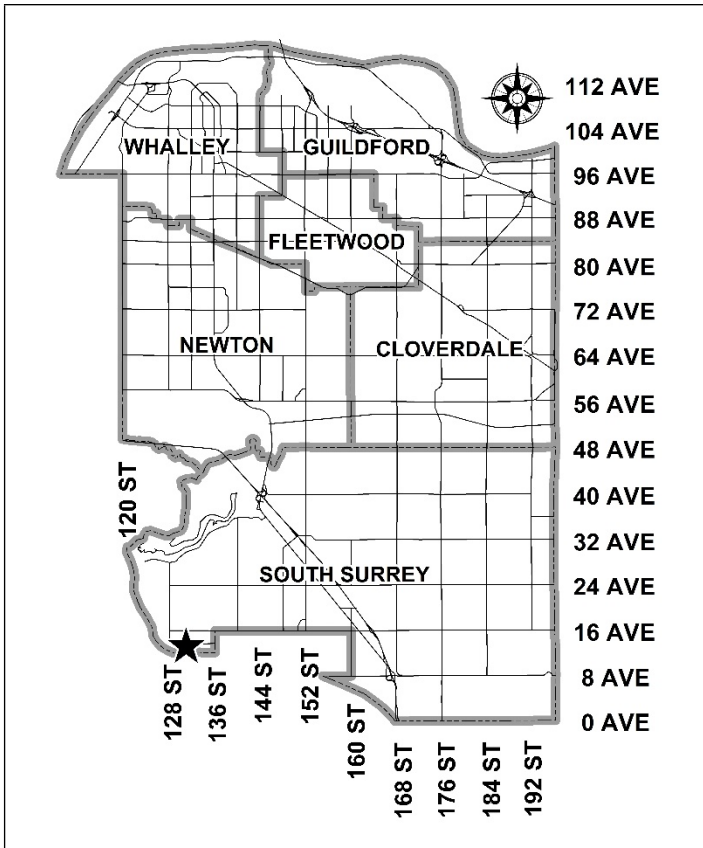


City of Surrey
ADDITIONAL PLANNING COMMENTS

Application No.: 7918-0373-00/01

Planning Report Date: May 27, 2024



PROPOSAL:

