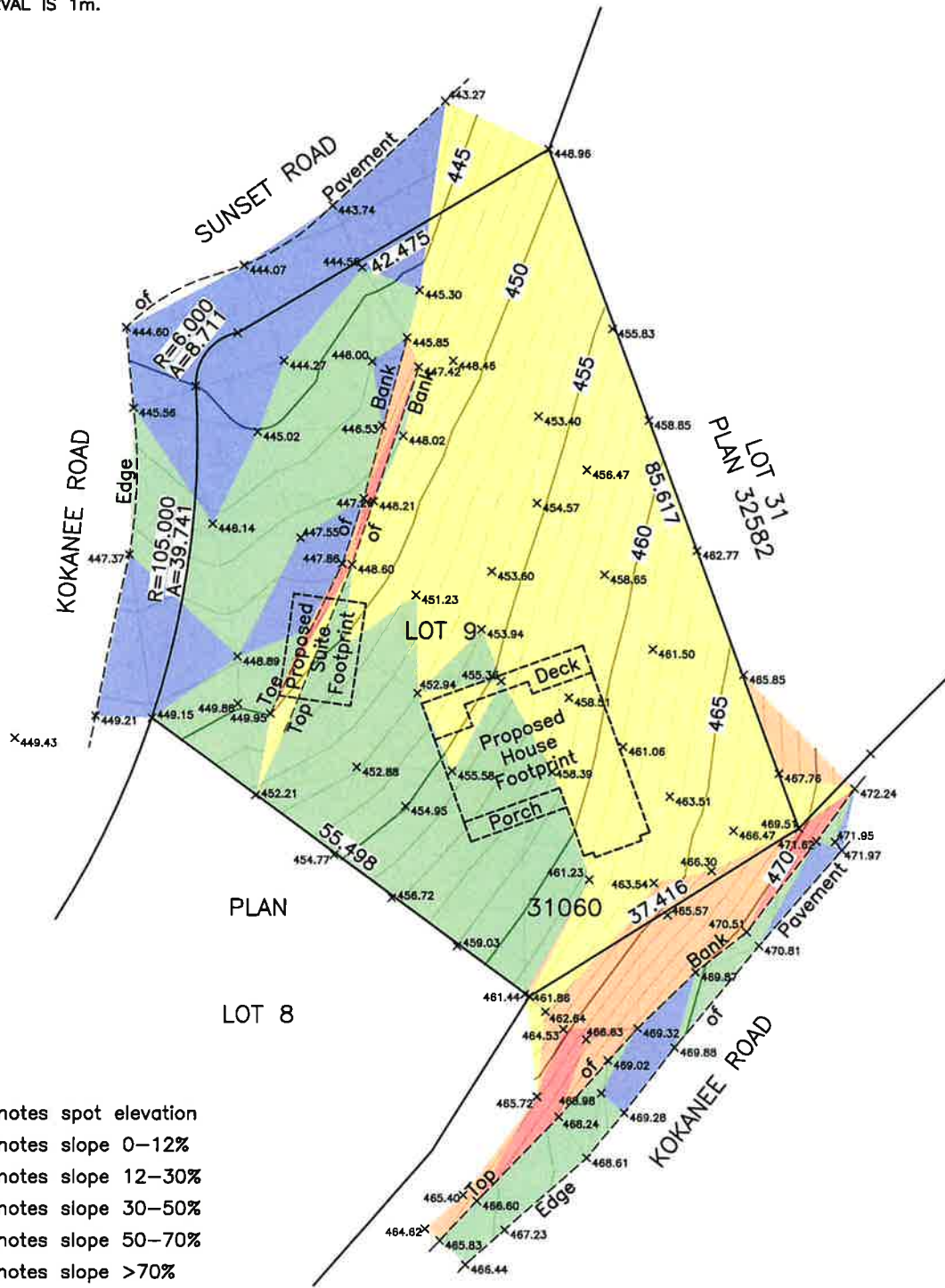
- Maximum **site coverage** is 40% and together with driveways, parking areas and **impermeable surfaces** shall not exceed 50%.
- Maximum **height** is the lesser of 10.0m or 2.5 **storeys**, except it is 4.5m for **secondary buildings** and **secondary structures**.
- Minimum **front yard** is 7.5m.
- Minimum **side yard** is 2.5m, except it is 7.5m from a **flanking street**. Where there is no direct vehicular access to the **rear yard** or to an attached garage or **carport**, one **side yard** shall be at least 3.0m.
- Minimum **rear yard** is 7.5m, except it is 1.0m for **secondary buildings**. Where the **lot width** exceeds the **lot depth**, the minimum **rear yard** is 4.5m provided that one **side yard** shall have a minimum width of 4.5m.
- The maximum **height** of any vertical wall element facing a **front, flanking or rear yard** (including **walkout basements**) is the lesser of 6.5m or 1.5 **storeys**, above which the **building** must be **set back** at least 1.2m.

9.2.6 Other Regulations

- There shall be no more than one **single detached house** per lot.
- Where **development** has access to a rear **lane**, vehicular access to the **development** is only permitted from the rear **lane**.

- For **seniors supportive housing**, a safe drop-off area for patrons shall be provided on the **site**.
- In addition to the regulations listed above, other regulations may apply. These include the general **development** regulations of Section 4 (secondary **development**, **yards**, projections into **yards**, lighting, agricultural setbacks, etc.); the specific use regulations of Section 5; the **landscaping** and fencing provisions of Section 6; and, the parking and loading regulations of Section 7.
- **Seniors supportive housing** shall be for no more than four residents. *(Bylaw 5467)*
- As per Section 4.10.2 - All **buildings** and **structures, excluding perimeter fencing (garden walls and fences)** on **lots abutting** City Roads as identified on Schedule "B" shall not be sited closer to the City Road than the setback as per the appropriate zone measured from the offset Rights of Way as illustrated on Schedule "B".
(Bylaw 5440)

ALL DISTANCES ARE IN METRES.
 ELEVATIONS ARE IN METRES, CGVD28 DATUM.
 CONTOUR INTERVAL IS 1m.



LEGEND:

- x denotes spot elevation
- Blue square denotes slope 0–12%
- Green square denotes slope 12–30%
- Yellow square denotes slope 30–50%
- Orange square denotes slope 50–70%
- Red square denotes slope >70%



SITE PLAN SHOWING SLOPES ON LOT 9,
 PLAN 31060, SEC 11, TP 13, ODYD

SCALE: 1 : 750 OUR FILE: R10703

DATE: 25 Mar 2022 DRAWN: KDG

Gordey

McPherson Maddox

Land Surveying

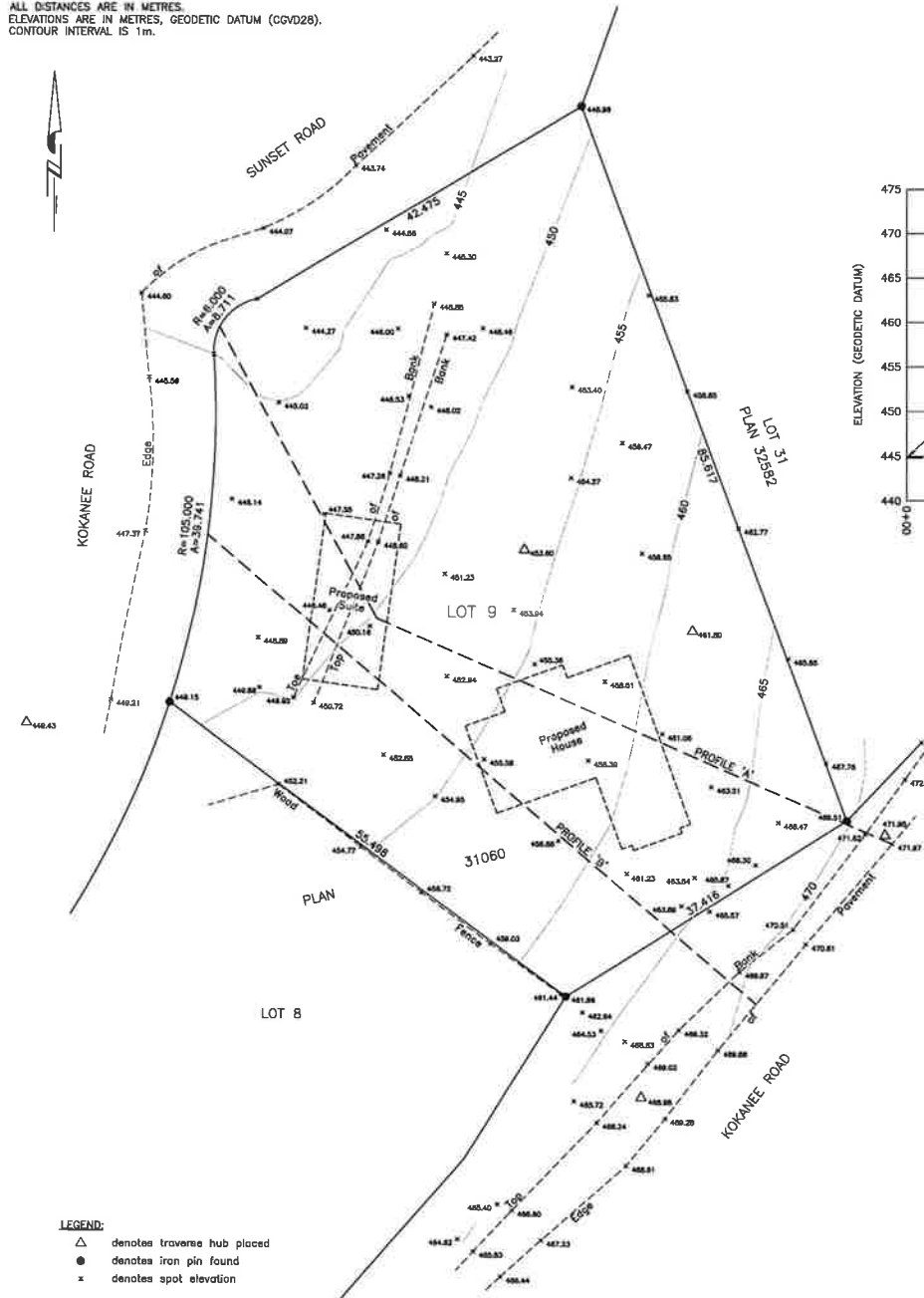
3500 – 30th Street

Vernon, BC V1T 5E8

Telephone: (250) 542-4343

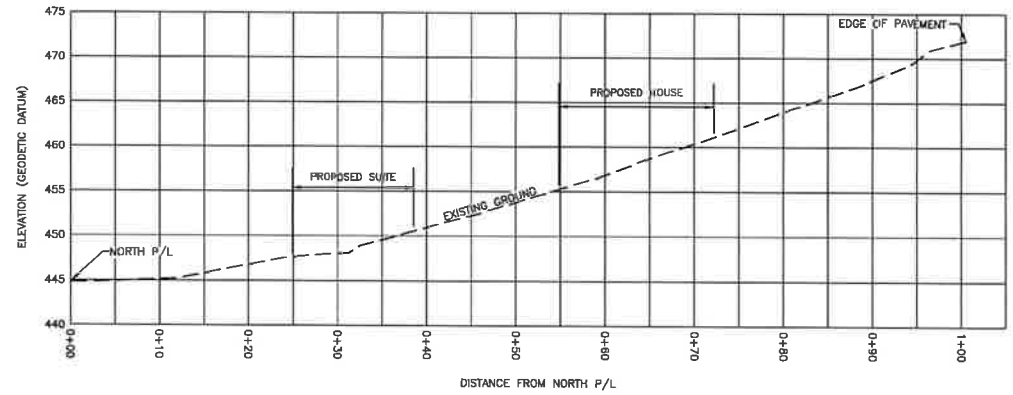
107030T03

ALL DISTANCES ARE IN METRES.
 ELEVATIONS ARE IN METRES, GEODETIC DATUM (CGVD28).
 CONTOUR INTERVAL IS 1m.

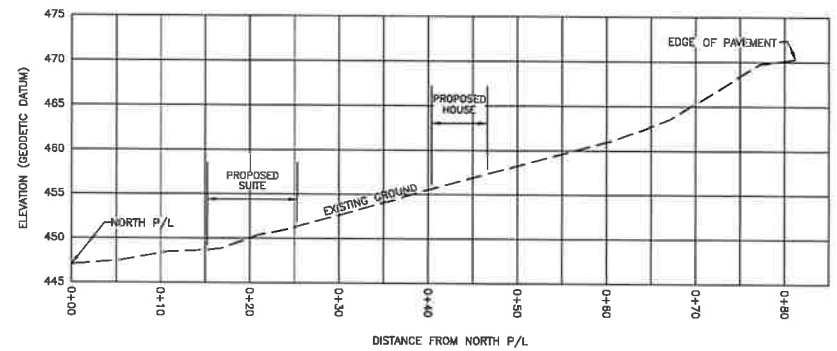


LEGEND:
 Δ denotes traverse hub placed
 ● denotes iron pin found
 x denotes spot elevation

PROFILE 'A'



PROFILE 'B'



SCALE: 1 : 400	OUR FILE: R10703
DATE: 29 Mar 2021	DRAWN: KDG
Gordey	

SITE PLAN OF LOT 9, PLAN 31060, SEC 11, TP 13, ODYD
 WITH EXISTING GROUND PROFILES

McPherson Maddox
 Land Surveying
 3500 - 30th Street
 Vernon, BC V1T 5E8
 Telephone: (250) 542-4343

107030T02

- 4.5.5 A **secondary building or structure** shall not be used as a **dwelling** unless it is a permitted **secondary suite** in which case the Conditions of Use pertaining to Secondary Suites in Section 5.5 shall apply. *(Bylaw 5851)*
- 4.5.6 A **secondary building or structure** shall not exceed 4.5m or one **storey in height**, whichever is the lesser, unless specified otherwise in the **development regulations** of a particular **zone** or unless it is a **Secondary Suite** in which case Section 5.5 shall apply. *(Bylaw 5851)*
- 4.5.7 **Lot** coverage of **secondary buildings or structures** shall not exceed 14% or a maximum area of 90m² for **secondary buildings** in the residential **zones**.
- 4.5.8 There shall be at least 2.0 m spatial separation between a **secondary building** and a primary **building**.
- 4.5.9 **Secondary buildings and structures** shall be located on an **interior lot** as follows:
- a **secondary building** shall not be located closer than 18.0m to the **front lot line** unless it complies with the **side yard** requirements for a primary **building**;
 - a **secondary building** shall be located not less than 1.0m from the **side lot line** or shall be unrestricted where the **secondary building** does not exceed the permitted **fence height**,
 - a **secondary building** housing a **secondary suite** shall have the same **side yard** requirements as for the primary **building** in that **zone**.
 - mechanical equipment shall be located to comply with the **side yard** for the primary **building**.

Secondary buildings on Corner and Through Sites

- 4.5.10 In addition to the provisions of Section 4.5.8, the distance between a **secondary building** and the **side lot line abutting a flanking street**, shall not be less than the **side yard** required for the primary **building**.
- 4.5.11 A **secondary building or structure**, excluding **fences**, on any through **lot** shall be sited as if a **front yard** is required on both **lot lines abutting streets**.

Storage Containers

- 5.4.2 No more than two persons, other than residents of the primary residence, shall be engaged in the **rural home based business**.
- 5.4.3 The **rural home based business** shall not occupy more than 25% of the floor area of the **dwelling** unit or **secondary building** or **structure**, and in no case shall the combined area of the residence used for the **business** and a **secondary building** or **structure** used for the **business** exceed 100m².
- 5.4.4 The display and retail sales of goods not produced on the **premises** shall not be permitted in a **rural home based business**, with the exception of
- products that are associated with the goods produced on the site,
 - agricultural products only in the A1, A2 and A3 Agricultural zones,
 - mail order sales,
 - telephone sales,
 - goods where the customer does not enter the **premises** to inspect or pick up the goods, and
 - products incidental to the service provided,
- subject to Section 5.4.7.
- 5.4.5 A **rural home based businesses** shall not occupy a required **parking space**.
- 5.4.6 A **rural home based business** sign is permitted according to the provisions of the *City of Vernon Sign Bylaw No. 4489*, as amended.
- 5.4.7 The following **uses** are prohibited as **home based businesses**: automotive repair, welding, **care centres**, cutting & wrapping of meat, including wild game, escort services, and gun shops.

5.5 Secondary Suites – Conditions of Use

- 5.5.1 **Secondary suites**, where permitted, are to be located only in **single detached housing** or a **secondary building** on a **lot** containing **single detached housing**. **Secondary suites** are not permitted in or on the same lot as **multiple housing, semi-detached housing, duplexes, bed and breakfast homes, rooming houses or boarding rooms**. (*Bylaw 5851*)
- 5.5.2 No more than one **secondary suite** shall be permitted per **single detached housing** unit. It may be permitted either within **single detached housing** or within a **secondary building**. (*Bylaw 5851*)
- 5.5.3 No **secondary suite** will be allowed without connection to a **community sewer system** unless the **lot** is at least 830m² in area and meets the requirements of the **City** and the *Medical Health Officer* for septic disposal capacity and related regulations.

5.5.4 A secondary suite must have a minimum of 15m² of separated and private open space in addition to any open space provided for the principle dwelling.

5.5.5 The net floor area of any secondary suite shall not exceed the lesser of 90m² or 45% of the net floor area of the building containing single detached housing.

Where a secondary suite is located in a secondary building the following shall apply:

Lot Size	450m ² - 557m ²		> 557m ²	
Lot Orientation	No Lane	Lane or Flanking Street	No Lane	Lane or Flanking street
Maximum footprint	The lesser of 80m ² or 75% of the net floor area the building containing single detached housing.		The lesser 90m ² or 75% of the net floor area of the building containing single detached housing.	
Maximum floor area	The net floor area of the upper storey can be no more than 75% of the net floor area of the first storey.		The net floor area of the upper storey can be no more than 75% of the net floor area of the first storey. The net floor area of a second storey of a suite can be 100% of the net floor area of the first storey if the net floor area of the first storey is less than 45m ² .	
	The net floor area must be the lesser of 90m ² or 60% of the net floor area of the building containing single detached housing.			
For the purposes of calculating net floor area for secondary suites contained in secondary buildings, notwithstanding the definition of net floor area, attached garages, carports, and basements shall be included in floor area calculations.				

5.5.6 A **secondary building** or structure containing a **secondary suite** shall not exceed the following **height** and **storey** limitations:

Lot Size	450m ² - 557m ²		> 557m ²	
Lot Orientation	No Lane	Lane or Flanking street	No Lane	Lane or Flanking street
Storeys	1.5 maximum		2.0 maximum	
Maximum Height	The lesser of the principal building height and no higher than 4.8 metres to the midpoint of a sloped roof or the highest point of a non-sloping roof.		The lesser of the principle building height and no higher than 6.0m to the midpoint of a sloped roof or the highest point of non-sloping roof.	
For the purpose of calculating height of a secondary suite located in a secondary building , notwithstanding the definition of height, a non-sloping roof will be considered any roof with <u>either</u> a single pitch or a pitch of 4:12 or less.				
No secondary building containing a secondary suite shall have a height more than the principle building, as measured from the building grade of each respective building.				

5.5.7 All dormers on a **secondary building** containing a suite shall be enclosed within and by the roof **structure**.

5.5.8 Parking shall be in conformance with the regulations of the Bylaw.

5.5.9 **Secondary suites** shall comply with all relevant *City Bylaws* and the *B.C. Building Code*.

5.5.10 A **secondary suite** shall be located on the same lot as the primary building. No strata titling shall be permitted.

5.5.11 A **secondary suite** must have direct access to outside from a dedicated exterior entrance. When a **secondary suite** is located within a principle

dwelling, access may be taken from a shared vestibule, which meets the provisions of the BC Building Code. (Bylaw 5851)

5.5.12 The following additional conditions of use shall apply to **secondary suites** which are located in **secondary buildings**:

- i. Roof decks are prohibited.
- ii. A **deck** above the **first storey** must face a **laneway** or **flanking street**. A **deck** above the **first storey** is not permitted in **secondary buildings** with **secondary suites** on **lots** without a **laneway** or **flanking street**.
- iii. A minimum 3.0m spacing with no **structures** is required between a **secondary building** containing a **secondary suite** and any other **building** containing a **dwelling unit** on the lot.
- iv. A **secondary suite** in a **secondary building** must have an at grade enclosed entrance. Exterior stairs accessing a **secondary suite** in a **secondary building** are not permitted. Stairs with a combined rise of 0.6 metres or less are excluded. (Bylaw 5851)

5.6 Bed and Breakfast Homes

5.6.1 **Bed and breakfast homes** are only permitted in **single detached housing** or **semi-detached housing** or **duplex housing** and shall comply with the following regulations: (Bylaw 5498)

- the **bed and breakfast home use** shall be operated as a **secondary use** only within the primary **building**, with a maximum 4 sleeping units with accommodation for a maximum of two guests per sleeping unit, of a minimum area of 11m² each; and,
- the **bed and breakfast home use** shall not change the residential character or external appearance of the **dwelling** involved.