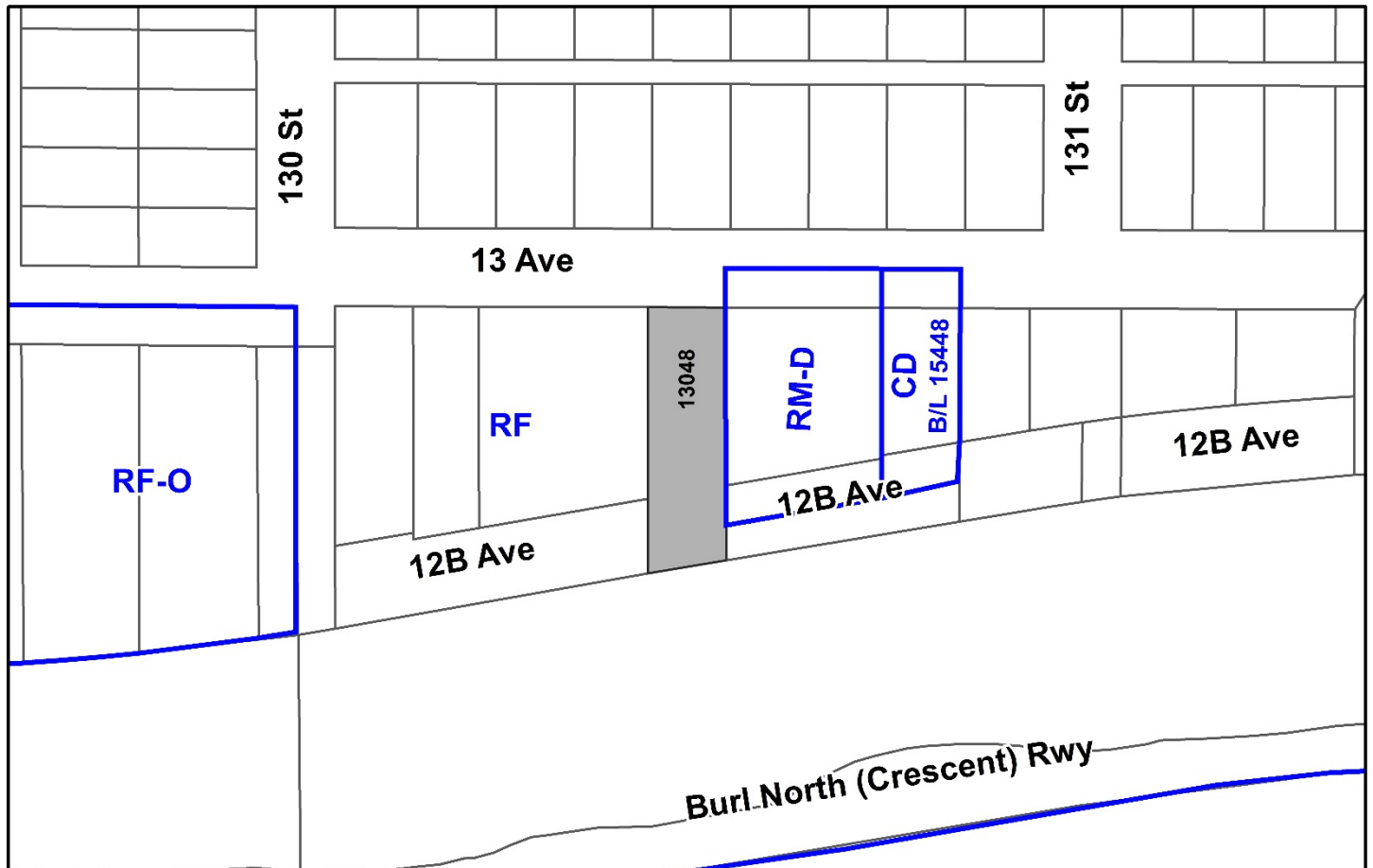
- Development Permit
- Development Variance Permit

to permit the development of a new single family dwelling on a lot of record.

LOCATION: 13048 - 13 Avenue

ZONING: RF

OCP DESIGNATION: Urban



RECOMMENDATION SUMMARY

- Approval to draft revised Development Permit for Hazard Lands and Sensitive Ecosystems.
- Approval for Development Variance Permit to proceed to Public Notification.

DEVIATION FROM PLANS, POLICIES OR REGULATIONS

- The applicant is proposing to reduce the minimum streamside setback from the Top of Bank of a "Natural Class B Stream," to increase the building height, and to reduce the side yard (east and west) setbacks.

RATIONALE OF RECOMMENDATION

- Development Permit and Development Variance Permit No. 7918-0373-00 were issued at the May 9, 2022, Regular Council – Land Use meeting to permit the development of a new single family dwelling on the subject lot of record. As a condition of the Development Permit, the applicant was required to undertake additional geotechnical investigation in conjunction with the finalized building design, after the initial Development Permit was issued. It was anticipated that a Development Permit amendment, or issuance of a subsequent Development Permit would be required. Since the Development Permit was issued in May 2022, the applicant has worked with staff, the consulting geotechnical engineer, and a third-party independent geotechnical engineer who is peer reviewing the proposal.
- As this review process has taken over two years, the Development Permit and Development Variance Permit No. 7918-0373-00 have expired. The applicant requests the reissuance of these permits, which includes amended details for the Development Permit based on the refined building designs.
- The applicant proposes changes to the structural design that result in a lessened impact to the slope. The previous proposal included a 9 metre tall keystone block retaining wall. The applicant's new proposal replaces the keystone block retaining wall with structural columns that cantilever the structure over the slope, reducing the overall load. There are no significant changes to the requested Development Variance Permit for streamside setbacks.
- A Class B watercourse impacts the southern boundary of the property. The subject property is located upslope of the watercourse and the top-of-bank is beyond the north property line.
- Adhering to the required streamside setbacks under the Zoning By-law would render the entire lot undevelopable. As this is a "lot of record" (i.e., existed prior to September 12, 2016), the amount of encroachment into the streamside setback is considered reasonable to allow for a single family dwelling to be constructed on the property.