5.6.2 One sign is permitted according to the provisions of the *City of Vernon Sign Bylaw No. 4489*.

5.6.3 All **bed and breakfast homes** shall comply with the other provisions of this Bylaw, the *BC Building Code*, the *Agricultural Land Commission* regulations where applicable, and other *Fire and Health Regulations*.

5.6.4 The property owner or operator must reside in the primary **dwelling** unit at least 180 days per calendar year.

5.6.5 The **bed and breakfast home use** is not permitted in conjunction with a **rooming house, secondary suite** or **boarding rooms**.

2.0 stalls per 3-or-more bedroom **dwelling** unit.

In addition to the above total required spaces for a **development**, 1 additional **parking space** shall be provided and designated visitor parking for every 7 **dwelling** units.

Group Home, Minor	1 per primary dwelling , plus 1 space per three rental beds and 1 per non-resident staff member, minimum total of not less than 3
Group Home, Major	1 per employee on duty, plus 1 per 5 dwelling or sleeping units, plus 1 scooter parking space per 5 dwelling or sleeping units
Home Based Business, Rural	1 per non-resident employee and 1 per customer in addition to that required for the primary dwelling
Home Based Business, Minor	1 per customer in addition to that required for the primary dwelling
Home Based Business, Major	1 per non-resident employee and 1 per customer in addition to that required for the primary dwelling
Mobile Homes	2 per dwelling unit, plus 1 space per 7 dwelling units as designated visitor parking
Rooming Houses	1 per 2 sleeping rooms, plus 2 spaces required for the corresponding primary dwelling unit
Second Kitchens	1 per second kitchen , plus spaces required for the corresponding primary dwelling unit
Secondary Suites	1 per suite, plus 2 spaces required for the corresponding primary dwelling unit
Seniors Assisted Living	1 per employee on duty, plus 1 per 5 dwelling or sleeping units, plus 1 per 7 units as designated visitor parking, plus



THE CORPORATION OF THE CITY OF VERNON REPORT TO COUNCIL

SUBMITTED BY: Matt Faucher
Planner, Current Planning

COUNCIL MEETING: REG COW I/C
COUNCIL MEETING DATE: August 15, 2022
REPORT DATE: July 15, 2022
FILE: 3090-20 (DVP00521)

SUBJECT: DEVELOPMENT VARIANCE PERMIT APPLICATION FOR 9353 EASTSIDE ROAD

PURPOSE:

To review the Development Variance Permit Application 00521 (DVP00521) to vary Section 4.16.1 of Zoning Bylaw 5000 in order to support a three lot subdivision with construction of three single detached dwellings on slopes greater than 30% at 9353 Eastside Road.

RECOMMENDATION:

THAT Council support Development Variance Permit Application 00521 (DVP00521) to vary Zoning Bylaw 5000 on LT 1 SEC 10 TWP 13 ODYD PLAN 9430 EXCEPT PLAN 11165 (9353 Eastside Road) as outlined in the report titled "Development Variance Permit Application for 9353 Eastside Road" dated July 15, 2022 and respectfully submitted by the Current Planner, as follows:

- a) Section 4.16.1 to allow construction of a building, structure or swimming pool on slopes 30% or greater;

AND FURTHER, that Council's support of DVP00521 is subject to the following:

- a) the site plan illustrating the general siting of the proposed single detached dwellings (Attachment 1) be attached to and form part of DVP00521;
- b) development of the property be in accordance with the report titled "Geotechnical Assessment – Proposed Residential Subdivision 9353 Eastside Road, Vernon, B.C." prepared by Calibre Geotechnical dated February 9, 2021 (Attachment 2), be attached to and form part of DVP00521;
- c) development of the property be in accordance with the report titled "Riparian Area Protection Regulation Assessment" prepared by Canyon Wren Consulting Inc., dated January 21, 2021 (Attachment 3), be attached to and form part of DVP00521; and
- d) if any tree removal is required to develop the property that the applicant obtain a valid Tree Cutting Permit.

ALTERNATIVES & IMPLICATIONS:

THAT Council not support Development Variance Permit Application 00521 (DVP00521) to vary Zoning Bylaw 5000 on LT 1 SEC 10 TWP 13 ODYD PLAN 9430 EXCEPT PLAN 11165 (9353 Eastside Road) as outlined in the report titled "Development Variance Permit Application for 9353 Eastside Road" dated July 15, 2022 and respectfully submitted by the Current Planner, as follows:

- a) Section 4.16.1 to allow construction of a building, structure or swimming pool on slopes 30% or greater.

Note: This alternative does not support the development variance permit application and would require the applicant to develop the site in compliance with Zoning Bylaw 5000.

ANALYSIS:

A. Committee Recommendations:

At its meeting of July 19, 2022, the Advisory Planning Committee passed the following resolution:

“As cited by the Committee.”

B. Rationale:

1. The subject property is located at 9353 Eastside Road (Figures 1 and 2). The property is approximately 9,907 m² (2.45 ac) in size with waterfront access to Lake Okanagan.
2. The subject property is zoned R1 – Estate Lot Residential and the subject application pertains to development regulations within Section 4.16.1 of Zoning Bylaw 5000 (Attachment 4) to support a three lot subdivision proposal.
3. The applicant proposes to subdivide the property into three lots and construct three single detached residential dwellings. The application meets the requirement to have a minimum of 100m² of contiguous buildable area with slopes less than 30%, however the proposed building footprint locations do not align with these areas specifically as illustrated in Attachment 1.
4. The application proposes to vary the following section of Zoning Bylaw 5000 in order to permit a three lot subdivision and construction of three single detached residential dwellings:
 - a. Section 4.16.1 no construction of a building, structure or swimming pool is permitted on slopes 30% or greater.



Figure 1 - Property Location Map



Figure 2: Aerial Photo of Property

5. The subject property is subject to Sec 75(1)(c) of the *Land Title Act* requiring the applicant to dedicate a 20m wide public access from Eastside Road to Lake Okanagan. With the support of the City's Approving Officer, the applicant has successfully applied to the Province for a waiver of this requirement citing the significant slope of the site, as well as the ecological sensitivity of the shoreline along the subject property (Attachment 5).
6. Given the significant slope of the site (Figure 3), a geotechnical assessment was completed for the subject property (Attachment 2). The report has identified a surficial slide caused by water which the applicant intends to address through the development of the future properties.

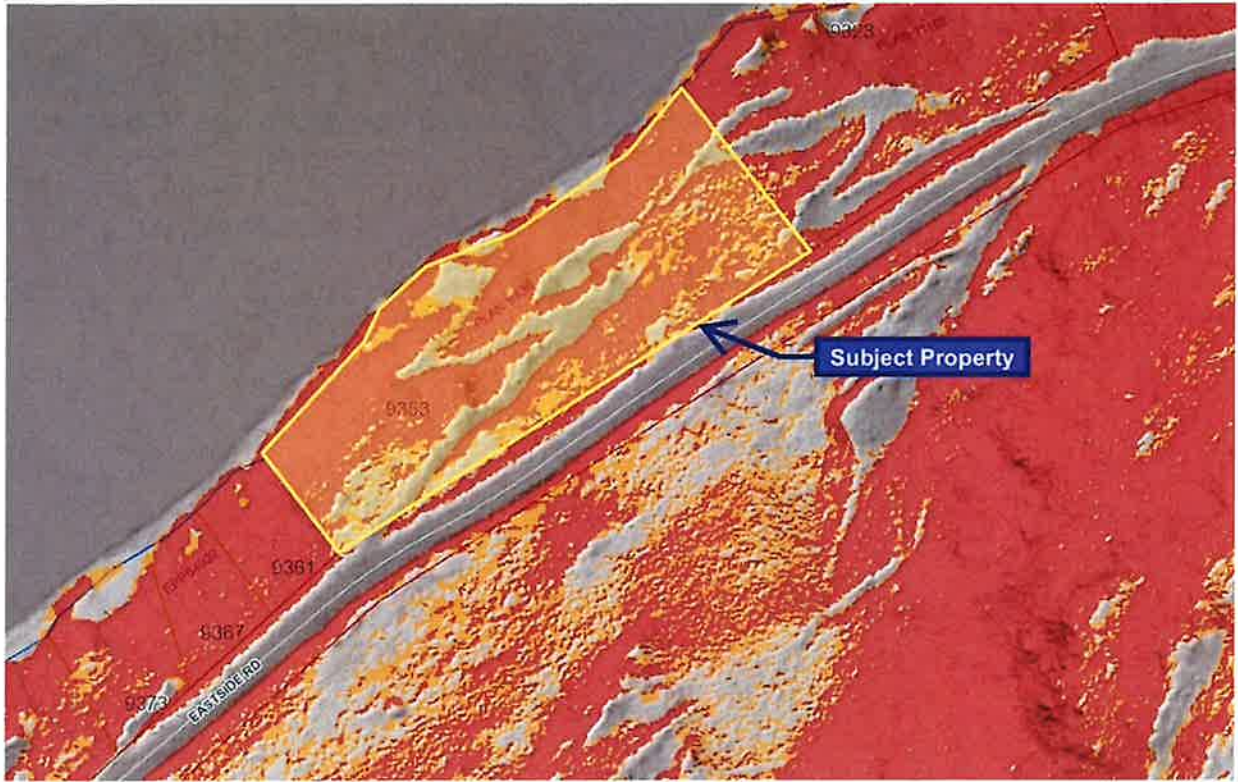


Figure 3: Hillshade ■ Slopes Greater Than 40%

7. As the subject property abuts Lake Okanagan (Figure 4), a Riparian Area Protection Regulation Assessment has been submitted by the applicant (Attachment 3). Should Council approve the variance application, future development of the subject property will require an environmental development permit and approval from the Province.

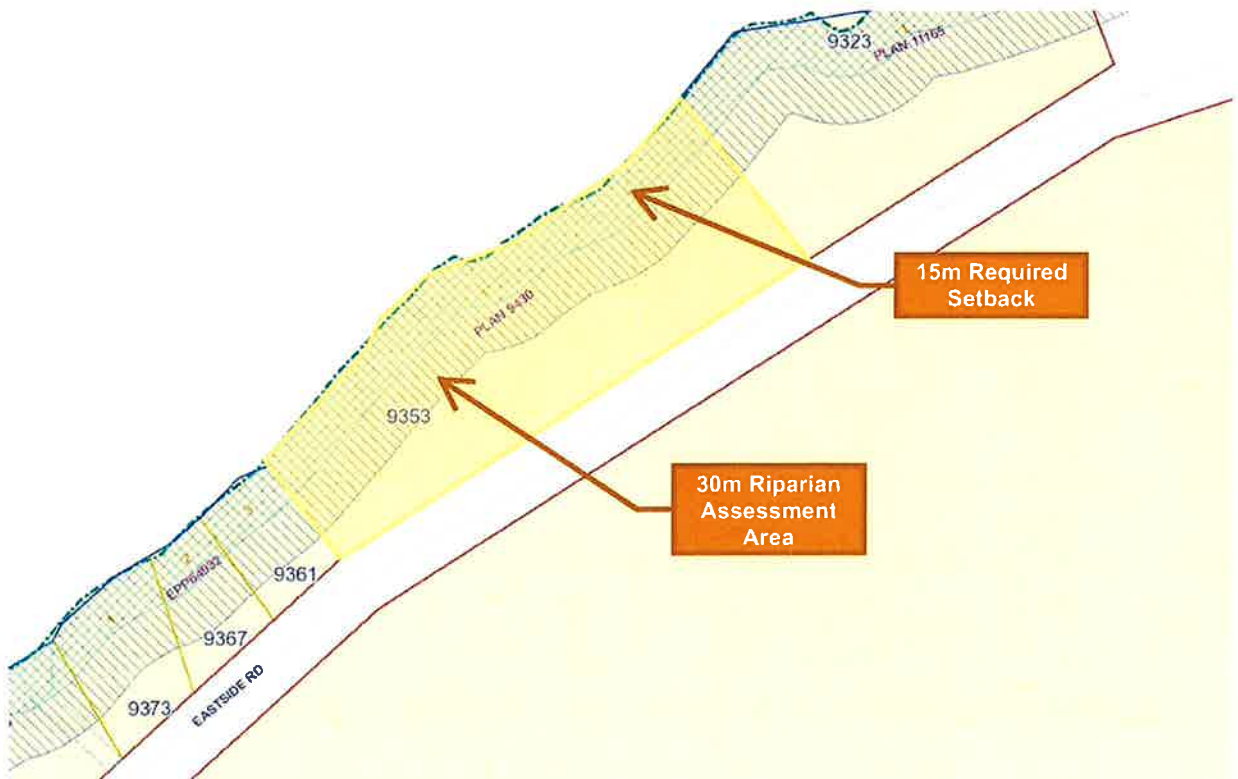


Figure 4: Riparian Assessment Area
APC Agenda (July 19, 2022)

8. Administration supports the requested variance for the following reasons:

- a) The subject property is almost entirely on slopes greater than 30%. The addition of any structure or redevelopment of the site would require construction on slopes greater than 30%.
- b) The applicant has provided the City with geotechnical and riparian assessment reports supporting development of the subject property.
- c) The proposed development is designed to work with the slope of the site (Attachment 6) and is not anticipated to detract from the aesthetic of the shoreline when viewed from Eastside Road or Lake Okanagan. Renderings of the proposed development are illustrated in Attachment 7.
- d) There were no concerns raised in response to the agency referral package as distributed.

C. Attachments

Attachment 1 – Building Footprint Locations

Attachment 2 – Geotechnical Report, prepared by Calibre Geotechnical dated Feb 9, 2021

Attachment 3 – Riparian Area Assessment, prepared by Canyon Wren Consulting dated Jan 21, 2021

Attachment 4 – Zoning Bylaw 5000 Section 4.16

Attachment 5 – Provincial Approval waiving requirements for lake access

Attachment 6 – Cross-Sections of proposed development lots

Attachment 7 – Renderings of proposed development

D. Council's Strategic Plan 2019 – 2022 Goals/Action Items:

The subject application involves the following goals/action items in Council's Strategic Plan 2019 – 2022:

- N/A

E. Relevant Policy/Bylaws/Resolutions:

1. The following provisions of Zoning Bylaw 5000 R1 – Estate Lot Residential Zone are relevant to the subject application:

- Zoning Bylaw 5000:

Section 4.16.1 – no construction of a building, structure or swimming pool is permitted on slopes 30% or greater.

BUDGET/RESOURCE IMPLICATIONS:

N/A

Prepared by:

Approved for submission to Council:

X _____
Matt Faucher
Planner, Current Planning

Will Pearce, CAO

Date: _____

X _____
Kim Flick
Director, Community Infrastructure and Development

REVIEWED WITH

- | | | |
|---|---|--|
| <input type="checkbox"/> Corporate Services | <input type="checkbox"/> Operations | <input checked="" type="checkbox"/> Current Planning |
| <input type="checkbox"/> Bylaw Compliance | <input type="checkbox"/> Public Works/Airport | <input checked="" type="checkbox"/> Long Range Planning & Sustainability |
| <input type="checkbox"/> Real Estate | <input type="checkbox"/> Facilities | <input checked="" type="checkbox"/> Building & Licensing |
| <input type="checkbox"/> RCMP | <input type="checkbox"/> Utilities | <input checked="" type="checkbox"/> Engineering Development Services |
| <input checked="" type="checkbox"/> Fire & Rescue Services | <input type="checkbox"/> Recreation Services | <input type="checkbox"/> Infrastructure Management |
| <input type="checkbox"/> Human Resources | <input type="checkbox"/> Parks | <input checked="" type="checkbox"/> Transportation |
| <input type="checkbox"/> Financial Services | | <input type="checkbox"/> Economic Development & Tourism |
| <input checked="" type="checkbox"/> COMMITTEE: APC (July 19/22) | | |
| <input type="checkbox"/> OTHER: | | |




G:\3000-3699 LAND ADMINISTRATION\3090 DEVELOPMENT VARIANCE PERMITS\20 APPLICATIONS\DVP00521\2 PROC\Rpt\220715_mf_APC Rpt_DVP00521.docx

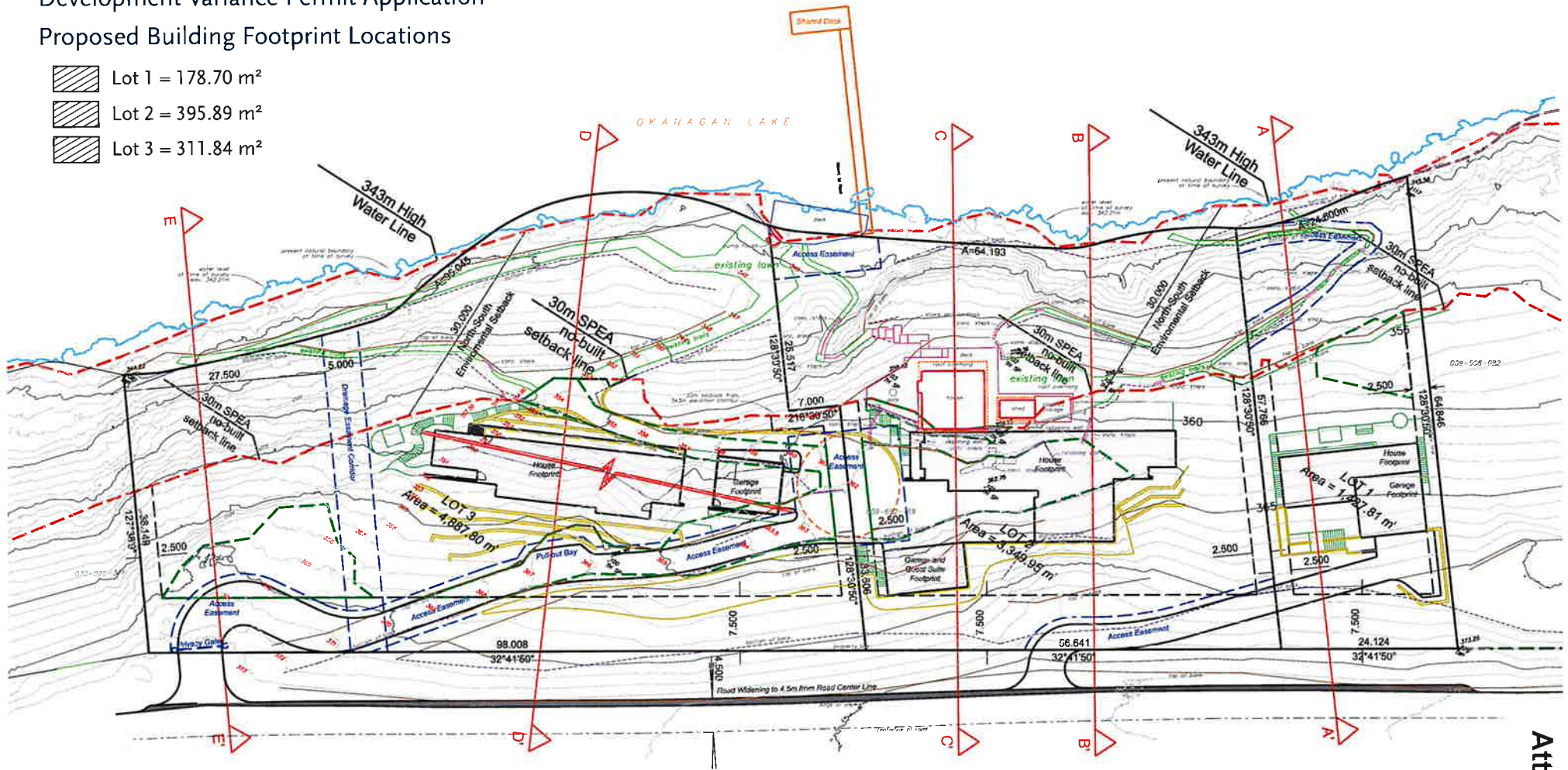
June 23rd, 2022

9353 Eastside Road - Subdivision Application

Development Variance Permit Application

Proposed Building Footprint Locations

-  Lot 1 = 178.70 m²
-  Lot 2 = 395.89 m²
-  Lot 3 = 311.84 m²



EKISTICS

Scale 1:500



Attachment 1

February 9, 2021

Calibre File No.: J20-02823

Ekistics Holdings Inc.
1925 Main Street
Vancouver, B.C.
V5T 3C1

Attention: Paul Rosenau

Subject: **Geotechnical Assessment - Proposed Residential Subdivision
9353 Eastside Road, Vernon, B.C.**

We carried out a geotechnical assessment of the above noted property on September 23, 2020. Based on our review of the information and our experience with the area we believe, from a geotechnical point of view, that the site can be subdivided into three residential lots, and subsequently developed, without impacting slope stability.

Please find the following attached:

- Plan view showing proposed residential lots and homes
- Memo from Dr. Dwayne Tannant – rock assessment
- Plan view showing our six test pit locations
- Six photos showing the test pits

At our test pit locations, we encountered shallow dense till or bedrock in all of our test pits, which is acceptable for high foundation bearing and adequate for slope stability.

- In TP-1, we found till at 0.75 metres – refusal with excavator in till.
- In TP-2, we found till at 0.4 metres over bedrock at 1.0 metre.
- In TP-3, we found till at 1.05 metres – refusal in till.
- In TP-4, we found bedrock at 0.3 metres.
- In TP-5, we found a thin till layer over bedrock.
- In TP-6, we cut into the slope and found a 1.5 metre exposure of till over bedrock (just below existing ditch line).



There is a culvert on Eastside Road that directs water towards the slide area on the property (i.e. water had caused the surficial slide). This culvert will have to be addressed prior to the development of the site.

No other geotechnical issues noted during our assessment other than what Dr. Tannant provided in his memo.

During construction we will provide the necessary geotechnical inspection services to allow for the construction of the homes with minimal to no impact on the areas surrounding the building's footprint.

We trust this letter meets your present requirements. Should you require any additional information, please contact our office.

For:
Calibre Geotechnical Engineering Ltd.



A. H. Albert Losch, P.Eng.
Geotechnical Engineer



Attachments

MEMORANDUM

To: Albert Losch, P.Eng.
From: Dwayne Tannant, P.Eng.
Subject: Rock Outcrops at 9353 Eastside Road
Date: September 5, 2020
Copy:

On September 2, 2020, at the request of Albert Losch from Calibre Geotechnical Engineering Ltd., I inspected the rock outcrops present at 9353 Eastside Road (Figure 1). The purpose of the inspection was to conduct a preliminary assessment of potential instabilities and issues associated with planned residential development on the site. The intrusive syenite or quartz monzonite rock found in this area is estimated to be very strong¹ (unconfined compressive strength > 100 MPa) and is relatively resistant to weathering. The rock contains well developed joint sets, and the geometries of the different outcrops are controlled by these joints.

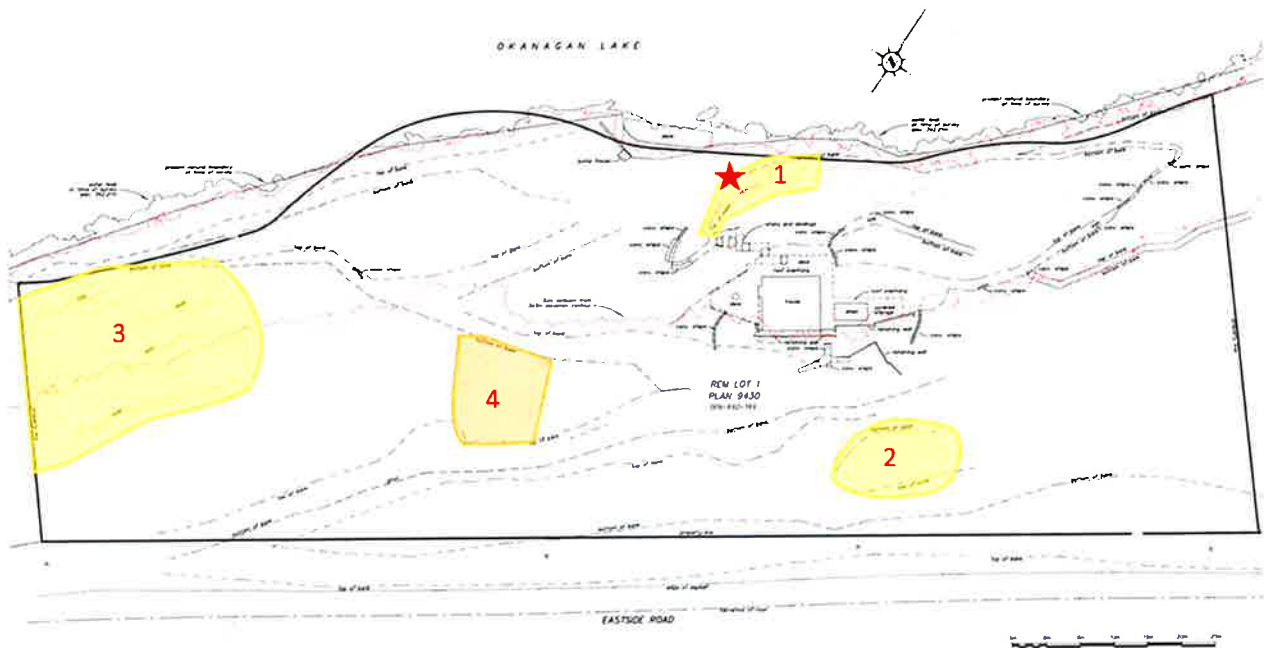


Figure 1. Topographic map extracted from a figure provided by Monashee Surveying Geomatics showing examined rock outcrops in yellow.

Three rock outcrop areas that could have implications for the planned development were examined. These are highlighted in the yellow areas in Figure 1. Other rock outcrops also occur (e.g. along the shore).

¹ International Society for Rock Mechanics. 1981. Rock characterisation, testing and monitoring - ISRM suggested methods. Oxford: Pergamon

Area 1 consists of a cliff located above the dock area and beside a walking path to the shore. A large potentially unstable block of rock (approximately 2.9 m high, 2.2 m wide and 1.3 m thick) is located on the cliff face with open joints/fractures (red star in Figure 1; yellow circle in Figure 2). This rock could slide/topple toward the shore and dock area, and it should either be removed or stabilized by rockbolts. Stabilizing the block is likely the best option as its removal may undermine portions of the cliff face. Without performing an analysis, the block would likely need about three 3 m long rockbolts to secure it in place permanently.

Area 2 consists of a rounded rock outcrop. There appear to be no issues with the stability of this small rock bluff. Future earthworks in this area should avoid undercutting the rock bluff unless further investigation is completed. It should be feasible to support the bluff if there is a desire to cut into the toe of the bluff.

Area 3 consists of a series of small bluffs stacked along the side of the lot. It would be feasible to have excavations for footings cut into the rock. However, the footings may require rockbolts to pin the footings into the rock while simultaneously providing local stabilization to prevent deformations on steep joints that dip toward the lakeshore.

Figure 3 shows a small landslide in the glacial soils indicated by the orange area (Area 4) in Figure 1. The landslide might have occurred when the original driveway or access trail to the lake was constructed. This landslide shows that the steep hillside in the glacial soils could experience large deformations. Careful consideration of possible concentrations of overland or groundwater flows will be needed while steep cuts into the soil are present. A site investigation to better understand where dense glacial till exists versus glaciolacustrine silt and the depth to bedrock will be needed to design safe cuts (and fills) for future development on the site.



Figure 2. Loose rock block.



Figure 3. Small landslide between the driveway and the trail to the shore.



TP-1



TP-2





TP-3



TP-4





TP-5



TP-6



FORM 1

Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

Riparian Area Protection Regulation Assessment

**9353 EASTSIDE ROAD
VERNON, BC**

**Prepared for:
Paul Rosenau &
David Franklin**

**3306 WEST 11TH AVE
VANCOUVER, BC**

Prepared by:



**CANYON WREN
CONSULTING INC.**

Riparian Areas Protection Regulation: Assessment Report

Please refer to submission instructions and assessment report guidelines when completing this report.

Date Jan. 21, 2021

I. Primary QEP Information

First Name	Mark	Middle Name	D
Last Name	Piorecky		
Designation	R.P.Bio	Company:	Canyon Wren Consulting Inc
Registration #	1810	Email:	mark@canyonwren.ca
Address	5859 Hartnell Rd.		
City	Vernon	Postal/Zip	V1B 3J5
Prov/state	B.C.	Country	Canada
		Phone #	250.307.2038

II. Secondary QEP Information (use Form 2 for other QEPs)

First Name		Middle Name	
Last Name			
Designation		Company:	
Registration #		Email:	
Address			
City		Postal/Zip	
Prov/state		Country	
		Phone #	

III. Developer Information

First Name	PAUL ROSENAU	Middle Name	
Last Name	DAVID FRANKLIN		
Company			
Phone #	604.671.8745	Email:	Rosenau@ekistics.ca
Address	3306 WEST 11TH AVENUE		
City	VANCOUVER	Postal/Zip	V6R 2J8
Prov/state	BC	Country	Canada

IV. Development Information

Development Type	Subdivision and Family Residential		
Area of Development (ha)	0.198	Riparian Length (m)	180
Lot Area (ha)	0.997	Nature of Development	Re-development
Proposed Start Date	April 1, 2021	Proposed End Date	April 1, 2022

V. Location of Proposed Development

Street Address (or nearest town)	9353 Eastside Road		
Local Government	City of Vernon	City	Vernon
Stream Name	Okanagan Lake		
Legal Description (PID)	009-692-169	Region	Okanagan
Stream/River Type	Lake	DFO Area	B.C. Interior
Watershed Code	310		
Latitude	50°	12'	20.5"
Longitude	119°	24'	26"

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Section 1. Description of Fisheries Resources Values and a Description of the Development Proposal

(Provide as a minimum: Species present, type of fish habitat present, description of current riparian vegetation condition, connectivity to downstream habitats, nature of development, specific activities proposed, timelines)

Fish and Fish Habitat

Okanagan Lake provides habitat for over 23 species of native and introduced fish. These include a variety of salmonids and coarse/non-game species. The table below provides a list of fish species present in Okanagan Lake.

Table 1. Fish species present in Okanagan Lake

Common Name	Scientific Name	Native (N) or Introduced (I)
brook trout	<i>Salvelinus fontinalis</i>	I
burbot	<i>Lota lota</i>	N
carp	<i>Cyprinus carpio</i>	I
chiselmouth	<i>Acrocheilus alutaceus</i>	N
cutthroat	<i>Oncorhynchus clarki lewisi</i>	N
kokanee	<i>Oncorhynchus nerka</i>	N
lake trout	<i>Salvelinus namaycush</i>	I
lake whitefish	<i>Coregonus clupeaformis</i>	I
largescale sucker	<i>Catostomus macrocheilus</i>	N
leopard dace	<i>Rhinichthys falcatus</i>	N
longnose dace	<i>Rhinichthys cataractae</i>	N
longnose sucker	<i>Catostomus catostomus</i>	N
mountain whitefish	<i>Prosopium williamsoni</i>	N
northern pikeminnow	<i>Ptychocheilus oregonesis</i>	N
peamouth chub	<i>Mylocheilus caurinus</i>	N
prickly sculpin	<i>Cottus asper</i>	N
pumpkinseed	<i>Lepomis gibbosus</i>	I
pygmy whitefish	<i>Prosopium coulteri</i>	N
rainbow trout	<i>Oncorhynchus mykiss</i>	N
redside shiner	<i>Richardsonius balteatus</i>	N
slimy sculpin	<i>Cottus cognatus</i>	N
smallmouth bass	<i>Micropterus dolomieu</i>	I
steelhead	<i>Oncorhynchus mykiss</i>	N
yellow perch	<i>Perca flavescens</i>	I

Ministry of Environment Habitat Wizard website, 2020

On Dec. 14th, 2020 the waters edge was approximately 5 m below the High Water Mark (HWM)/ Stream Boundary (SB), which is identified by the 343 m elevation contour (Photos 1-2). The lakebed/substrate in the littoral zone in front of the subject property was categorized as:

- HWM to 2.5 m – dominated by natural bedrock, large angular boulders, scattered round gravels;
- 2.5 to 6 m – Mix of 50% rounded gravels (<10 cm), 20% angular cobbles (10-20 cm) and

FORM 1

Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

30% embedded boulders (<50 cm);

- 6 to 15 m – Mix of 60% angular cobbles (20-30 cm) and 40% boulders (<60 cm);
- Beyond 16 m – Too deep to see.

Existing fish habitat in Okanagan Lake in front of the subject property is characterized as high-value kokanee spawning habitat. This is based on the topography and lake substrate observed in the littoral zone in front of the property, as well as maps produced as part of the Okanagan Region Large Lakes Foreshore Protocol (Jan. 2018). This protocol identifies black, red, yellow and no colour zones associated with kokanee spawning importance. Shore spawning kokanee are known to occur in Okanagan Lake, and spawning habitat is generally associated with cliffs/bluffs and angular coarse substrates (which occur on the subject property, Photo 1-3). The foreshore in front of the subject property is a black colour zone, kokanee are known to spawn directly in front of the existing residence. The nearshore topography is moderately sloping to 15 m into the lake. After that it drops quickly.

Description of Current Riparian Vegetation Condition

Topographically, the upland property slopes steeply from Eastside Road to the HWM at about 26.5 degrees or 50%.

The majority of the subject property and SPEA exist in a natural state. Despite this, nearly the entire existing residence, large deck, pump house, two small outbuildings, and several paths, currently exist within the RAPR determined SPEA (Figures 1 and 2, Photos 3-9). The portion of the property that is not developed consists almost entirely of native forested vegetation, including: Douglas-fir and ponderosa pine trees, Oregon grape, upright juniper, dogwood, willow, snowberry and rose shrubs. This existing vegetation provides valuable riparian function in the form of leaf litter, insect drop, shade and potential for woody debris.

Existing alterations to the foreshore are limited to an existing deck, that will be removed, a near future dock that has been approved, a portion of the historical dock that is beached on the shore (and will be removed during new dock construction), and an existing pump-house (Figures 1 and 2, Photos 1-3). All remaining foreshore is natural.

The trees and shrubs serve to dramatically reduce erosion potential and provide important fish habitat in the form of leaf litter, insect drop, shade and potential for woody debris. The property currently provides high value riparian function.

Nature of Development and Proposed Activities

Field assessments of the subject property were conducted on July 27, August 10, and Dec. 14, 2020 by Mark Piorecky, M.Sc., R.P.Bio. The subject property currently consists of a large single parcel measuring approximately 179 m wide (street front) by 57 m deep (centre of lot), with a total area of approximately 9977 m². The property is bordered by developed lakeshore residential lots to the northeast and southwest, Eastside Road to the southeast and Okanagan Lake to the northwest.

It is the intent of the proponent to subdivide the existing property into three separate lots and develop 3 single family residences, as identified in Figure 3. To minimize impacts to the riparian values of the subject property, the following actions are being pursued:

- 1) With the exception of the foreshore deck and beached portion of the previous dock, all existing structures within the SPEA will be retained.
- 2) New residences for Proposed Lots 1 and 3, will be constructed entirely outside of the RAPR determined SPEA.
- 3) The new residence for Proposed Lot 2, will occur primarily outside of the RAPR determined SPEA. The exception to this, is 11.2 sq m of the new residence that will utilize the foundation of the existing residence within the SPEA. The remainder of the existing residence foundation will be retained and simply covered with deck surfacing to match the existing deck.
- 4) Residential development will result in NO impacts to existing trees and/or shrubs within the RAPR determined SPEA.

FORM 1

Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

- 5) Access to the lake will follow existing trails and staircases. Drilled wells are being planned for and will be located outside the SPEA. If however, waterlines from the lake are required and appropriately permitted, they too will follow these existing trails (see Figures 1-3).
- 6) A danger tree assessment has not been conducted. In the future, if questions as to the safety of trees within the SPEA arise, a Danger Tree Assessment will be conducted by a qualified assessor, to determine the appropriate course of action. Removed trees will be replaced according to BC MOELP (1996) Tree Replacement Criteria levels and requirements outlined in Section 2.

Construction is anticipated to start **May 1, 2021** and be completed by **May 1, 2023**.

Section 2. Results of Riparian Assessment (SPEA width)

2. Results of Detailed Riparian Assessment

Refer to Section 3 of Technical Manual

Date: Jan. 26, 2021

Description of Water bodies involved (number, type)

Okanagan Lake

Stream	
Wetland	
Lake	X
Ditch	
No. of reaches	
Reach #	

Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons			Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes I, <u>Mark Piorecky</u> , hereby certify that: a) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i> ; b) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u> ; c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and d) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.
Polygon No:	1 of 1		Method employed if other than TR
SPVT Type	LC	SH	

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1 of 1	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons			
LWD, Bank and Channel Stability ZOS (m)	15				
Litter fall and insect drop ZOS (m)	15				
Shade ZOS (m) max	30	South bank	Yes	X	No
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)				
Ditch Fish Bearing	Yes	No	If non-fish bearing insert no fish bearing status report		
SPEA maximum	30	(For ditch use table3-7)			

I, <u>Mark Piorecky</u> , hereby certify that:	
a.	I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i> ;
b.	I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u> ;
c.	I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
d.	In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

Comments

The shoreline of the subject property faces northwest, thus is significantly influenced by the shade ZOS. As a result, the RAPR determined SPEA ranges from approximately 18.3 to 31.3 m, as measured horizontally from the HWM / SB of Okanagan Lake (343 m above sea level (see Figure 3)).

The Subject Property is 9970 m² in size, with the new proposed lots measuring approximately 1773 m² (Lot 1), 2985 m² (Lot 2) and 4940 m² (Lot 3). The RAPR determined SPEA covers approximately 37% (3670 m²), of the Subject Property. Proposed new development on the subject property will occur entirely outside the RAPR Determined SPEA. The only works planned for within the SPEA are those related to re-developing a portion of the central residence on the existing foundation within Lot 2.

Future vegetation enhancement and/or replacement within the SPEA will adhere to the following:

- If future Danger Trees are identified for removal, tree replacement will occur according to specifications outlined in the BC MOELP (1996) tree replacement criteria.
- If survival of any existing shrub within the SPEA is impacted by development, it will be compensated for at a 2:1 ratio.
- Enhancement and replacement vegetation species will be chosen from the following:
 - Coniferous trees: ponderosa pine, Douglas-fir, western larch, western white pine, western red cedar.
 - Deciduous trees: aspen, birch, cascara, choke cherry, pin cherry, cottonwood, mountain ash, hawthorn or willow.
 - Shrubs: ceanothus, black twinberry, soopalallie, high/low bush cranberry, willow, dogwood, Douglas maple, snowberry, rose, saskatoon, spirea, hazelnut, huckleberry, juniper, potentilla, mock-orange, elderberry, current (ribes) or Oregon grape.

The proponents are committed to carrying out development activities in accordance with this letter to ensure that the Riparian Protection Standard, is met.

Apart from the identified development plan, activities and features that are prohibited within the SPEA, include but are not limited to the following: removal, alteration, disruption or destruction of vegetation; disturbance of soils; construction or erection of additional buildings and structures; creation of non-structural impervious or semi-impervious surfaces; flood protection works; construction of roads, trails, additional retaining walls, docks, wharves or bridges; provision and maintenance of sewer and water services; development of drainage systems and development of utility corridors.