-
- The applicant has provided a Geotechnical Report, an Ecosystem Development Plan (EDP) and Impact Mitigation Plan (IMP), and a *Riparian Areas Protection Regulation (RAPR)* Assessment Report in support of the proposed variance to the streamside setback. The proposed dwelling will comply with the Provincial *RAPR* setbacks and is located a minimum of 31 metres as measured from the high-water mark.
 - Fencing and signage will be installed along the boundary of the Streamside Protection Area to identify it as an environmentally sensitive area where no encroachment or disturbance is allowed. The no encroachment or disturbance boundary will be established approximately 30 metres south of the north property line. A Restrictive Covenant will be registered to delineate the no encroachment or disturbance boundary, which will protect approximately 940 square metres of the south portion of the property.
 - The proposed variance to the building height allows for a reasonable sized dwelling to be constructed on the property. As viewed from the street, the building height is less than the maximum building height of 7.3 metres allowed in the RF zone.
 - The proposed variance to the side yard (east and west) setbacks are for retaining walls that will ensure that the dwelling is geotechnically safe. The retaining walls will be located at minimum 15 metres from the closest buildings on the adjacent properties while the proposed dwelling itself will comply with the minimum building side yard setback of 1.8 metres.

RECOMMENDATION

The Planning & Development Department recommends that:

1. Council authorize staff to draft Development Permit No. 7918-0373-01 for Hazard Lands (Steep Slopes) and Sensitive Ecosystems (Streamside Areas and Green Infrastructure Areas), generally in accordance with the attached drawings (Appendix I) and the finalized Ecosystem Development Plan and Geotechnical Report.
2. Council approve Development Variance Permit No. 7918-0373-01 (Appendix IV) varying the following, to proceed to Public Notification:
 - (a) to increase the maximum building height of any portion of a principal building with a roof slope of less than 1:4 of the RF Zone from 7.3 metres to 11.5 metres;
 - (b) to reduce the minimum side yard setbacks of the RF Zone from 1.8 metres to 0 metres for the retaining walls on each side lot line; and
 - (c) to reduce the minimum streamside setback distance from top of bank for a "Natural Class B Stream" (yellow-coded) from 15.0 metres, as measured from top-of-bank, to a minimum of 31 metres from the high water mark (equivalent to a maximum of approximately 26 metres below top-of-bank).
3. Council instruct staff to resolve the following issues prior to final approval:
 - (a) registration of an amended Section 219 Restrictive Covenant for Engineered foundation and slope stability, and to establish a "no build" and "no disturbance" area at the geotechnical setback line based on the geotechnical report prepared by GeoPacific Consultants Ltd., dated February 29, 2024.

SITE CONTEXT & BACKGROUND

Direction	Existing Use	OCP Designation	Existing Zone
Subject Site	Vacant single family property	Urban	RF
North (Across 13 Avenue):	Single family property	Urban	RF
East:	Duplex	Urban	RM-D
South:	Burlington Northern Railway	Urban	RF
West:	Single family dwelling	Urban	RF

Context & Background

- The subject property is 1,340 square metres in size, designated Urban in the Official Community Plan and zoned "Single Family Residential Zone (RF)".

- The property is currently vacant and is encumbered by a Class B (yellow-coded) watercourse on the south portion of the property.
- The applicant undertook work in 2022 to finalize the proposal for issuance of the Development Permit and Development Variance Permit. Both permits were issued at the May 9, 2022, Regular Council – Land Use meeting. At that time, it was agreed that further geotechnical investigation would be needed in conjunction with the final building designs at the time of Building Permit application. This would also require an amendment to the issued Development Permit to ensure the terms of the permit aligned with the final geotechnical investigation.
- Since May 2022 the applicant has worked with staff, the geotechnical engineering consultant, and a third-party independent geotechnical engineering peer reviewer to refine the building and geotechnical design. As this process has taken two years, both the Development Permit and Development Variance Permit have expired and require re-issuance.
- This report outlines the details of this proposal, including minor changes to the geotechnical considerations in support of reissuing both the Development Permit and Development Variance Permit No. 7918-0373-01.

DEVELOPMENT PROPOSAL

Planning Considerations

- The applicant is proposing to construct a new single family dwelling, which is subject to a Development Permit for Hazard Lands (Steep Slopes) and Sensitive Ecosystems (Streamside Areas and Green Infrastructure Areas).
- The streamside setback for the Class B (yellow-coded) watercourse is located within 13 Avenue and therefore, the proposal also requires a variance to reduce the streamside setback from 15 metres, as measured from top-of-bank, to a minimum of 31 metres from the high water mark (equivalent to a maximum of 26 metres below top-of-bank). The applicant is also proposing to increase the allowable building height for a roof with slopes less than 3/12 from 7.3 metres to 11.5 metres, and to reduce the side yard (east and west) setbacks from 1.8 metres to 0 metres for retaining walls.

	Proposed
Lot Area	
Gross Site Area:	1,340 square metres
Road Purchase Area:	147 square metres
Undevelopable Area:	n/a
Net Site Area:	1,487 square metres

POLICY & BY-LAW CONSIDERATIONS

Zoning By-law

- The table below provides an analysis of the development proposal in relation to the requirements of the Zoning By-law, including the "Single Family Residential Zone (RF)", streamside setbacks and parking requirements.

RF Zone (Part 16)	Permitted and/or Required	Proposed
Yards and Setbacks		
Front Yard (north):	7.5 metres	7.5 metres (after partial road closure)
Side Yard (east):	1.8 metres	2.1 metres (to building) *0 metres (to retaining wall)
Side Yard (west):	1.8 metres	3.3 metres (to building) *0 metres (to retaining wall)
Rear (south):	7.5 metres	48.3 metres
Building Height		
Principal Building	7.3 metres	11.5 metres
Accessory Building	n/a	n/a
Streamside (Part 7A)		
Streamside Setbacks		
Class B (yellow-coded) Stream:	15 metres	31 metres from the high water mark

Setback and Heights Variances

- The applicant is requesting the following variances:
 - to increase the maximum building height of the RF Zone from 7.3 metres to 11.5 metres; and
 - to reduce the minimum side yard (east and west) setbacks of the RF Zone from 1.8 metres to 0 metres for retaining walls.
- The proposed building has a primary roof that consists of flat sections and a mono-sloped roof at 2/12 slope. With slopes less than 3/12, the maximum building height in the RF zone is 7.3 metres to the peak of the roof.
- The proposed variance to the building height will allow for a reasonably sized dwelling to be constructed on the property. As viewed from the street, the building height is less than the maximum building height of 7.3 metres and is consistent with the neighbourhood massing and streetscape.

- Under the Zoning By-law, retaining walls are considered *structures* and therefore, must comply with the *fencing* provisions of Part 4. General Provisions of the Zoning By-law, which require such structures comply with the height and yard restrictions of that zone. In this case, the maximum height of the retaining wall is 9 metres and it must be setback 1.8 metres from side lot lines.
- The proposed variance to the side yard (east and west) setbacks are for retaining walls that will ensure that the dwelling is geotechnically safe. The retaining walls will be located at minimum 15 metres from the closest buildings on the adjacent properties while the proposed dwelling itself will comply with the minimum building side yard setback of 1.8 metres.
- Staff support the requested variances to proceed for consideration.