Section 3. Site Plan

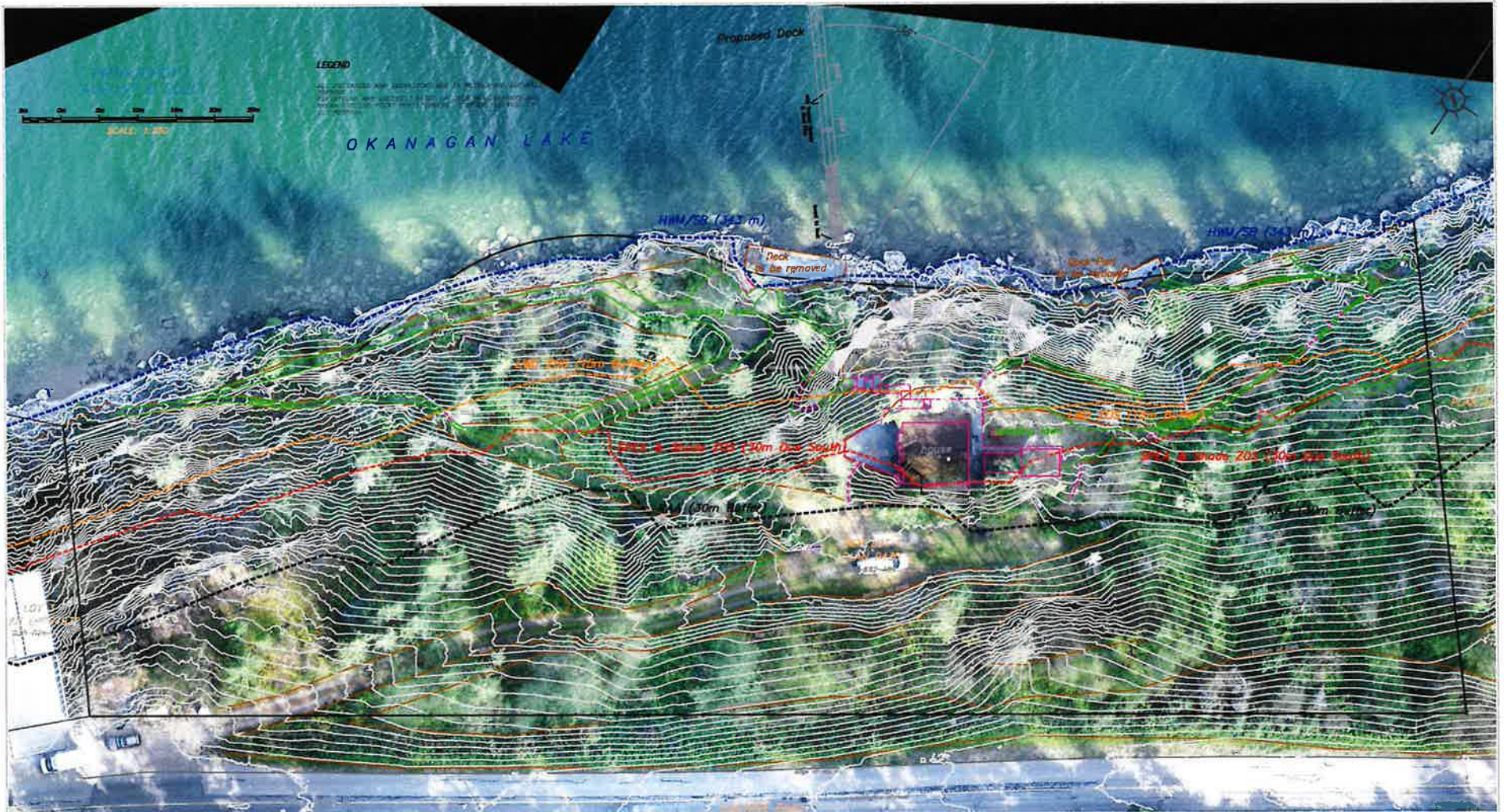


Figure 1: Aerial image (Aug 6, 2020) of site plan with existing structures, trails and RAPR determined SPEA.

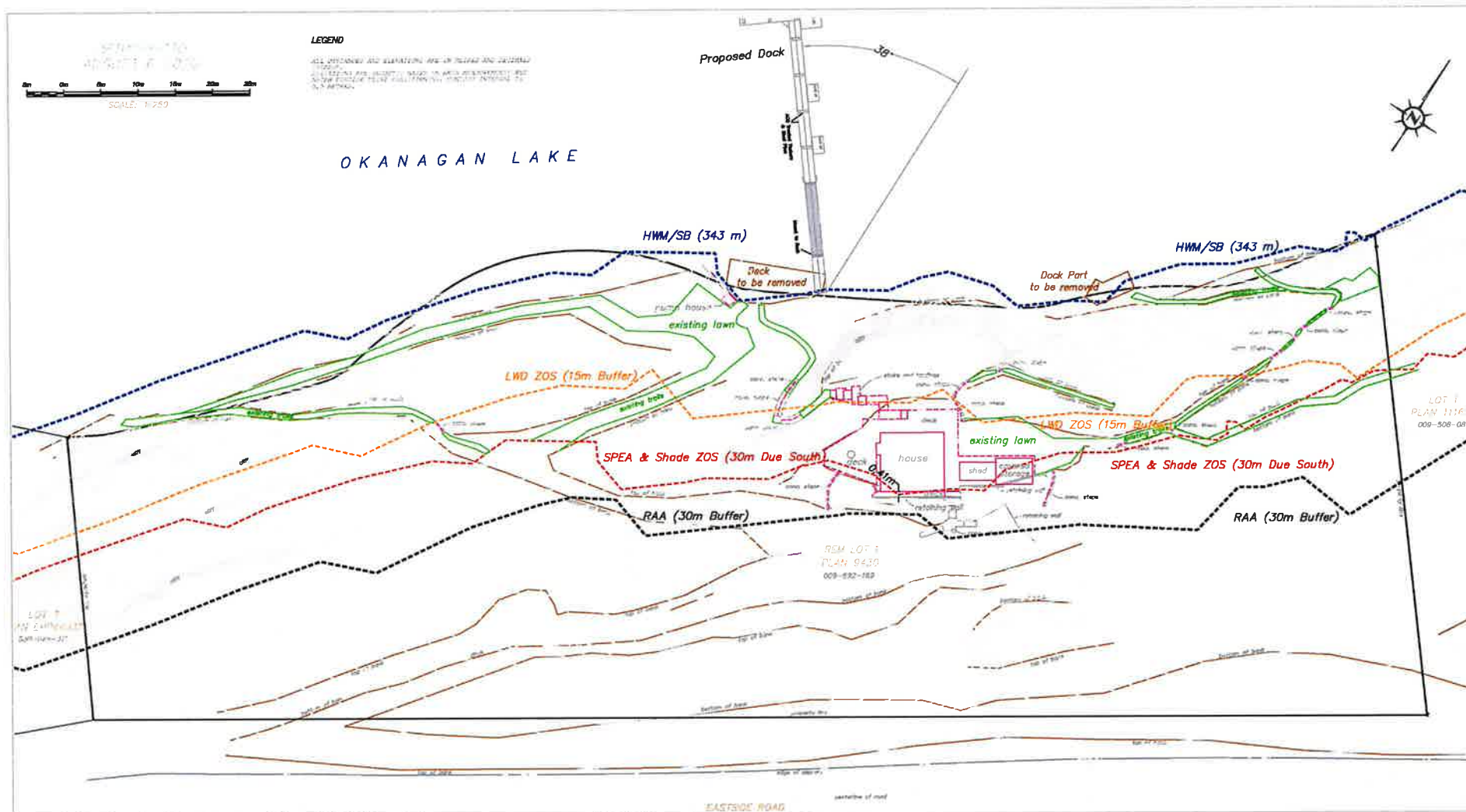


Figure 2: Site plan with existing structures, trails and RAPR determined SPEA (Aerial Image removed for clarity).

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Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

Section 4. Measures to Protect and Maintain the SPEA

This section is required for detailed assessments. Attach text or document files, as need, for each element discussed in Part 4 of the RAPR. It is suggested that documents be converted to PDF *before* inserting into the assessment report. Use your "return" button on your keyboard after each line. You must address and sign off each measure. If a specific measure is not being recommended a justification must be provided.

1. Danger Trees	No danger trees were currently identified on the Subject Property. If trees within the SPEA are later identified as danger trees and need to be removed (i.e. as a result of natural aging, pine beetle, etc.), this will be done according to specifications outlined in the BC MOELP tree replacement criteria and those outlined in Section 2 – Comments, of this report.
<p>I, <u>Mark Piorecky</u>, hereby certify that:</p> <ul style="list-style-type: none"> a) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>; b) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u>; c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the <i>Riparian Areas Protection Regulation</i>. 	
2. Windthrow	Windthrow is not an issue for this development since the prevailing winds are from the West and as such SPEA trees will already be subject to much of this wind force and therefore wind firm.
<p>I, <u>Mark Piorecky</u>, hereby certify that:</p> <ul style="list-style-type: none"> a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u>; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the <i>Riparian Areas Protection Regulation</i>. 	
3. Slope Stability	<p>Slope stability was assessed by Albert Losch, P.Eng., of Calibre Geotechnical Engineering Ltd., as identified in the Geotechnical Report posted with this assessment in the RARNS database. As identified in the report, "Based on our review of the information and our experience with the area we believe, from a geotechnical point of view, that the site can be subdivided into three residential lots, and subsequently developed, without impacting slope stability."</p> <p>Additionally, there is a culvert on Eastside Road that directs water towards a small slide area on the property, located outside of the SPEA. The location of this culvert will have to be addressed prior to the development of the site, so that surface water does not flow down the existing driveway. No other geotechnical issues were noted.</p> <p>During construction Calibre Geotechnical Engineering Ltd. will provide required geotechnical inspection services to ensure residential development results in no impacts to the residences and SPEA ,from slope instability.</p>
<p>I, <u>Mark Piorecky</u>, hereby certify that:</p> <ul style="list-style-type: none"> a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u>; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the <i>Riparian Areas Protection Regulation</i>. 	
4. Protection of Trees	<p>No trees will be removed within the SPEA. Similarly, foundation development outside the SPEA, will NOT require trenching or digging near SPEA trees.</p> <p>No trees will be removed within the SPEA, aside from future identified</p>

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Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

	<p>Danger Trees. Residential construction will require trenching or digging adjacent to the SPEA, while waterline installation may require minor trenching within the SPEA, along existing trails. Many of these activities are far enough from existing trees that they will not impact their root zones. However, the following precautions will be taken, in consultation with the environmental monitor (EM), to prevent damage to trees within the SPEA:</p> <ol style="list-style-type: none"> Flagging and identification of the SPEA boundary. Prior to construction, highly visible flagging or snow fence will be placed along the SPEA boundary. This will clearly demarcate the border to the public and machinery; Physical barriers will be erected, based on tree size and location, to ensure that the majority of the root system remains undisturbed during construction activities; Best management practices require that machinery used for construction be in good repair and free of leaks. Contractors on site are required to have spill kits at the construction site (preferably on each piece of large machinery) and develop a spill reporting and clean-up procedure.
<p>I, <u>Mark Piorecky</u>, hereby certify that:</p> <ol style="list-style-type: none"> I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>; I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u>; I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the <i>Riparian Areas Protection Regulation</i>. 	
<p>5. Encroachment</p>	<p>As the proposed development is on lake front, the owners will expect and require access to the waterfront. However, it is also noted that the intention of the SPEA is to provide natural, functioning undisturbed riparian habitat. As such, the owners have been made fully aware that encroachment into the SPEA is not a practice that is supported or permitted under the RAPR. Encroachment activities include: conversion of natural vegetation into lawn, dumping of yard waste, planting of non-native vegetation, and the creation of numerous access points and pathways.</p> <p>Several existing paths onto the SPEA already exist. These will be maintained and utilized by residence, moving forward.</p>
<p>I, <u>Mark Piorecky</u>, hereby certify that:</p> <ol style="list-style-type: none"> I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>; I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u>; I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the <i>Riparian Areas Protection Regulation</i>. 	
<p>6. Sediment and Erosion Control</p>	<p>Sediment and erosion control will focus on minimizing disturbance and source-control to prevent sediment or sediment laden water from entering the SPEA during construction. Proposed sediment control will follow Best Management Practices (BMPs) for: works in and around a watercourse, sediment control, and urban and rural land development (MWLP 2004, LWBC 2005).</p> <p>Under the direction of the EM, erosion and sediment control activities will include but not be limited to the following:</p> <ol style="list-style-type: none"> All areas with exposed soils will be re-vegetated promptly with grass especially where surface flows have potential to reach the lake. If re-vegetation cannot occur immediately, alternative sediment control methods will be employed. These can include the use of filter cloth, tarps and/or straw mulch in combination with silt fencing, if required; Excavated materials will be stockpiled in areas where there is negligible potential for sediment to be transported into the SPEA;

FORM 1

Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

	<p>c. In areas where soils are to be placed near the SPEA boundary (i.e. during residential foundation excavation), silt fencing will form a final barrier to sediment transport. The silt fence should be installed according to manufacturer's instructions and be monitored periodically for tautness and effectiveness.</p>
<p>I, <u>Mark Piorecky</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.</p>	
<p>7. Stormwater Management</p>	<p>Stormwater from the area of impervious surfaces outside the SPEA, will not be discharged directly into the SPEA or lake. Roof and driveway run-off will be directed into the ground and distributed amongst <u>dry wells installed outside the SPEA</u>. To decrease the potential for surface runoff, the use of semipermeable surfaces (i.e. paving stones, gravel, porous asphalt) are encouraged for driveway features planned outside the SPEA.</p>
<p>I, <u>Mark Piorecky</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.</p>	
<p>8. Floodplain Concerns (highly mobile channel)</p>	<p>The subject property is not located in an active floodplain, therefore flooding of the SPEA is not considered an issue.</p>
<p>I, <u>Mark Piorecky</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>Paul Rosenau and David Franklin</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.</p>	

Section 5. Environmental Monitoring

A Qualified Environmental Professional (QEP) will be retained as project environmental monitor by the proponent. The focus of monitoring will be the protection of the SPEA. There will be a pre-construction meeting to communicate the importance of SPEA protection, along with tree protection and the erosion and sediment control plans with site personnel. Site inspection frequency will be timed to key construction activities in areas adjacent to and/or within the SPEA (i.e. existing foundation removal) and based on weather events (e.g. after periods of intense rainfall). The QEP will ensure that sediment and erosion control measures are functioning properly and protecting the SPEA. The monitor has the authority to halt construction activities if impacts to sensitive habitats are likely to occur.

A post-development report, outlining the degree of compliance with the above measures and reviewing the success of measures implemented during construction will also be produced and submitted on the RARNS database.

Section 6. Photos

Photo 1. Foreshore, HWM / SB, SPEA vegetation, and existing deck to be removed (from proposed dock area - looking NE) – Dec. 14, 2020.



Photo 2. Close-up of HWM / SB, SPEA vegetation, pump house and deck to be removed (from proposed dock area - looking SW) – Dec. 14, 2020.



Photo 3. HWM / SB during high water levels, SPEA vegetation and existing residence (from end of proposed dock - looking SE) – Aug. 10, 2020.



Photo 4. Existing deck and residence (from concrete steps - looking N) – Dec. 14, 2020.



Photo 5. View of lakeside deck and stairs down to water (looking N) – Dec. 14, 2020.



Photo 6. View of deck, lawn and existing sheds (from NE corner of residence - looking E) – Dec. 14, 2020.



Photo 7. View of existing lawn, sheds and residence (from end of lawn - looking SW) – Dec. 14, 2020.



Photo 8. Existing driveway (left), lake access path (right) (from parking area located behind existing residence - looking SW) – Dec. 14, 2020.



Photo 9. SPEA vegetation and first switchback in main lake access path (from near SPEA line - looking NE) – Dec. 14, 2020.



Section 7. Professional Opinion**Qualified Environmental Professional opinion on the development proposal's riparian assessment.**Date 1. I/We Mark Piorecky, R.P.Bio.

hereby certify that:

- a) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
- b) I am/We are qualified to carry out the assessment of the proposal made by the developer Paul Rosenau and David Franklin, which proposal is described in section 3 of this Assessment Report (the "development proposal"),
- c) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
- d) In carrying out my/our assessment of the development proposal, I have/We have followed the specifications of the Riparian Areas Protection Regulation and assessment methodology set out in the minister's manual; AND

2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:

- a) **N/A** the site of the proposed development is subject to undue hardship, (if applicable, indicate N/A otherwise) AND
- b) **X** the proposed development will meet the **riparian protection standard** if the development proceeds as proposed in the report and complies with the measures, if any, recommended in the report.

[NOTE: "Qualified Environmental Professional" means an individual as described in section 21 of the Riparian Areas Protection Regulation.]

Section 8. References

- Land and Water BC (LWBC). 2005. A Users Guide to Working in and Around Water. Regulation under British Columbia's Water Act. Revised May 2005.
<http://www.agf.gov.bc.ca/resmgmt/publist/500series/502000-1.pdf>
- Ministry of Environment Habitat Wizard website. 2020. Habitat Wizard. Accessed March 13, 2020. <http://www.env.gov.bc.ca/habwiz/>
- Ministry of Environment, Lands and Parks (MOELP). 1996. Tree Replacement Criteria. B.C. Environment, Lower Mainland Region, Surrey, B.C. Pp. 1.
- Ministry of Water, Land and Air Protection (MWLAP). 2004. Standards and Best Practices for In Stream Works. WLAP BMP Series. 167 pp._
<http://wlapwww.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>
- Okanagan Large Lakes Foreshore Protocol. 2018. BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Penticton, BC. Jan. 2018. 11 pp.
https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/standards-guidelines/best-management-practices/okanagan/okanagan_large_lakes_foreshore_protocol.pdf

Section 9. Appendix I - Geotechnical Report

Attached Separately

4.15 Development Covenants

4.15.1 At the time of rezoning, prior to bylaw adoption, City Council may at its discretion require the property owner to register a covenant on the title of the property limiting the permitted uses and/or densities within the approved land use zones, so as to reflect the specific approved development plan.

4.16 Hillside Development Areas

4.16.1 Vernon's Official Community Plan (OCP) establishes Development Permit Areas (DPAs) for all areas within the City of Vernon. Vernon's Hillside Guidelines and Regulations Policy defines hillsides and provides Goals and Objectives for development of lands on hillsides and slopes under 30%. No construction of a building, structure or swimming pool is permitted on slopes 30% or greater.

4.16.2 No subdivision of land creating lots is permitted where less than 100m² of contiguous buildable area which meets all bylaw regulations herein for each lot is provided, with the exception of boundary lot adjustments.
(Bylaw 5433)

Lantenhammer, Desiree TRAN:EX

From: Lantenhammer, Desiree TRAN:EX
Sent: April 14, 2022 10:26 AM
To: 'Craig Broderick'
Cc: Liz Hanley; CSB Reception
Subject: RE: SUB00796 9353 Eastside Rd.

Good morning,

The Provincial Approving Officer supports the waiving of Sec 75(1)(c) of the Land Title Act. Please forward the appropriate documents to me and I will get them endorsed.

Regards,
Desiree

Desiree Lantenhammer, BSc

Development Services Officer

Ministry of Transportation and Infrastructure

Phone: 778-943-0151

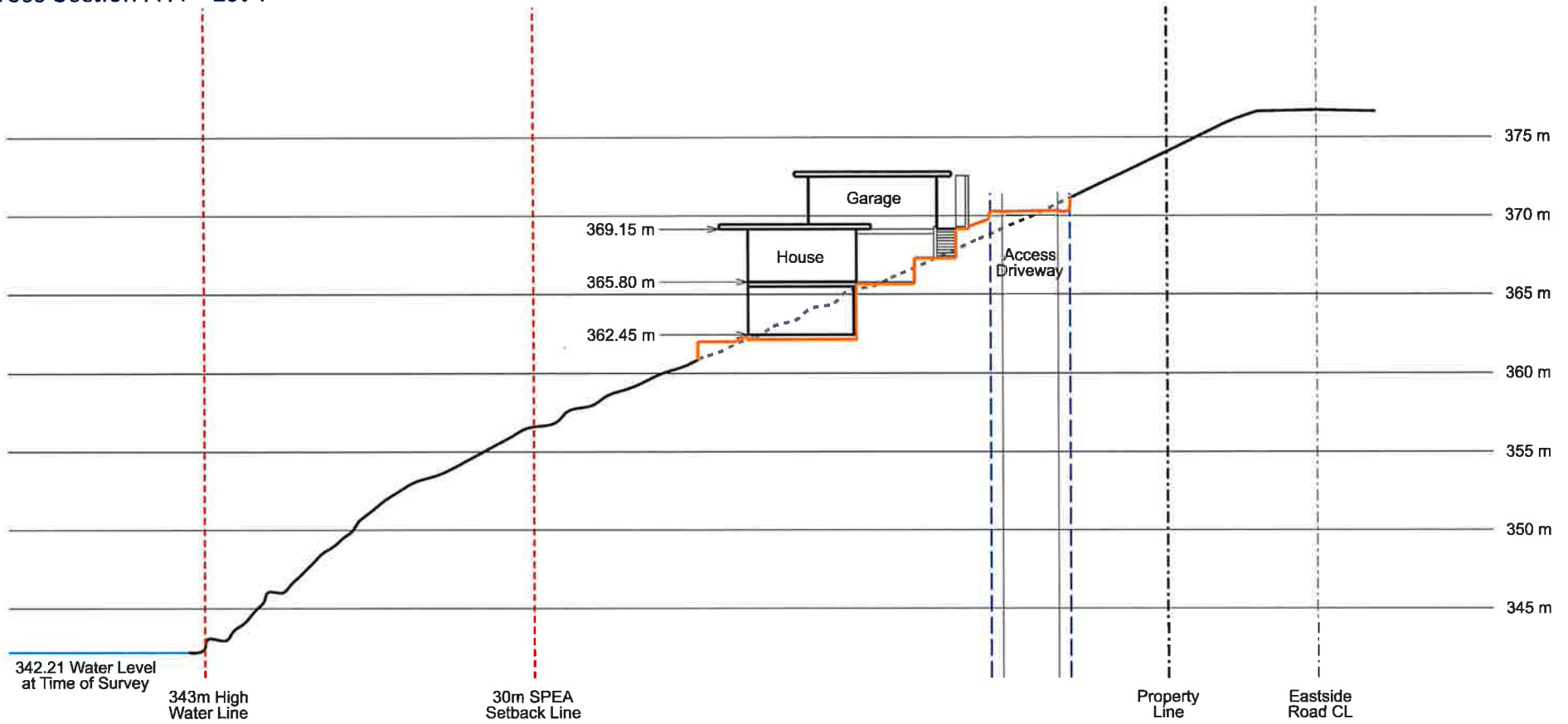
Cell: 250-503-8963

June 23rd, 2022

9353 Eastside Road - Subdivision Application

Development Variance Permit Application

Cross Section A-A' - Lot 1

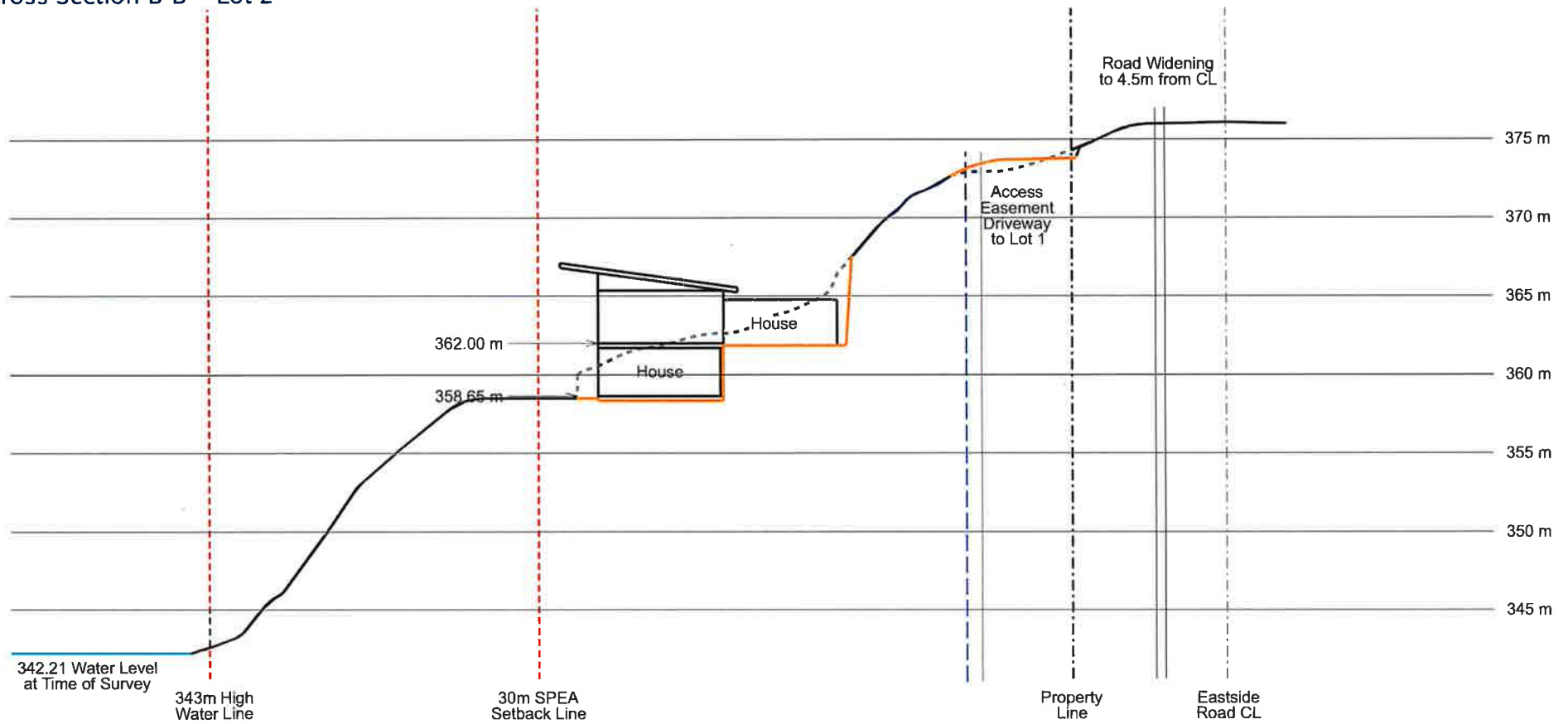


Attachment 6

9353 Eastside Road - Subdivision Application

Development Variance Permit Application

Cross Section B-B' - Lot 2



EKISTICS

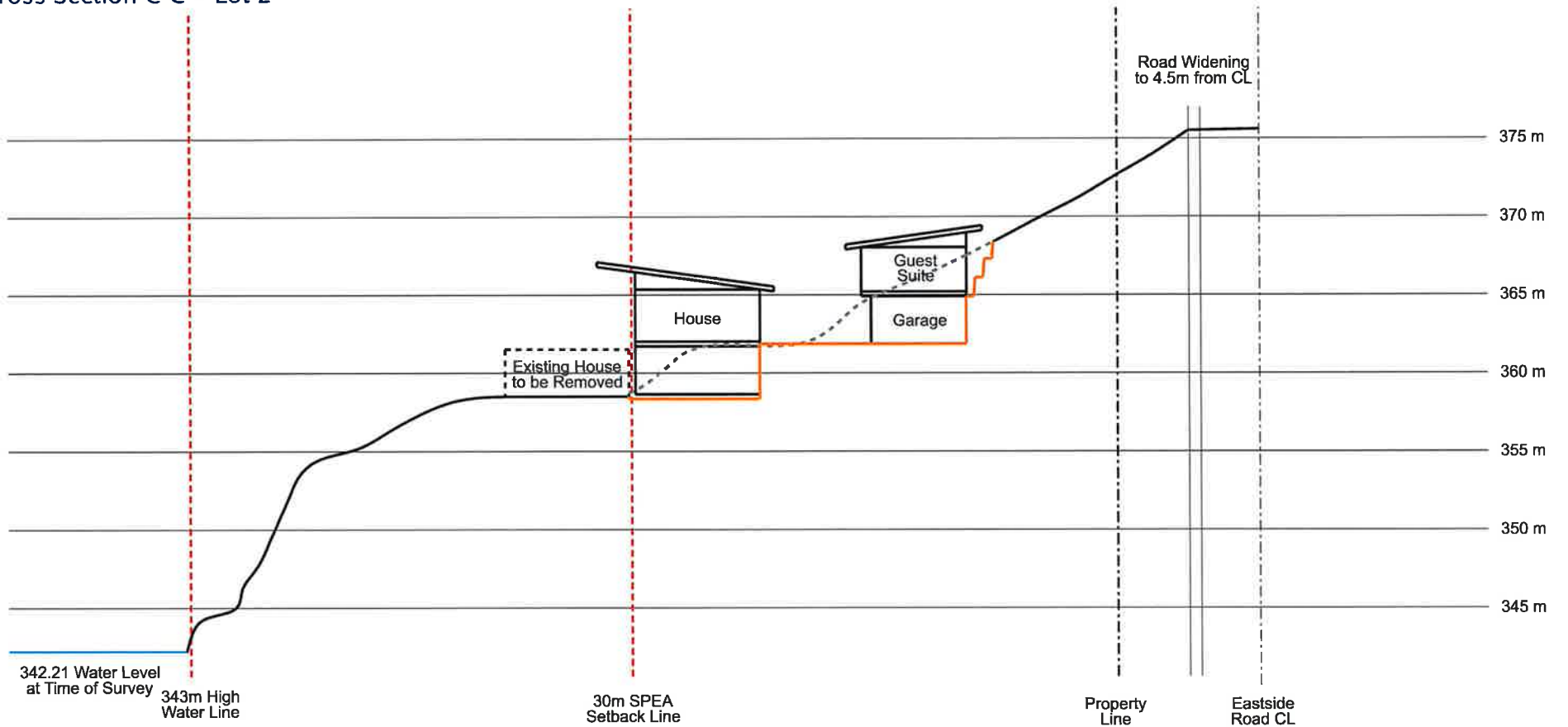
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June 23rd, 2022

9353 Eastside Road - Subdivision Application

Development Variance Permit Application

Cross Section C-C' - Lot 2



EKISTICS

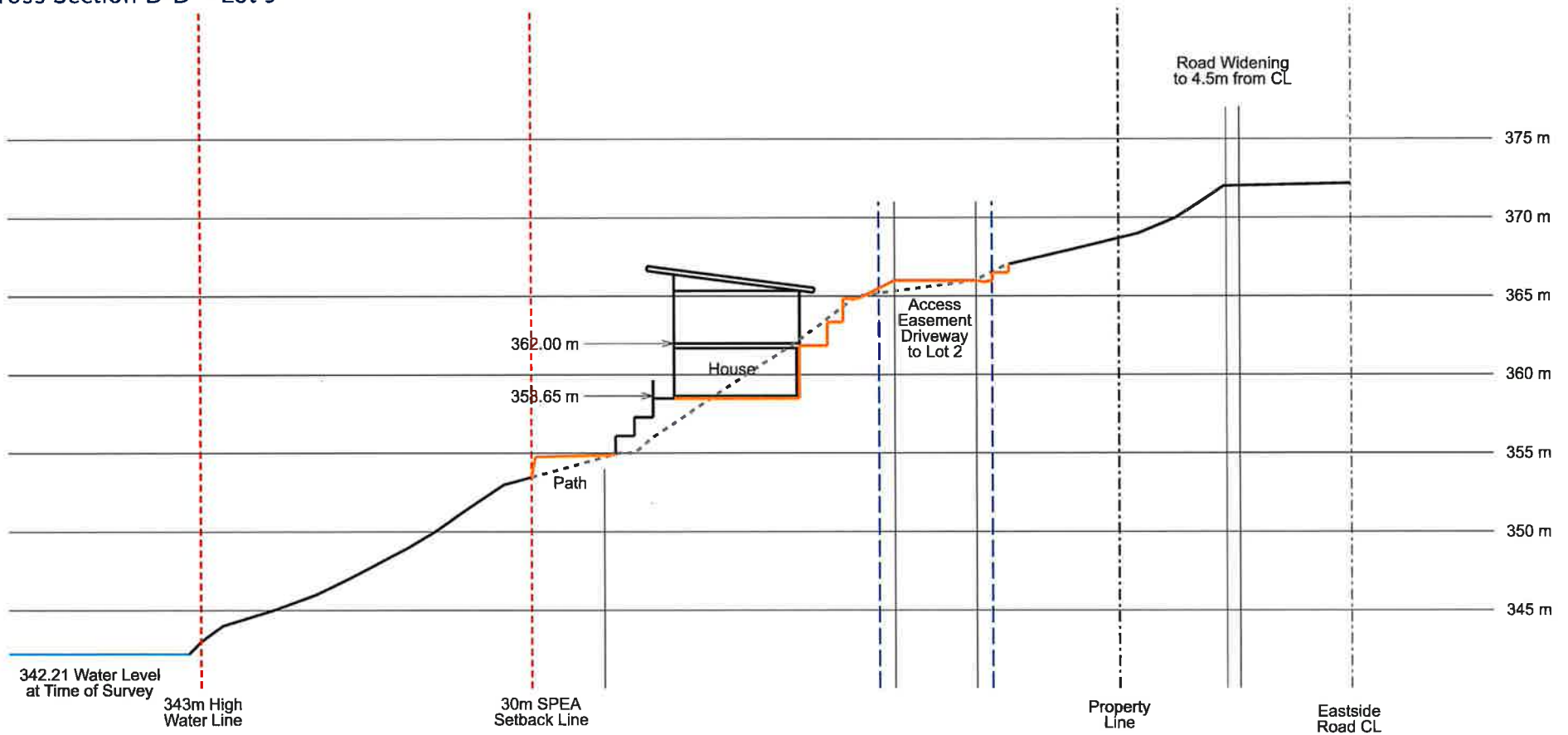
Scale 1:250

June 23rd, 2022

9353 Eastside Road - Subdivision Application

Development Variance Permit Application

Cross Section D-D' - Lot 3



EKISTICS

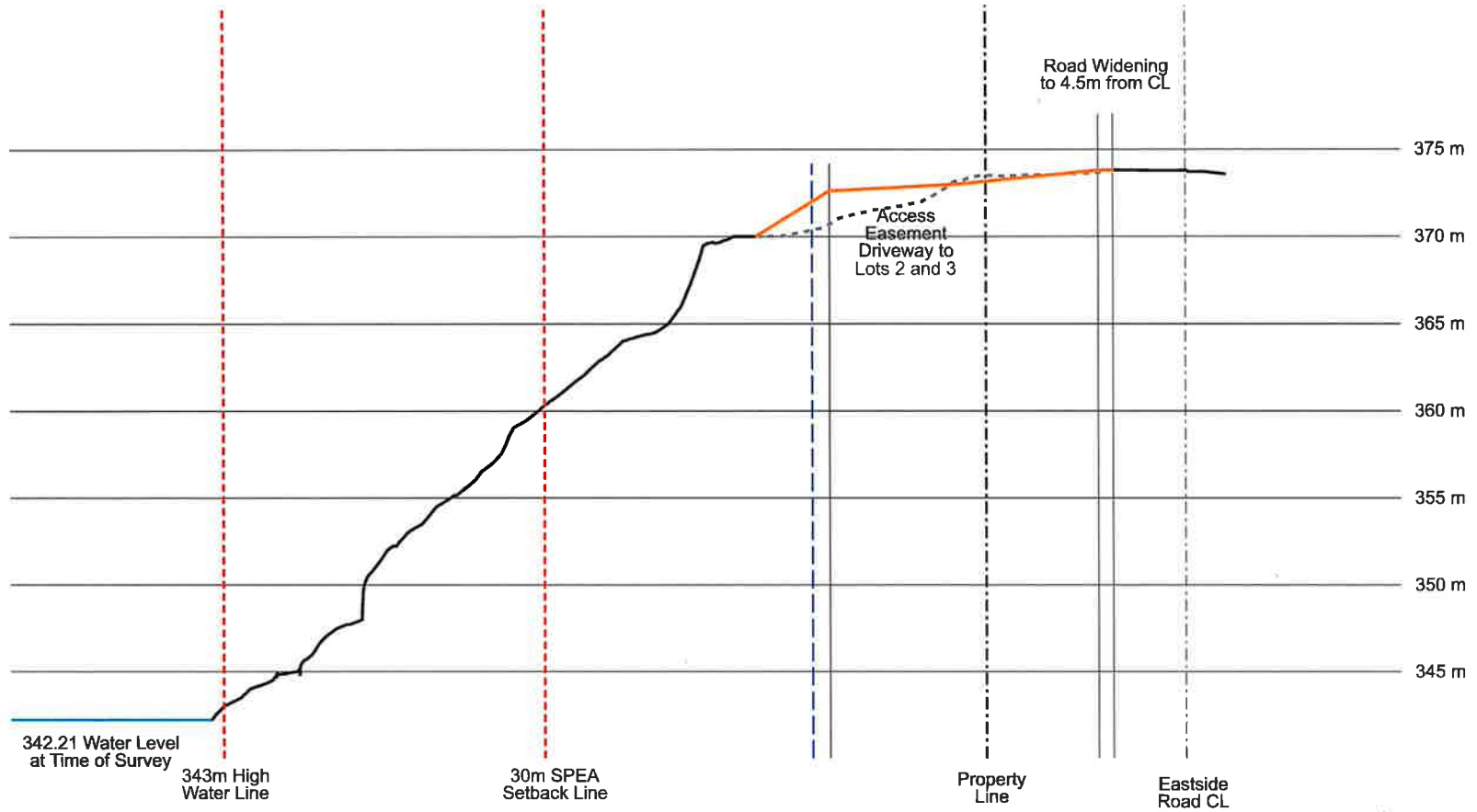
Scale 1:250

June 23rd, 2022

9353 Eastside Road - Subdivision Application

Development Variance Permit Application

Cross Section E-E' - Lot 3



EKISTICS

Scale 1:250

June 23rd, 2022

9353 Eastside Road - Subdivision Application

Sketchup Views - East from Lake



EKISTICS

Attachment 7

June 23rd, 2022

9353 Eastside Road - Subdivision Application

Sketchup Views - South from Lake



EKISTICS

June 23rd, 2022

9353 Eastside Road - Subdivision Application

Sketchup Views - North East from Lake



EKISTICS

June 23rd, 2022

9353 Eastside Road - Subdivision Application

Sketchup Views - North from Road at Entrance



EKISTICS



THE CORPORATION OF THE CITY OF VERNON REPORT TO COUNCIL

SUBMITTED BY: Matt Faucher, Current Planner

COUNCIL MEETING: REG COW I/C

COUNCIL MEETING DATE: August 15, 2022

REPORT DATE: July 14, 2022

FILE: 3090-20 (DVP00540)

SUBJECT: DEVELOPMENT VARIANCE PERMIT APPLICATION FOR 7333 TRONSON ROAD

PURPOSE:

To review the Development Variance Permit application 00540 (DVP00540) to vary Zoning Bylaw 5000 Section 4.16.1 to permit construction on slopes greater than 30% and Section 6.5.11 to vary the maximum height of a retaining wall from 1.2m to 1.83m at 7333 Tronson Road.

RECOMMENDATION:

THAT Council support Development Variance Permit application 00540 (DVP00540) to vary Zoning Bylaw 5000 on LT 14, DL 56, ODYD, PL 18373 (7333 Tronson Road), as follows:

- a) Section 4.16.1 to allow the construction of buildings, structures and swimming pools on slopes greater than 30%;
- b) Section 6.5.11 to increase the maximum height of a retaining wall from 1.2m to 1.83m;

AND FURTHER, that Council's support of DVP00540 is subject to the following:

- a) That the site plan, building elevations and cross-sections, intended to illustrate the siting of structures, drive access and retaining wall height (Attachment 1) in the report titled "Development Variance Permit Application for 7333 Tronson Road" dated July 14, 2022 and respectfully submitted by the Current Planner, be attached to and form part of DVP00540 as Schedule 'A';
- b) That Geotechnical Investigation Report prepared by Beacon Geotechnical Ltd dated January 5, 2017, be attached to and form part of DVP00540 as Schedule 'B'; and
- c) That issuance of DVP00540 be withheld until a Development Permit for the subject property is authorized to be issued.

ALTERNATIVES & IMPLICATIONS:

1. THAT Council not support Development Variance Permit application 00540 as outlined in the report titled "Development Variance Permit Application for 7333 Tronson Road) dated July 14, 2022 and respectfully submitted by the Current Planner to vary Zoning Bylaw 5000 on LT 14, DL 56, ODYD, PL 18373 (7333 Tronson Road).

Note: This alternative does not support the development variance permit application and would require the applicant and owner to develop the site in compliance with Zoning Bylaw 5000.

ANALYSIS:

A. Committee Recommendations:

At its meeting of July 19, 2022, the Advisory Planning Committee passed the following resolution:

“As cited by the committee”

B. Rationale:

1. The subject property is located at 7333 Tronson Road (Figures 1 and 2). The property is approximately 1,835m² (0.45 ac) in size. The surrounding area is predominantly single detached and two family dwellings.
2. The purpose of the application is to review a request to vary two provisions of Zoning Bylaw 5000 in order to construct a five unit multi-family development on the subject property.
3. The subject property is zoned R5 – Fourplex Housing Residential (Attachment 2) and the subject application pertains to development regulations within Section 4.16.1 (30% slopes) and Section 6.5.11 (maximum height of a retaining wall) of Zoning Bylaw 5000 (Attachment 3).
4. The vacant subject property contains fragments of slopes greater than 30% (Attachment 4) which requires approval of a variance to proceed with development of the site.
5. The application proposes to vary Section 4.16.1 of Zoning Bylaw 5000 in order to allow the proposed structures and access drive to be located on slopes exceeding 30% slopes. A geotechnical investigation of the subject property was conducted by the previous owner which reviewed the proposed development of five units on the subject property (Attachment 5). The report notes that “... no significant re-grading of the property will be required to achieve the final design grades on site” and that “Based on our observations, we are satisfied that the property can be safely used for the intended purpose of residential development”.



Figure 1 - Property Location Map



Figure 2: Aerial Photo of Property

Additionally, the application proposes to vary Section 6.5.11 of Zoning Bylaw 5000 in order to allow the construction of retaining structures to a maximum of 1.83m in height to support the slope post development.

- 6. As part of the Development Permit process, the applicant will need to satisfy all bylaw requirements, as well as access and egress requirements of Vernon Fire Rescue.
- 7. The subject property and surrounding area is predominantly zoned R5 – Fourplex Housing Residential. This zoning has been in place since approximately 2004 upon adoption of Zoning Bylaw 5000.
- 8. Administration supports the requested variance for the following reasons:
 - a) The existing lot is zoned for residential purposes (R5 – Fourplex Housing Residential Zone); and
 - b) The applicant has retained a qualified geotechnical engineer to assess the site and make recommendations. The engineer has determined that the site is suitable for the proposed development.