Streamside Variance

- The applicant is requesting the following streamside variance:
 - to reduce the minimum setback distance for a Class B (yellow-coded) stream from 15 metres, as measured from top-of-bank, to a minimum of 31 metres from the high water mark (equivalent to a maximum of approximately 26 metres below top-of-bank).
- Adhering to the required streamside setbacks under the Zoning By-law would render the entire lot undevelopable. As this is a “lot of record” (i.e., existed prior to September 12, 2016), the amount of encroachment into the streamside setback is considered reasonable to allow for a single family dwelling to be constructed on the property.
- The applicant has provided a Geotechnical Report, an Ecosystem Development Plan (EDP) and Impact Mitigation Plan (IMP), and a *Riparian Areas Protection Regulation (RAPR)* Assessment Report in support of the proposed variance to the streamside setback. The proposed dwelling will comply with the Provincial *RAPR* setbacks and is located a minimum of 31 metres as measured from the high-water mark.
- Fencing and signage will be installed along the boundary of the Streamside Protection Area to identify it as an environmentally sensitive area where no encroachment or disturbance is allowed. The no encroachment or disturbance boundary will be established approximately 30 metres south of the north property line. A Restrictive Covenant will be registered to delineate the no encroachment or disturbance boundary, which will protect approximately 940 square metres of the south portion of the property.
- Staff support the requested variances to proceed for consideration.

DEVELOPMENT PERMITS

Sensitive Ecosystems (Streamside Areas) Development Permit Requirement

- The subject property falls within the Sensitive Ecosystems Development Permit Area (DPA) for Streamside Areas in the OCP, given the location of an existing Class B (yellow-coded) watercourse which flows south towards Boundary Bay. The Sensitive Ecosystems (Streamside Areas) Development Permit is required to protect aquatic and terrestrial ecosystems associated with streams from the impacts of development.
- In accordance with Part 7A Streamside Protection setbacks of the Zoning By-law, a Class B (yellow-coded) watercourse requires a minimum streamside setback of 15 metres for single family lots of record, as measured from the top of bank. The proposed setbacks do not comply with the requirements outlined in the Zoning By-law and therefore, a Development Variance Permit to reduce the streamside setback is required. See the Development Variance Permit section above for additional information.
- The riparian area will be protected through the registration of a Restrictive Covenant against the property to ensure safeguarding and maintenance of the Protection Area in perpetuity, in compliance with the OCP.
- An Ecosystem Development Plan, prepared by Rolf Sickmuller, *R.P. Bio.*, of Envirowest and dated May 12, 2020 was reviewed by staff and found to be generally acceptable, with some modifications to content and format of the report still required. The finalized report and recommendations will be incorporated into the Development Permit.

Sensitive Ecosystems (Green Infrastructure Areas) Development Permit Requirement

- The subject property falls within the Sensitive Ecosystems DPA for Green Infrastructure Areas in the OCP, given the location of a Biodiversity Conservation Strategy (BCS) Green Infrastructure Network (GIN) Corridor located south of the subject site. The Sensitive Ecosystems (Green Infrastructure Areas) Development Permit is required to protect environmentally sensitive and/or unique natural areas from the impacts of development.
- The City of Surrey Biodiversity Conservation Strategy (BCS) Green Infrastructure Network (GIN) map, adopted by Council on July 21, 2014 (Corporate Report No. R141; 2014), identifies a Regional BCS Corridor adjacent to the subject site, in the Sunnyside Acres BCS management area, with a High ecological value.
- The development proposal does not engage the GIN Corridor but does preserve and enhance approximately 342 square metres of riparian area outside of the GIN Corridor. This method of GIN enhancement will assist in the long-term protection of the natural features and allows the City to better achieve biodiversity at this location consistent with the guidelines contained in the BCS.
- An Ecosystem Development Plan, prepared by Rolf Sickmuller, *R.P. Bio.*, of Envirowest and dated May 12, 2020 was reviewed by staff and found to be generally acceptable, with some modifications to content and format of the report still required. The finalized report and recommendations will be incorporated into the Development Permit.