C. Attachments:

- Attachment 1 – Site plan and elevations
- Attachment 2 – R5 – Fourplex Housing Residential Zone
- Attachment 3 – Section 4.16.1 and Section 6.5.11 of Zoning Bylaw 5000
- Attachment 4 – Map – Slopes greater than 30%
- Attachment 5 – Geotechnical Report

D. Council’s Strategic Plan 2019 – 2022 Goals/Action Items:

The subject application involves the following goals/action items in Council’s Strategic Plan 2019 – 2022:

- Support the creation of additional housing within the City.

E. Relevant Policy/Bylaws/Resolutions:

1. The following provision of Zoning Bylaw 5000 is relevant to the subject application:

- | | |
|----------------|---|
| Section 4.16.1 | No construction of a building, structure or swimming pool is permitted on slopes 30% or greater. |
| Section 6.5.11 | Retaining walls on all residential lots, except those required as a condition of subdivision approval, must not exceed a height of 1.2m measured from grade on the lower side, and must be constructed so that multiple retaining walls are spaced to provide at least a 1.2m horizontal separation between them. |

BUDGET/RESOURCE IMPLICATIONS:

N/A

Prepared by:

Approved for submission to Council:

X

 Signer 1
 Matt Faucher, CPT
 Planner

 Will Pearce, CAO
 Date: _____

X

Signer 2
Kim Flick
Director, Community Infrastructure and Development

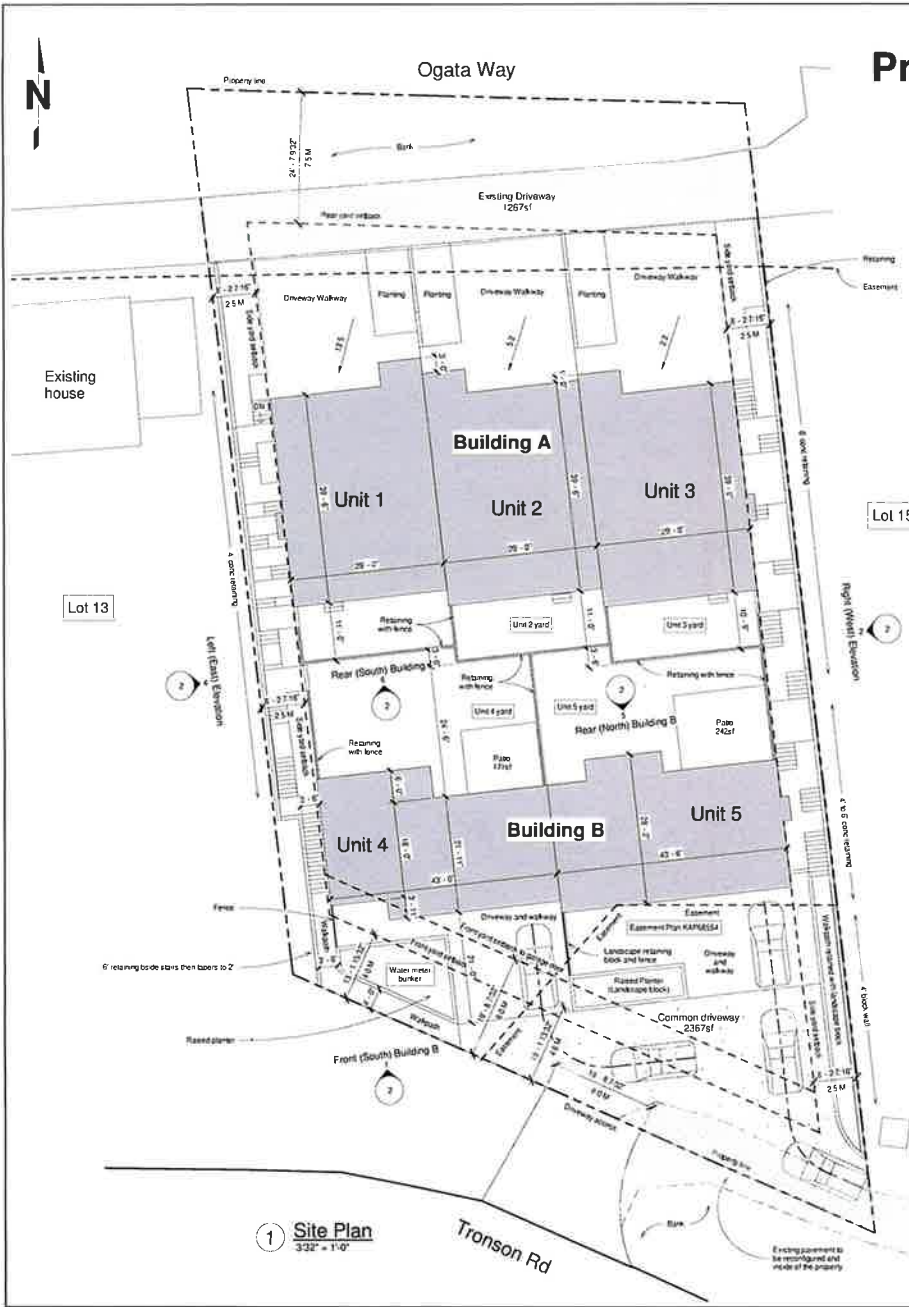
REVIEWED WITH

- | | | |
|--|---|--|
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| <input type="checkbox"/> Bylaw Compliance | <input type="checkbox"/> Public Works/Airport | <input checked="" type="checkbox"/> Long Range Planning & Sustainability |
| <input type="checkbox"/> Real Estate | <input type="checkbox"/> Facilities | <input checked="" type="checkbox"/> Building & Licensing |
| <input type="checkbox"/> RCMP | <input type="checkbox"/> Utilities | <input checked="" type="checkbox"/> Engineering Development Services |
| <input checked="" type="checkbox"/> Fire & Rescue Services | <input type="checkbox"/> Recreation Services | <input type="checkbox"/> Infrastructure Management |
| <input type="checkbox"/> Human Resources | <input type="checkbox"/> Parks | <input checked="" type="checkbox"/> Transportation |
| <input type="checkbox"/> Financial Services | | <input type="checkbox"/> Economic Development & Tourism |
| <input checked="" type="checkbox"/> COMMITTEE: APC – July 19, 2022 | | |
| <input type="checkbox"/> OTHER: | | |

G:\3000-3699 LAND ADMINISTRATION\3090 DEVELOPMENT VARIANCE PERMITS\20 Applications\DVP00540\2 PROC\Rpt\220714_mf_APC Rpt_DVP00540.docx

Proposed Development

7333 Tronson Road, Vernon, BC



1 Site Plan
3/32" = 1"=0"

R5 Zoning

30 units	Per hectare
4.0m	Front yard setback
6.0m	Front yard to garage door
2.5m	Side yard setback to 2 storeys
7.5m	Rear yard setback
40%	Building coverage
50%	Impermeable coverage
0.6	Floor space ratio
10.0m	Maximum height
4.0m	Between buildings
25.0m ² (269sf)	Private outdoor space

Site Calculations

All areas in SF unless noted
 19758 (0.183ha) Lot size
 5 units Allowed at 30 units per ha

Unit	Living Space	Footprint
1	2391	1189
2	2376	1181
3	2391	1189
4	2258	1030
5	2407	1116
Total	11821	5705

0.598 Floor space ratio at: 11821
 28.9% Building coverage at: 5705
 1267 Asphalt common driveway (North)
 1850 Asphalt common driveway (South)
 171 Patio (conc)
 242 Patio (conc)
 5705 Building footprints
 9185 Total impermeable
 46.5% Impermeable coverage

Notes

- All driveway and walkways to each unit will be permeable paving stones.
- All walkways and stairs on the East and West are landscape deck and crush gravel.
- Walkways to be landscaped with plantings.



2 From Unit 1



3 From Unit 3



4 From Unit 4



5 From Unit 5

For Variance v1.0

M
MEYER
 DESIGNS LTD
 600 Mt. Tod Drive
 Coldestream, BC
 V1B 3Y6
 250-503-4579
 Kelly@MeyerDesigns.ca
 MeyerDesigns.ca

Site Plan and Perspectives

Project Number: 2021
 Date: July 13, 2021
 Drawn by: Nathan A.

Proposed Residences
 7333 Tronson Road
 Vernon, BC

1



③ **Front (North) Building A**
1/8" = 1'-0"



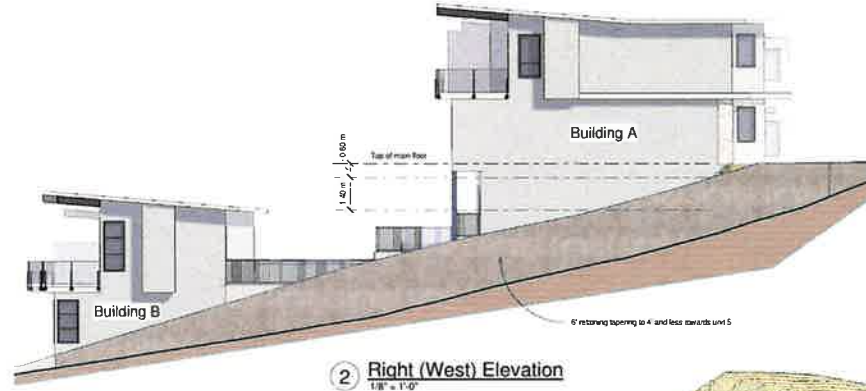
⑥ **Rear (South) Building A**
1/8" = 1'-0"



① **Front (South) Building B**
1/8" = 1'-0"



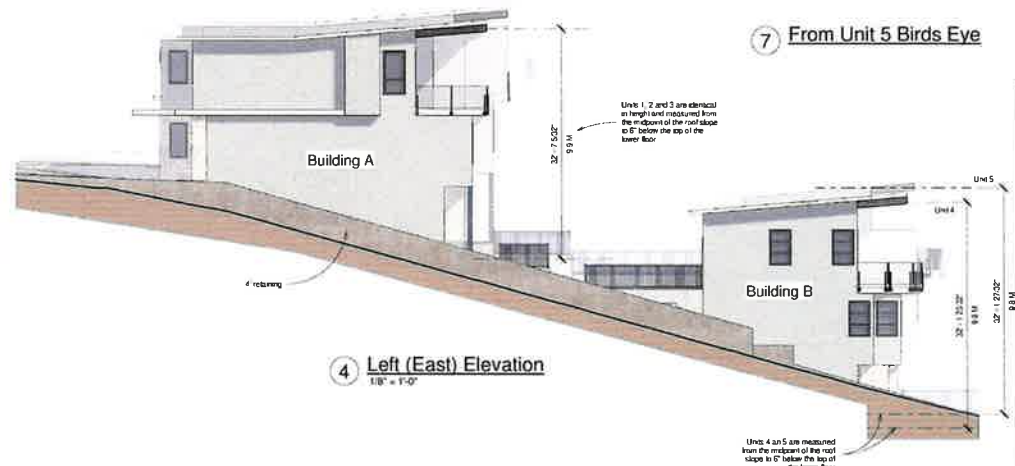
⑤ **Rear (North) Building B**
1/8" = 1'-0"



② **Right (West) Elevation**
1/8" = 1'-0"



⑦ **From Unit 5 Birds Eye**



④ **Left (East) Elevation**
1/8" = 1'-0"

For Variance v1.0

 MEYER DESIGNS LTD 600 Mt. Todd Drive Coquitlam, BC V1B 3Y6 250-503-4579 Kelly@MeyerDesigns.ca MeyerDesigns.ca	
Elevations	
Project Number	2021-014
Date	July 13, 2022
Drawn by	Nathan Meyer
Proposed Residences	2333 Transpac Road Vernon, BC
2	



9.6 R5 : Four-plex Housing Residential

9.6.1 Purpose

The purpose is to provide a **zone** for the **development** of a maximum of four ground oriented **dwelling** units in the form of **single detached, semi-detached, duplex, three-plex** or **four-plex housing** on urban services. The R5c sub-zoning district allows for **care centre, major** as an additional use. The R5h sub-zoning district allows for **home based business, major** as an additional use. *(Bylaw 5467)*

9.6.2 Primary Uses⁴

- **care centre, major** *(use is only permitted with the R5c sub-zoning district)*
- **duplex housing**
- **four-plex housing**
- **group home, major**
- **semi-detached housing**
- **single detached housing**
- **three-plex housing**
- **seniors housing**

9.6.3 Secondary Uses

- **boarding rooms**
- **care centres, minor**
- **home based businesses, minor**
- **home based businesses, major** *(in single detached housing only) (use is only permitted with the R5h sub-zoning district)*
- **secondary suites (in single detached housing only)**
- **seniors assisted housing**
- **seniors supportive housing**

9.6.4 Subdivision Regulations

- Minimum **lot width** is 20.0m, except it is 22.0m for a **corner lot**.
- Minimum **lot depth** is 30.0m.
- Minimum **lot width** for single detached housing is 14.0m, except it is 16.0m for a **corner lot**.
- Minimum **lot area** for single detached housing is 450m².
- Minimum **lot area** is 700m², except it is 800m² for a **corner lot**, or 10,000m² if not serviced by a **community sewer system**. *(Bylaw 5339)*

9.6.5 Party Wall Subdivision Regulations

Lot Type	Minimum Lot area		Minimum Lot Width	
	interior	corner	interior	corner
Semi-Detached Housing	350m ²	400m ²	10.0m	12.0m
Three-Plex Housing	235m ²	285m ²	7.0m	9.0m
Four-Plex Housing	175m ²	225m ²	7.0m	9.0m

9.6.6 Development Regulations

- Maximum **site coverage** is 40% and together with driveways, parking areas and **impermeable surfaces** shall not exceed 50%.

- Maximum **floor space ratio** is 0.6.
- Maximum **height** is the lesser of 10.0m or 2.5 **storeys**, except it is 4.5m for **secondary buildings** and **secondary structures**.
- Minimum **front yard** is 4.0m, except it is 6.0m for a garage or **carport** to the back of curb or sidewalk for a front entry garage, or it is 0.6m to the side of the garage and 2.6m to the front building façade for side-entry garage and driveway layouts.
- Minimum **side yard** is 2.0m for a 1 or 1.5 **storey** portion of a **building** or a **secondary building or structure** and 2.5m for a 2 or 2.5 **storey** portion of a **building**, except it is 4.0m from a **flanking street** unless there is a garage accessed from the **flanking street**, it is 4.0m or it is 2.6m to the building for a side-entry garage and driveway from a flanking street and at least 6.0m from the back of curb or sidewalk. Where there is no direct vehicular access to the **rear yard** or to an attached garage or **carport**, one **side yard** shall be at least 3.0m. The minimum **side yard** setback for shared interior **party walls** shall be 0.0m. The minimum **side yard** setback for **single detached housing** is 1.5m, except it is 4.0m from a **flanking street** unless there is a garage accessed from the **flanking street**, it is 4.0m or it is 2.6m to the building for a side-entry garage and driveway from a **flanking street** and at least 6.0m from the back of curb or sidewalk.
- Minimum **rear yard** is 6.0m for a 1 or 1.5 **storey** portion of a **building** and 7.5m for a 2 or 2.5 **storey** portion of a **building**, except it is 1.0m for **secondary buildings**.
- The maximum **height** of any vertical wall element facing a **front, flanking or rear yard** (including **walkout basements**) is the lesser of 6.5m or 2.5 **storeys**, above which the **building** must be **set back** at least 1.2m.
- Maximum **density** is 30 units per gross hectare (12 units/gross acre).
- Maximum four **dwelling** units located in a **building**, with each unit having a minimum width of 6.5m. (*Bylaw 5339*)

9.6.7 Other Regulations

- In order for bareland strata **developments** to be consistent with the character of the surrounding neighborhood, the strata plan shall be considered as one **site** for defining the overall use, **density** and **site coverage**.
- The above noted **subdivision** and **development** regulations shall be applied to each strata **lot** within the strata plan.
- A minimum area of 25m² of **private open space** shall be provided per **dwelling**.
- Where **development** has access to a rear **lane**, vehicular access to the **development** is only permitted from the rear **lane**.
- For **seniors assisted housing, seniors housing and seniors supportive housing**, a safe drop-off area for patrons shall be provided on the **site**.
- For strata developments, common recreation buildings, facilities and amenities may be included in the strata plan. Recreational buildings shall be treated as **secondary buildings** for the purpose of determining the **height** and **setbacks** of the **building** as specified in each **zone**.
- For multi-unit residential housing, one **office** may be operated for the sole purpose of the management and operation of the multi-unit residential **development**.
- In addition to the regulations listed above, other regulations may apply. These include the general **development** regulations of Section 4 (secondary **development, yards**, projections into **yards**, lighting, agricultural setbacks, etc.); the specific use regulations of Section 5; the **landscaping** and fencing provisions of Section 6; and, the parking and loading regulations of Section 7.
- As per Section 4.10.2 - All **buildings** and **structures, excluding perimeter fencing (garden walls and fences)** on **lots abutting** City Roads as identified on Schedule "B" shall not be sited closer to the City Road than the setback as per the appropriate zone measured from the offset Rights of Way as illustrated on Schedule "B". (*Bylaw 5440*)

4.15 Development Covenants

4.15.1 At the time of rezoning, prior to bylaw adoption, City Council may at its discretion require the property owner to register a covenant on the title of the property limiting the permitted uses and/or densities within the approved land use zones, so as to reflect the specific approved development plan.

4.16 Hillside Development Areas

4.16.1 Vernon's Official Community Plan (OCP) establishes Development Permit Areas (DPAs) for all areas within the City of Vernon. Vernon's Hillside Guidelines and Regulations Policy defines hillsides and provides Goals and Objectives for development of lands on hillsides and slopes under 30%. No construction of a building, structure or swimming pool is permitted on slopes 30% or greater.

4.16.2 No subdivision of land creating lots is permitted where less than 100m² of contiguous buildable area which meets all bylaw regulations herein for each lot is provided, with the exception of boundary lot adjustments.
(Bylaw 5433)

to prevent sagging and to minimize rot. Along sloping ground, the top of wood **fences** shall be horizontal with vertical drops at the posts.

6.5.6 Screening **fences** shall be opaque double-sided **construction**. Where screen **fences** are allowed or required by this Bylaw, they shall be of an opaque or a combination of opaque, translucent or lattice design.

6.5.7 No **fence** constructed at the **natural grade** in residential **zones**, shall exceed 2.0m in **height**, except where **abutting** an **agricultural** or **commercial zone** the maximum **height** is 2.4m. No fence shall have pickets or finials extending above the horizontal rail that may pose a danger to wildlife. *(Bylaw 5890)*

6.5.8 No **fence** in a **commercial** or **industrial zone** shall exceed 2.4m.

6.5.9 **Industrial zones** are to have an opaque 2.4m high **fence** along all **property lines abutting** non-industrial **zones** and around **wrecking yards** that are visible from a **street abutting** the property.

6.5.10 No barbed wire or electrified fencing shall be allowed in any **residential, commercial, public** or **industrial zones** except:

- in RR **zone** for **use** in **livestock** enclosures; and
- in P2 **zone** where the **site** is used for **detention and correctional services**.

Razor wire fences shall not be permitted in any zone.

6.5.11 **Retaining walls** on all residential **lots**, except those required as a condition of **subdivision** approval, must not exceed a **height** of 1.2m measured from grade on the lower side, and must be constructed so that multiple **retaining walls** are spaced to provide at least a 1.2m horizontal separation between them.

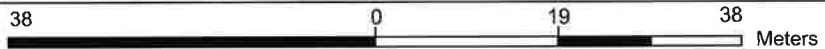
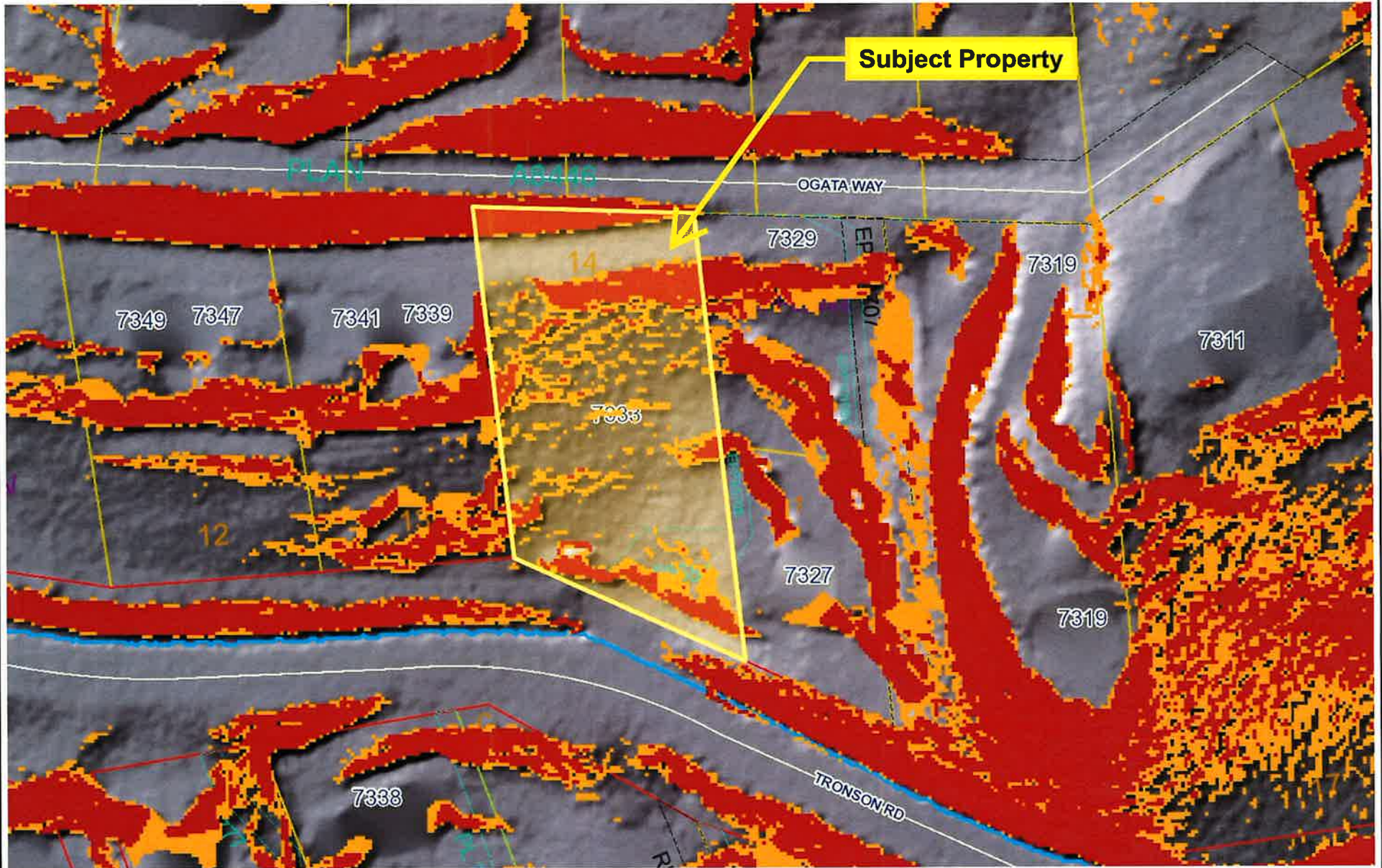
6.5.12 In the case of a **retaining wall** constructed in accordance with Section 6.5.11, the combined **height** of a **fence** on top of a **retaining wall** at the **property line** or within 1.2m of the **property line** shall not exceed 2.0m, measured from **natural grade** at the **property line** (see Diagram 6.1).

6.5.13 Notwithstanding Section 6.5.11, a **retaining wall** may be higher than 1.2m, measured from grade, where the **natural grade** of the subject property is lower than the **abutting** property (see Diagram 6.2).

6.5.14 In the case of a **retaining wall** constructed in accordance with Section 6.5.13, the maximum **height** of a **fence**, or portion of **retaining wall** extending above the **natural grade** of the **abutting** higher property, or combination thereof, shall be 2.0m, measured from the **natural grade** of the **abutting** higher property (see Diagram 6.2).



Vernon Essentials Site



© Corporation of the City of Vernon

1: 750

- >30% Slope
- >40% Slope



This drawing has been produced by the City of Vernon's Geographic Information System. The data provided is derived from a variety of sources with varying levels of accuracy. The City of Vernon makes no warranty or representation, expressed or implied, with the regard to the correctness, accuracy and/or reliability of the information contained herein.



BEACON GEOTECHNICAL LTD.

**GEOTECHNICAL INVESTIGATION
PROPOSED MULTI-FAMILY DEVELOPMENT**

7327 Tronson Road

Vernon, B.C.

Submitted to:

Paul Yu
Vancouver, B.C.

Submitted by:

Beacon Geotechnical Ltd.
Kelowna, B.C.

January 5, 2017

16-J2071

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APPENDICES

Appendix A.....	Site Plan - Figure A.01
Appendix B	Test Hole Logs - Figures B.01-B.04
Appendix C.....	Gradation (Sieve) Analysis Results - Figures C.01-C.04
Appendix D.....	Geotechnical Report - General Conditions



1.0 INTRODUCTION

Beacon Geotechnical Ltd. (Beacon) understands that it is proposed to develop the property located 7327 Tronson Road, Vernon, B.C. As part of the subdivision application process, the City of Vernon has requested, in their memorandum dated November 3rd, 2016, File No: DP000654, that a geotechnical report be prepared on the property to support the subdivision application. Beacon has been retained by Mr. Paul Yu to carry out a detailed geotechnical investigation on the site. The report is to describe the soil conditions, as well as to determine the suitability of the property for development. This report summarizes the results of our investigation and provides comments and recommendations for the development of the property.

Scope of Work: The scope of work for this project was presented in our proposal to Mr. Paul Yu, "*Proposal for Geotechnical Consulting Services, Proposed Residential Development – 7327 Tronson Road, Vernon, B.C.*", dated November 16, 2016, File No. 16-P00552. In summary, it was proposed to excavate four testpits within the development to identify the soil profile in the area. Following the field and laboratory work, a geotechnical report would be prepared outlining the results of the investigation and presenting our recommendations for development of the project.

Authorization: Authorization to proceed with the test hole investigation was received from Mr. Paul Yu, via email on November 17th, 2016.

Site Description: The property is legally described as Lot 14, Plan 18373, DL 56, ODYD. The site is trapezoid in shape and encompasses approximately 1835 square metres. It is bounded to the north by an easement plan, A9281, which is a driveway, along with Ogata Way, to the east and west by single family homes, and the south by Tronson Road. There is also another irregular shaped easement on the property in the lower south east corner, described as easement plan KAP68554. Topographically, the property slopes downward from north to south, with elevations ranging from 378 metres down to 364 metres. At the time of the investigation, the property was vacant and vegetated with grasses, shrubs and some large trees.

Project Description: We understand that the project will include the development of a five unit complex comprising of one duplex building and one three-plex building. Both buildings will be three storey wood framed structures over a concrete slab on grade. At this time there are no sanitary or storm sewer connections to the property, however a water service shut off valve was noted adjacent to the driveway on the north end of the property. The remaining portion of the property will be developed with driveways and landscaping.

2.0 FIELD WORK

On November 25th, 2016 four test pits were excavated at the approximate locations shown in Appendix A on Figure A.01, under the supervision of the author of this report. The test pits were excavated using a small tracked excavator contracted from On the Mark Locates of Kelowna, to a depth of 2.8 metres below the existing grades. Continuous written logs were maintained in the field and included a description of the soil type, consistency, moisture content, colour and thickness of all soil layers encountered. Four samples were selected for gradation analysis. The results are shown in Appendix C on Figures C.01 through to C.04, while the testpit logs are in Appendix B as Figures B.01 to B.04.

3.0 SUBSURFACE CONDITIONS

A total of four test pits were excavated over the project site at the approximate locations shown on Figure A.01, in Appendix A. The subsurface profile encountered at our borehole locations was found to be relatively consistent over the property. The following provides a general description of the soil profile encountered. For a more detailed description of subsurface site profile, refer to the detailed logs shown as Figures B.01 to B.04 in Appendix B.

Soil Conditions: The publication, “Late Glacial History and Surficial Deposits of the Okanagan Valley, British Columbia”, by Hugh Nasmith (1962), Bulletin 46, Ministry of Energy, Mines, and Petroleum Resources, Province of British Columbia, indicates that the surficial geology in the project area consists of glacial lake sediments.

The site is located on a hillside adjacent to Kin Beach on Okanagan Lake. The soil profile on site was found to consist of topsoil over organic silts over various consistencies of glacial deposits, from sandy silts with trace gravel, to gravelly and silty sand, sand and gravel with some silt, to sandy and silty gravel. The glacial deposits were compact to dense and light brown in color.

The results of the gradation tests are shown as Figures C.01 to C.04, in Appendix C.

Groundwater: Groundwater not encountered at any of our testpit locations. We anticipated the groundwater table will be below the proposed construction grades for this project. However, seepage may be encountered along preferential drainage paths within the sand and gravel.

4.0 DISCUSSION

We understand that Mr. Paul Yu proposes to develop the property located at 7327 Tronson Road, in Vernon, B.C. The proposed development includes a five unit complex comprising of one duplex building and one three-plex building. Based on our understanding, no significant re-grading of the property will be required to achieve the final design grades on site. The project will be constructed in accordance with the City of Vernon Subdivision and Development Servicing Bylaw #3843.

The soil profile consisted of topsoil over organic silt over various glacial deposits. We anticipate that the elevation of the groundwater be well below the development grades, however seepage or perched groundwater may be encountered on or within the glacial deposits. Bedrock was not encountered any of the test holes on site and the bedrock surface is expected to be well below the existing site grades.

Based on our observations, we are satisfied that the property can be safely used for the intended purpose of residential development. For the purposes of this project, safe is defined as having less than a 2% chance in 50 years of experiencing a geotechnical hazard which would affect the proposed building sites. The following provides our recommendations for development of the site and presents our comments addressing the City of Vernon's requirements.

5.0 RECOMMENDATIONS

5.1 Site Preparation

Stripping: Site preparation within the building footprint should include removal of all vegetation, topsoil and organic silt to expose the underlying glacial deposits of various consistencies of silt, sand and gravel. The exposed subgrade surface should be inspected by Beacon to confirm the bearing capacity of the subgrade and to identify any soft spots. Soft spots, if encountered, should be re-compacted at the direction of the engineer in the field.

Filling: If it is required to raise the site grade to accommodate the construction of any of the buildings in the project, we recommend that imported structural fill or blast rock be used. Imported structural fill placed in the building footprint should be placed in lifts not exceeding 300 millimetres in thickness. Each lift should be moisture conditioned and compacted to a minimum of 98% of Standard Proctor maximum dry density in accordance with ASTM D698, and within 2% of optimum moisture content, prior to placing subsequent lifts. We recommend that the compaction of the fill be confirmed with in situ density tests.

Where blast rock is used as structural fill, then we recommend that all boulders greater than 0.2 metres in diameter be removed prior to placement. Due to the coarse nature of the blast rock, in situ density tests cannot be carried out. We therefore recommend that Beacon confirm the compaction of the blast rock by reviewing field compaction methods and proof rolling lifts of blast rock with large construction equipment on a regular basis during fill placement.

5.2 Buildings

Foundation Design: Based on the results of the investigation, we recommend that the proposed building be founded on conventional strip and pad spread footings. The foundations should be placed directly on the granular glacial deposits. The foundations for the building should be designed on the basis of an allowable soil bearing pressure of **120 kPa**. The frost protection depth should be a minimum of 0.6 metres for all exterior wall or deck footings.

Slab on Grade: Prior to placing fill for the slab-on-grade floor, the building footprint should be prepared as outlined in Section 5.1 above. The stripped surface should be inspected prior to placing any fill. Fill placed below the slab should meet the gradation requirements discussed in Section 5.1.

In addition, site preparation for the floor slab should include a rough-in for a subfloor depressurization system to protect from soil gas ingress. The system is described in detail in Section 9.13.4. of the 2012 edition of the B.C. Building Code. Accordingly, a minimum of 100 millimetres of porous granular material, such as pea gravel, should be placed immediately below the slab, and access through the slab should be provided to allow for depressurization for all contiguous areas. A vapour barrier should be placed between the granular fill and the concrete slab to inhibit the migration of moisture and gas through the slab.

Foundation Perimeter Drains: We recommend that a perimeter drainage system be constructed around the building with a slab grade below the final site grade. As a minimum, the perimeter drainage system should include a 100 millimetre perforated pipe placed at the toe of all exterior footings. The pipe should be covered with a minimum of 0.3 metres of round drain rock and covered with a filter fabric prior to backfilling. The perforated pipe should drain to the City storm sewer or into dry wells discharging into the glacial deposits. However, if the slab-on-grade floor elevation is at or above the surrounding grade, and that all landscaping, sidewalks and parking lots around the perimeter of the building slope away from the foundation, then we are of the opinion that a perimeter drainage system would not be required for these buildings.

Roof Drainage: We recommend that the roof storm water be discharged to the storm service. Where connections to the storm drain are not feasible, then we recommend that the roof drainage be discharged into rock pits into the glacial deposits, or onto splash pads.

Frost Protection: We recommend that the footing grade be a minimum of 0.6 metres below the final site grade for protection from frost heave.

5.3 Reuse of Existing Soil

Any topsoil, other organic soil and silt on this site is considered **unsuitable** for re-use as structural fill beneath building footprints, as subgrade fill within driveways or as trench fill, but may, however, be used as landscaping fill. The natural glacial deposits may be re-used as structural fill, if they are removed, stored and compacted in optimum conditions.

5.4 Slopes

The portions of development will not be within slopes over 30%, the overall current site conditions is at approximately 26%, with localized benches, and a steeper portion for the road fill on the high end for the driveway.

If soil cuts or fill slopes are required we recommend the following based on the soil and groundwater conditions on site:

Soil Cuts: Cut slopes excavated in the existing silt, sand or gravel; material should be excavated no steeper than 2(H):1(V).

Fill Slopes: If Fill slopes are required, we recommend that permanent fill slopes, constructed with the sand and gravel, compacted to a minimum of 98% of Standard Proctor maximum dry density, be inclined no steeper than 2(H):1(V). Fill slopes constructed of blast rock fill may be inclined at 1.5(H):1(V). All fill slopes should be over built during construction and trimmed to grade after fill placement is complete to ensure adequate compaction of the face of the fill slope.

We recommend that both cut and fill slopes are vegetated as soon as possible to minimize the risk of surface erosion. During construction, we recommend that all exposed soils be continually moistened when required to minimize the amount of dust generated. Based on the type of development planned, we do not anticipate that water erosion would pose a problem for this property; however, we recommend that during site grading that overland drainage be discouraged from discharging over any unprotected slopes.

5.5 Testpits

The testpits were excavated at the approximate locations as indicated on Figure A.01. In the situation where a portion of any proposed building or parking is found to be located over a testpit, we recommend that the testpit be over excavated and re-compacted to a minimum of 98% of Standard Proctor maximum dry density in accordance with ASTM D698 and within 2% of optimum moisture content.

6.0 CLOSURE

The recommendations presented in the report were prepared in accordance with the City of Vernon Subdivision and Development Servicing Bylaw #3843. As such, the City of Vernon, being the regulatory development authority, may rely upon the recommendations and use the report as required for the development of the property.

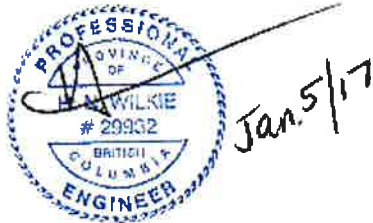
The recommendations contained in this report have been prepared for the proposed five unit complex at 7327 Tronson Road, described in Section 1.0 of this report. Should the intended use for the property, at any time, vary from our understanding of the project, Beacon should be given the opportunity to review the project to ensure that our recommendations are both accurate and sufficient. Use of this report is subject to the Geotechnical Report – General Conditions attached in Appendix D.

It should be noted that geological conditions are innately variable and are seldom spatially uniform. At the time of the report, information on the stratigraphy at the project site was available at four discrete test hole locations. In order to develop recommendations from this information, it is necessary to make some assumptions concerning conditions other than at these locations. Adequate monitoring should be provided during construction to check that these assumptions are reasonable.

Beacon does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used for any project other than the proposed residential development described in Section 1.0. Any such unauthorized use of this report is at the sole risk of the user.

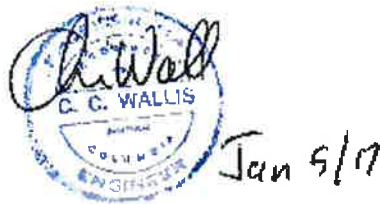
We trust that this report satisfies your present requirements. Should you have any further questions, please feel free to contact our office.

Yours truly,
Beacon Geotechnical Ltd.



Heather Wilkie, P.Eng.
Geotechnical Engineer

Reviewed by,
Beacon Geotechnical Ltd.

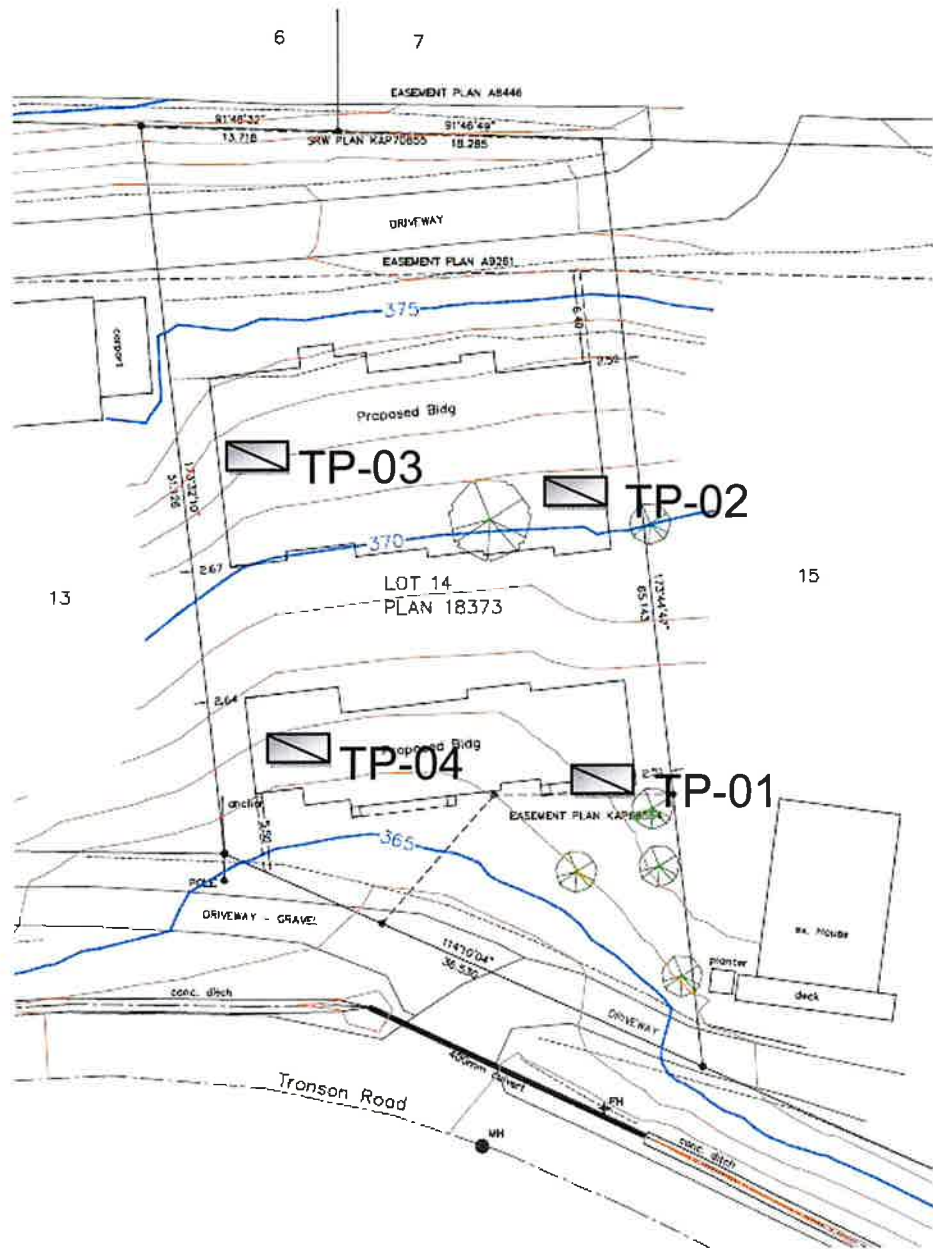


Chris Wallis, P.Eng.
Geotechnical Engineer

APPENDIX A

TEST HOLE PLAN





<p>LEGEND</p> <p>Approximate Test Pit Location</p>	Beacon Geotechnical Ltd.				
	7327 TRONSON ROAD – PROPOSED MULTI-FAMILY DEVELOPMENT				
	Site Plan				
File No: J16-2071	Scale: NTS	Drawn By: hnw	Date: Nov. 28, 2016	Figure: A.01	

Site Plan Taken From: Plan provided by russel shortt

NOTE: ALL LOCATIONS ARE APPROXIMATE




APPENDIX B

TEST HOLE LOGS



Project: Multi Family Development
Location: 7327 Tronson Road, Vernon, BC
Client: Paul Yu
Beacon Project No: 16-J2071