Hazard Lands (Steep Slope) Development Permit Requirement

- The subject property falls within the Hazard Lands (Steep Slope) Development Permit Area (DPA) in the OCP, as it contains steep slopes in excess of 20% gradient. The Hazard Land (Steep Slope) Development Permit is required to protect developments from hazardous conditions.
- The subject property slopes downward north to south at approximately 41 degree slope, flattening out to approximately 14 degrees near the southern base of the property.
- A geotechnical report, prepared by Mohammad Deirszadeh, Ph.D., *P. Eng.*, of GeoPacific and dated February 29, 2024 was peer reviewed by Thomas Madden and Randy Williams, *P. Eng.*, of WSP and found to be generally acceptable by the peer reviewer. The report and peer review were reviewed by staff and found to conform to the OCP Development Permit guidelines for Hazard Lands. The finalized geotechnical report will be incorporated into the Development Permit.
- The geotechnical report investigated issues related to slope stability and natural storm water drainage, from a geotechnical perspective, to determine the feasibility of development on the site and proposed recommendations to ensure the ongoing stability of the slope. The previous building design included a 9 metre tall keystone block retaining wall at the rear of the building along the slope. The updated design replaces this retaining wall with structural columns that support the cantilevered structure over the slope, lessening the load on the slope. This design is supported by the peer reviewer over the original retaining wall that was proposed.
- The consultant has determined that the development can be achieved provided that the recommendations in their report are incorporated into the overall design of the site. This includes not allowing the addition of trees on the steep slope, a perimeter drainage system that is pumped to 13 Avenue City facilities, and maintaining a "no-disturbance" and "maintenance access zone" measured 30 metres south from the north property line.
- A Section 219 Restrictive Covenant that requires the owner to develop the site in accordance with the conditions in the geotechnical report was registered as part of the subject application; however, the Restrictive Covenant is to be amended to replace the terms of the original geotechnical investigation with the updated geotechnical report, dated February 29, 2024. This is a condition of final development permit issuance.

TREES

- Rhythm Batra, ISA Certified Arborist of Mike Fadum and Associates Ltd. prepared an Arborist Assessment for the subject property. The table below provides a summary of the proposed tree retention and removal by tree species:

Table 1: Summary of Proposed Tree Preservation by Tree Species:

Tree Species	Existing	Remove	Retain
Deciduous Trees (excluding Alder and Cottonwood Trees)			
Bigleaf Maple	2	0	2
Coniferous Trees			
Western Red Cedar	1	0	1
Douglas Fir	3	0	3
Lawson Falsecypress	1	1	0
Total (excluding Alder and Cottonwood Trees)	7	1	6
Total Replacement Trees Proposed (excluding Boulevard Street Trees)		0	
Total Retained and Replacement Trees Proposed		6	
Estimated Contribution to the Green City Program		\$4,400.00	

- The Arborist Assessment states that there is a total of seven (7) mature trees on the site, and zero Alder and Cottonwood trees. It was determined that six (6) trees can be retained as part of this development proposal. The proposed tree retention was assessed taking into consideration the location of services, building footprints, road dedication and proposed lot grading.
- For those trees that cannot be retained, the applicant will be required to plant trees on a 2 to 1 replacement ratio. This will require a total of two (2) replacement trees on the site. As the Geotechnical Report recommends that no trees be planted on the steep slope area, zero replacement trees are proposed. The one tree proposed for removal is a City boulevard tree that requires removal due to the proposed dwelling, which is located as close to the property line as possible to limit construction in the steepest areas of the property.
- Parks staff assessed the tree and will require \$4,400 for the removal as contribution to the Green City Program.
- In summary, a total of six (6) trees are proposed to be retained on the site with a contribution of \$4,400 to the Green City Program.

INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report:

- Appendix I. Site Plan
- Appendix II. Summary of Tree Survey, Tree Preservation and Tree Plans
- Appendix III. Development Variance Permit No. 7918-0373-01
- Appendix IV. Initial Planning Report No. 7918-0373-00 dated June 29, 2020 (appendices available upon request)

approved by Shawn Low

Don Luymes
General Manager
Planning and Development

KS/ar



CHRISTOPHE VAISSEAU
BUILDING DESIGNER
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13048 13TH AVE

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REV	DATE	REMARKS
	MAY 21, 2022	ISSUED FOR PERMIT
	MAY 22, 2023	FORNIT RECORDS
	MAY 12, 2023	FORNIT RECORDS
	OCT 10, 2023	FORNIT RECORDS

CLIENT :	DATE :
PROJECT :	SCALE :
CONTENT :	PROJECT No. :
	SHEET No. :
	REVISION :

DATE :	OCT 2022
SCALE :	1/16" = 1'-0"
PROJECT No. :	
SHEET No. :	A 1.1
REVISION :	

GENERAL NOTES

- THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE B.C. BUILDING CODE 2018.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND WILL BE RESPONSIBLE FOR SAME.
- ALL WORK SHALL CONFORM TO THE B.C. BUILDING CODE (2018) AND ALL LOCAL MUNICIPAL CODES AND BY-LAWS.
- CONTRACTOR OR BUILDER TO VERIFY ROUGH OPENINGS OF ALL DOORS, WINDOWS, FITTINGS, AFFIXANCES, AND BUILT-IN EQUIPMENT PRIOR TO CONSTRUCTION.
- SLOPE FINISHED GRADE AWAY FROM THE BUILDING MINIMUM 1/4" TO 1" TO PROVIDE ADEQUATE DRAINAGE.
- CONCRETE STRENGTH SHALL CONFORM TO 9.3.1.1. B.C. BUILDING CODE 2018. CONFIRM WITH STRUCTURAL ENGINEER.
- ARCHITECTURAL CONCRETE TO BE WELL VENTILATED, CLEAR OF ANY FIREHOLE/COMB AND TO HAVE A SMOOTH EVEN TEXTURED FINISH.
- CONCRETE SLABS TO BE SEALED IN ACCORDANCE WITH SUBSECTION 9.1.3.7 OF THE B.C. BUILDING CODE (2018 EDITION).
- ROOF TRUSS MANUFACTURERS TO PROVIDE SHOP DRAWINGS SEALED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO INSTALLATION.
- ROOF VENTING SHALL BE 1/300 OF INSULATED CEILING SPACE. VENTS SHALL BE UNIFORMLY DISTRIBUTED.
- WALL PLATES SHALL BE #2 OR BETTER KD SPRUCE. ALL BUI BEAMS SHALL BE #2 OR BETTER KD SPRUCE. STUDS SHALL CONFORM TO RESIDENTIAL STANDARDS OF THE CURRENT B.C.B.C. CONFIRM WITH STRUCTURAL ENGINEERS.
- FRAMING TO BE ANCHORED WITH 1/2" DIA. ANCHOR BOLTS @ 4'-0" O.C. MAXIMUM OR ANCHOR STRAPS @ 4'-0" O.C. POSTS TO BE ANCHORED WITH METAL FOOT ANCHORS. CONFIRM WITH STRUCTURAL ENGINEER.
- DIMENSIONS SHOWN TO THE OUTSIDE OF BUILDING FACE ARE TO THE OUTSIDE FACE OF WALL SHEATHING.
- DOUBLE FLOOR JOISTS UNDER ALL PARALLEL PARTITIONS. PLACE JOISTS TO SUIT PLUMBING, HEATING, ETC.
- UNTELS TO BE 2 - 2" X 1" O" WITH DOUBLE PLATE ON TOP UNLESS NOTED OTHERWISE.