Depth	Soil Type	Soil Type	Elevation (m)	Seepage (m)	Number	Type	Moisture Content Percent			
							20	40	60	80
0		Ground Surface	0.00							
0		TOPSOIL Grass over topsoil, dark brown.	0.00							
1		ORGANIC SILT SILT, organic, stiff, dark brown.	-0.30 0.30							
3		FILL FILL, SILT, SANDY, fine grained, trace GRAVEL, light brown and grey and rust mottled.	-0.91 0.91							
5		Refusal on black abs pipe and crush trenches.			1-1	GS				
6		End of Borehole	-1.83 1.83							
10										

Investigation Date: December 25, 2016
Contractor: On the Mark Contracting
Equipment: 50g Tracked Excavator
Logged By: hnw

Northing: 0
Easting: 0
Elevation: 0
Figure No: B.01

Beacon Geotechnical Ltd.
 #201-1889 Spall Road
 Kelowna, B.C.
 V1Y 4R2

Project: Multi Family Development
Location: 7327 Tronson Road, Vernon, BC
Client: Paul Yu
Beacon Project No: 16-J2071



Depth	Soil Type	Soil Type	Elevation (m)	Seepage (m)	Number	Type	Moisture Content Percent			
							20	40	60	80
0		Ground Surface	0.00							
0		TOPSOIL Grass over topsoil, dark brown.	0.00							
1		ORGANIC SILT SILT, organic, stiff, dark brown.	-0.30							
2		GRAVEL AND SAND GRAVEL AND SAND, fine grained, some SILT, occasional COBBLE/BOULDER, dense, light brown.	-0.61							
5					2-1	GS				
8		End of Borehole	-2.44							
10			2.44							

Investigation Date: December 25, 2016
Contractor: On the Mark Contracting
Equipment: 50g Tracked Excavator
Logged By: hnw

Northing: 0
Easting: 0
Elevation: 0
Figure No: B.02

Beacon Geotechnical Ltd.
 #201-1889 Spall Road
 Kelowna, B.C.
 V1Y 4R2

Project: Multi Family Development
Location: 7327 Tronson Road, Vernon, BC
Client: Paul Yu
Beacon Project No: 16-J2071



Depth	Soil Type	Soil Type	Elevation (m)	Seepage (m)	Number	Type	Moisture Content Percent			
							20	40	60	80
0		Ground Surface	0.00							
0		TOPSOIL Grass over topsoil, dark brown.	0.00							
1		SANDY GRAVEL GRAVEL, SANDY, fine grained, SILTY, occasional COBBLE/BOULDER, dense, light brown.	-0.30 0.30							
4					3-1	GS				
9		End of Borehole	-2.74 2.74							

Investigation Date: December 25, 2016 Contractor: On the Mark Contracting Equipment: 50g Tracked Excavator Logged By: hnw	Northing: 0 Easting: 0 Elevation: 0 Figure No: B.03	Beacon Geotechnical Ltd. #201-1889 Spall Road Kelowna, B.C. V1Y 4R2
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Project: Multi Family Development
Location: 7327 Tronson Road, Vernon, BC
Client: Paul Yu
Beacon Project No: 16-J2071

Log of Borehole: TP-04



Depth	Soil Type	Soil Type	Elevation (m)	Seepage (m)	Number	Type	Moisture Content Percent			
							20	40	60	80
0		Ground Surface	0.00							
0	TOPSOIL	Grass over topsoil, dark brown.	0.00							
1	SAND	SAND, fine grained, GRAVELLY, SILTY, occasional to some COBBLE/BOULDER, dense, light brown.	-0.30 0.30							
4					4-1	GS				
9		End of Borehole	-2.74 2.74							

Investigation Date: December 25, 2016
Contractor: On the Mark Contracting
Equipment: 50g Tracked Excavator
Logged By: hnw

Northing: 0
Easting: 0
Elevation: 0
Figure No: B.04

Beacon Geotechnical Ltd.
 #201-1889 Spall Road
 Kelowna, B.C.
 V1Y 4R2

APPENDIX C

GRADATION ANALYSIS



GRAIN SIZE ANALYSIS RESULTS

Project: Multi-Family Development
 Location: 1327 Tronson, Vernon
 Client: 0

Insite File No.: BEA-2071
 Figure No: C.01

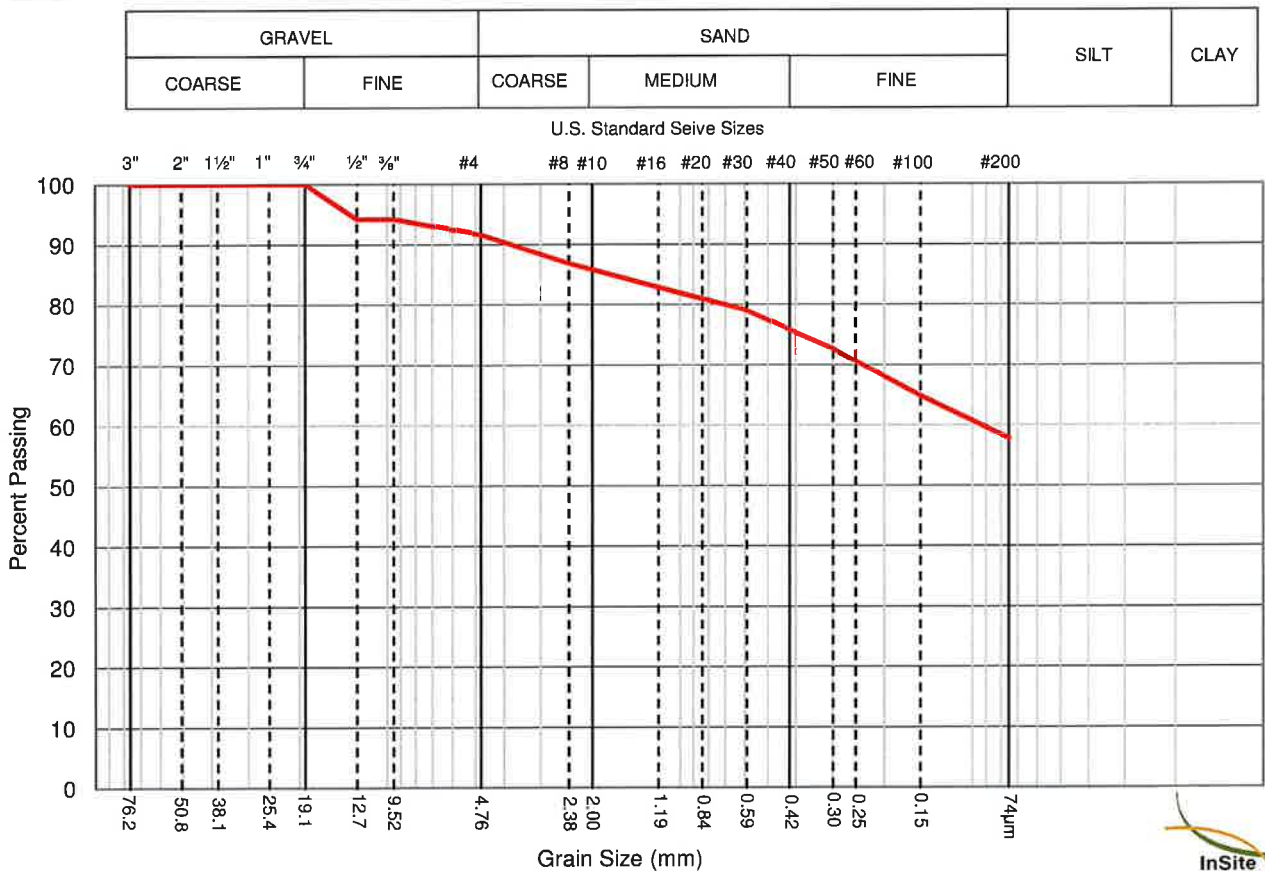
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Attention: 0

Sample Source: Test Hole
 Sample Location: 1-2 @ 5'
 Specification: None
 Material Type: SILT, sandy, trace gravel
 Natural Moisture Content: 16.0%
 Sieve Series: 8/16/30/50
 Fineness Modulus: 1.28

Date Sampled: November 25, 2016
 Date Received: November 28, 2016
 Date Tested: November 28, 2016
 Sampled by: HW
 Tested by: JH
 Test Method: ASTM C117 & C136

Gravel Sizes				Sand, Silt and Clay Sizes					
Sieve Sizes		Percent Passing	Gradation Limits		Sieve Sizes		Percent Passing	Gradation Limits	
US Sieve	Metric (mm)		Min	Max	US Sieve	Metric (mm)		Min	Max
3"	76.2	100.00			#4	4.75	91.51		
2"	50.8	100.00			#8	2.40	86.87		
1½"	38.1	100.00			#16	1.20	82.93		
1"	25.4	100.00			#30	0.60	79.12		
¾"	19.1	100.00			#50	0.30	72.64		
½"	12.7	94.19			#100	0.15	64.83		
⅜"	9.5	94.19			#200	0.075	57.76		



Reviewed By:



GRAIN SIZE ANALYSIS RESULTS

Project: Multi-Family Development
 Location: 1327 Tronson, Vernon
 Client: 0

Insite File No.: BEA-2071
 Figure No: C.02

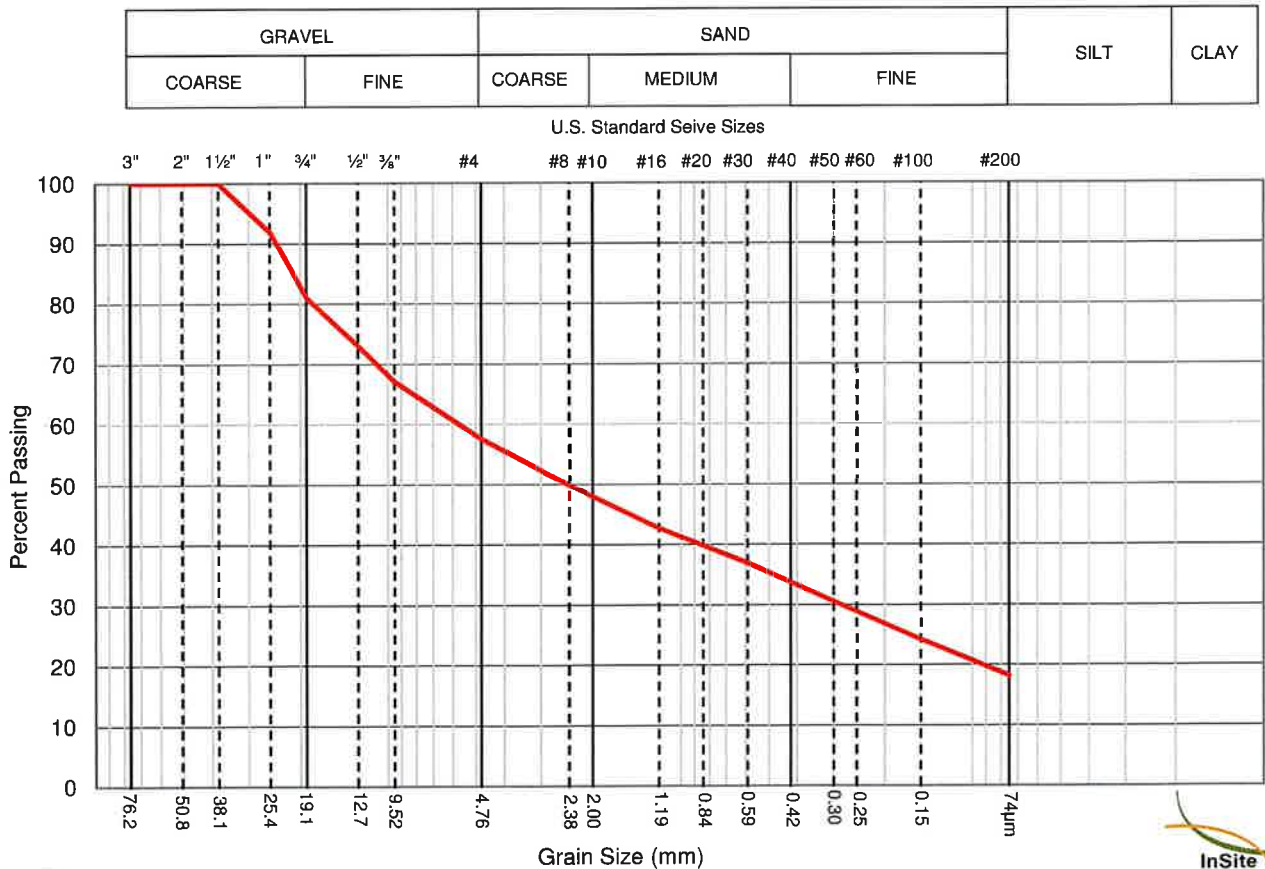
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Attention: 0

Sample Source: Test Hole
 Sample Location: 2-2 @ 5'
 Specification: None
 Material Type: GRAVEL & SAND, some silt
 Natural Moisture Content: 5.3%
 Sieve Series: 8/16/30/50
 Fineness Modulus: 4.10

Date Sampled: November 25, 2016
 Date Received: November 28, 2016
 Date Tested: November 28, 2016
 Sampled by: HW
 Tested by: JH
 Test Method: ASTM C117 & C136

Gravel Sizes				Sand, Silt and Clay Sizes					
Sieve Sizes		Percent Passing	Gradation Limits		Sieve Sizes		Percent Passing	Gradation Limits	
US Sieve	Metric (mm)		Min	Max	US Sieve	Metric (mm)		Min	Max
3"	76.2	100.00			#4	4.75	57.43		
2"	50.8	100.00			#8	2.40	49.83		
1½"	38.1	100.00			#16	1.20	42.83		
1"	25.4	91.91			#30	0.60	37.05		
¾"	19.1	81.04			#50	0.30	30.53		
½"	12.7	73.07			#100	0.15	24.24		
⅜"	9.5	67.12			#200	0.075	18.21		



Reviewed By:



GRAIN SIZE ANALYSIS RESULTS

Project: Multi-Family Development
 Location: 1327 Tronson, Vernon
 Client: 0

Insite File No.: BEA-2071
 Figure No: C.03

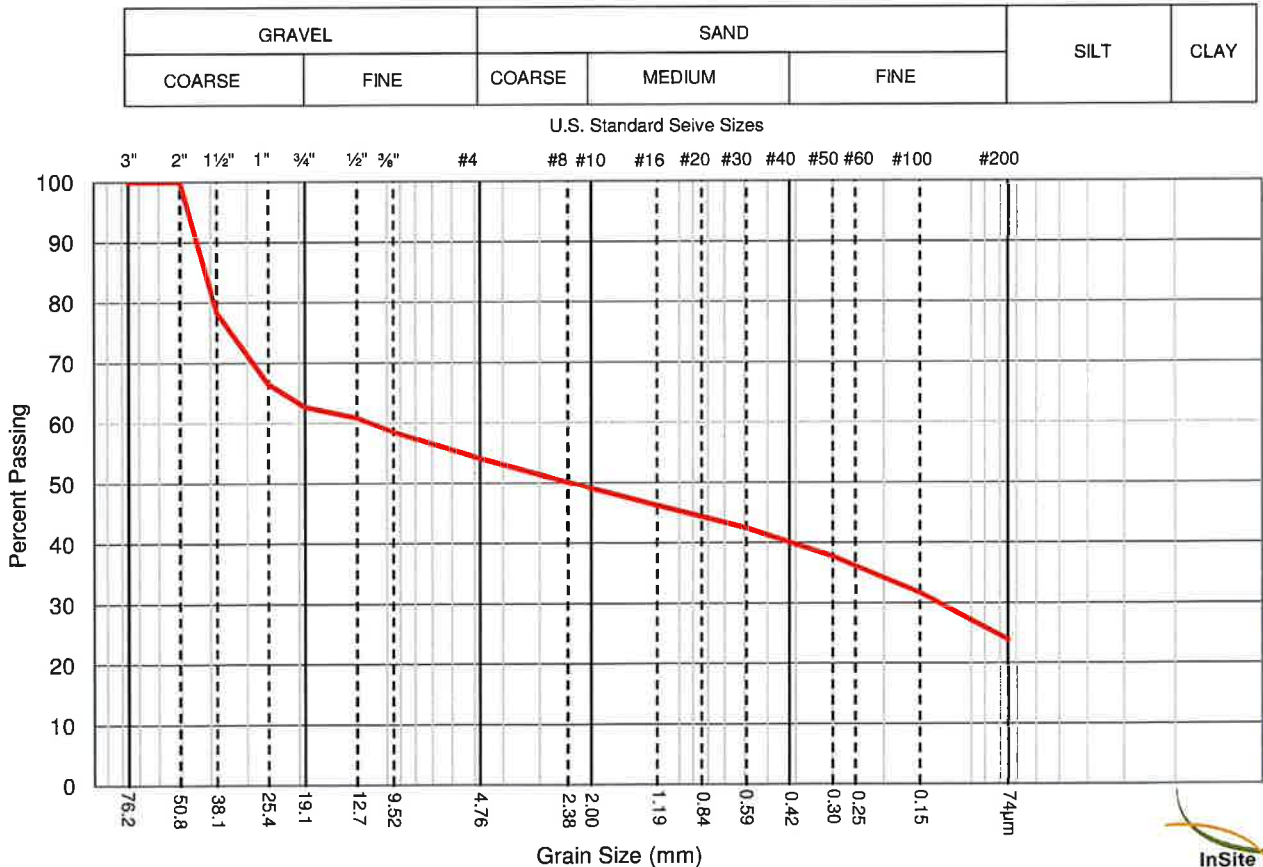
cc:

Attention: 0

Sample Source: Test Hole
 Sample Location: 3-1 @ 9'
 Specification: None
 Material Type: GRAVEL, sandy, silty
 Natural Moisture Content: 4.8%
 Sieve Series: 8/16/30/50
 Fineness Modulus: 4.38

Date Sampled: November 25, 2016
 Date Received: November 28, 2016
 Date Tested: November 29, 2016
 Sampled by: HW
 Tested by: JH
 Test Method: ASTM C117 & C136

Gravel Sizes				Sand, Silt and Clay Sizes					
Sieve Sizes		Percent Passing	Gradation Limits		Sieve Sizes		Percent Passing	Gradation Limits	
US Sieve	Metric (mm)		Min	Max	US Sieve	Metric (mm)		Min	Max
3"	76.2	100.00			#4	4.75	53.97		
2"	50.8	100.00			#8	2.40	50.07		
1½"	38.1	78.31			#16	1.20	46.31		
1"	25.4	66.47			#30	0.60	42.56		
¾"	19.1	62.65			#50	0.30	37.71		
½"	12.7	60.85			#100	0.15	31.68		
⅜"	9.5	58.50			#200	0.075	23.90		



Reviewed By:



APPENDIX D

GENERAL CONDITIONS



This report incorporates and is subject to these “General Conditions”.

1. USE OF REPORT AND OWNERSHIP

This geotechnical report pertains to a specific site, a specific development and a specific scope of work. It is not applicable to any other sites nor should it be relied upon for types of development other than that to which it refers. Any variation from the site or development would necessitate a supplementary geotechnical assessment. This report and the recommendations contained in it are intended for the sole use of Beacon’s client. Beacon does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than Beacon’s client unless otherwise authorized in writing by Beacon. Any unauthorized use of the report is at the sole risk of the user. This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of Beacon. Additional copies of the report, if required, may be obtained upon request.

2. NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems and methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned. Classification and identification of geological units are judgmental in nature as to both type and condition. Beacon does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice. Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

3. LOGS OF TEST HOLES

The test hole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

4. STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historic environment. Beacon does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional investigation and review may be necessary.

5. SURFACE WATER AND GROUNDWATER CONDITIONS

Surface and groundwater conditions mentioned in this report are those observed at the times recorded in the report. These conditions vary with geological detail between observation sites; annual, seasonal and special meteorologic conditions; and with development activity. Interpretation of water conditions from observations and records is judgmental and constitutes an evaluation of circumstances as influenced by geology, meteorology and development activity. Deviations from these observations may occur during the course of development activities.

6. PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

7. SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

8. INFLUENCE OF CONSTRUCTION ACTIVITY

There is a direct correlation between construction activity and structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques are known.

9. OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, as well as the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

10. DRAINAGE SYSTEMS

Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

11. BEARING CAPACITY

Design bearing capacities, loads and allowable stresses quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition assumed. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions assumed in this report in fact exist at the site.

12. SAMPLES

Beacon will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the client's expense upon written request, otherwise samples will be discarded.

13. STANDARD OF CARE

Services performed by Beacon for this report have been conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practising under similar conditions in the jurisdiction in which the services are provided. Engineering judgement has been applied in developing the conclusions and/or recommendations provided in this report. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of this report.

14. ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, Beacon has not been retained to investigate, address or consider and has not investigated, addressed or considered any environmental or regulatory issues associated with development on the subject site.