- ALL WOOD IN CONTACT WITH CONCRETE TO BE DAMP PROTECTED WITH 50# BUILDING FELT.
- PASTE IN ALL GYPSUM WALL BOARD (G.W.B.) IN CONFORMANCE WITH SUB SECTION 9.29.5.5 OF THE B.C. BUILDING CODE (2018 EDITION).
- 9.29.5.5 (1) - B.C.B.C. 2018 - FOR SINGLE-LAYER GYPSUM BOARD APPLICATION, NAILS SHALL BE SPACED NOT MORE THAN 180 mm O.C. ON CEILING SUPPORTS AND NOT MORE THAN 200 mm APART ALONG VERTICAL WALL SUPPORTS. EXCEPT THAT NAILS MAY BE SPACED IN PAIRS ABOUT 300 mm APART EVERY 300 mm ALONG SUCH WALL OR CEILING SUPPORTS.
- 9.29.5.5 (2) - B.C.B.C. 2018 - WHERE SINGLE-LAYER GYPSUM BOARD IS APPLIED WITH DRYWALL SCREWS, THE SCREWS SHALL BE SPACED NOT MORE THAN 300 mm O.C. ALONG SUPPORTS, EXCEPT ON VERTICAL SURFACES THE SCREWS MAY BE SPACED NOT MORE THAN 400 mm O.C. WHERE THE SUPPORTS ARE NOT MORE THAN 400 mm O.C.
- PRE-FAB. GAS FIREPLACE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND TO THE REQUIREMENTS OF THE CANADIAN GAS ASSOCIATION. INSTALL NON-COMBUSTIBLE HEARTH TO MEET THE REQUIREMENTS OF SUBSECTION 9.22.3 OF THE B.C. BUILDING CODE (2018 EDITION). FINISH MATERIALS AS PER OWNER'S SPECIFICATIONS.
- PROVIDE ATTIC ACCESS HATCHES AS PER ARTICLE 9.19.2 OF THE B.C. BUILDING CODE (2018 EDITION). ALL HATCHES TO BE MINIMUM 21.5" X 23.25" (545 mm X 590 mm)
- ELECTRICAL, PLUMBING AND VENTILATION MUST COMPLY WITH ALL RELEVANT CODES AND REGULATIONS IN ALL RESPECTS.
- EVERY EFFORT HAS BEEN MADE TO CAREFULLY PREPARE THESE DRAWINGS AND AVOID MISTAKES. HOWEVER, THE POSSIBILITY OF HUMAN ERROR DOES EXIST AND THEREFORE THE BUILDING CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, MATERIALS AND CONDITIONS SHOWN ON THE STRUCTURAL NOTES AND FLOOR PLANS AND ASSUME RESPONSIBILITY FOR ALL. BY USING THE PLANS HE ACCEPTS THAT RESPONSIBILITY.
- THE SCOPE OF THIS FRAME DESIGN DOES NOT ALLOW FOR SITE CONDITIONS WHICH MAY AFFECT THE STRUCTURAL INTEGRITY OF THE DESIGN. IT IS HIGHLY ADVISED THAT THE CONTRACTOR AND/OR OWNER ENGAGE THE SERVICES OF A PROFESSIONAL STRUCTURAL ENGINEER TO FULLY ASSES THE ABILITY OF THE STRUCTURE TO HANDLE ALL THE LOADS TO WHICH IT MAY COME IN CONTACT WITH. THE DESIGNER HAS NEITHER THE LEGAL ABILITY OR THE RESPONSIBILITY TO COUNSEL THE OWNER IN THIS REGARD.

SITE INFO

LEGAL DESCRIPTION
PLAN OF LOT 1,
SECTION 8, TOWNSHIP 11, N.W.D. PLAN BCF 42201
ZONE R2

CIVIC ADDRESS
13048 13 AVENUE
SURREY, B.C.

SITE AREA
16,022 S.F.

SITE COVERAGE
ALLOWABLE: 23% (3,687 S.F.)
PROPOSED: 21% (3,372 S.F.)

FLOOR AREA RATIO
ALLOWABLE: 5,000 S.F.
PROPOSED: 4,954 S.F.

FLOOR AREA
4TH LEVEL: 660 S.F.
ATTACHED GARAGE: 487 S.F.
3RD LEVEL: 1,582 S.F.
2ND LEVEL: 1,749 S.F.
BASEMENT LEVEL AREA OVER: 299 S.F.
COVERED AREA OVER: 179 S.F.
TOTAL AREA: 4,954 S.F.

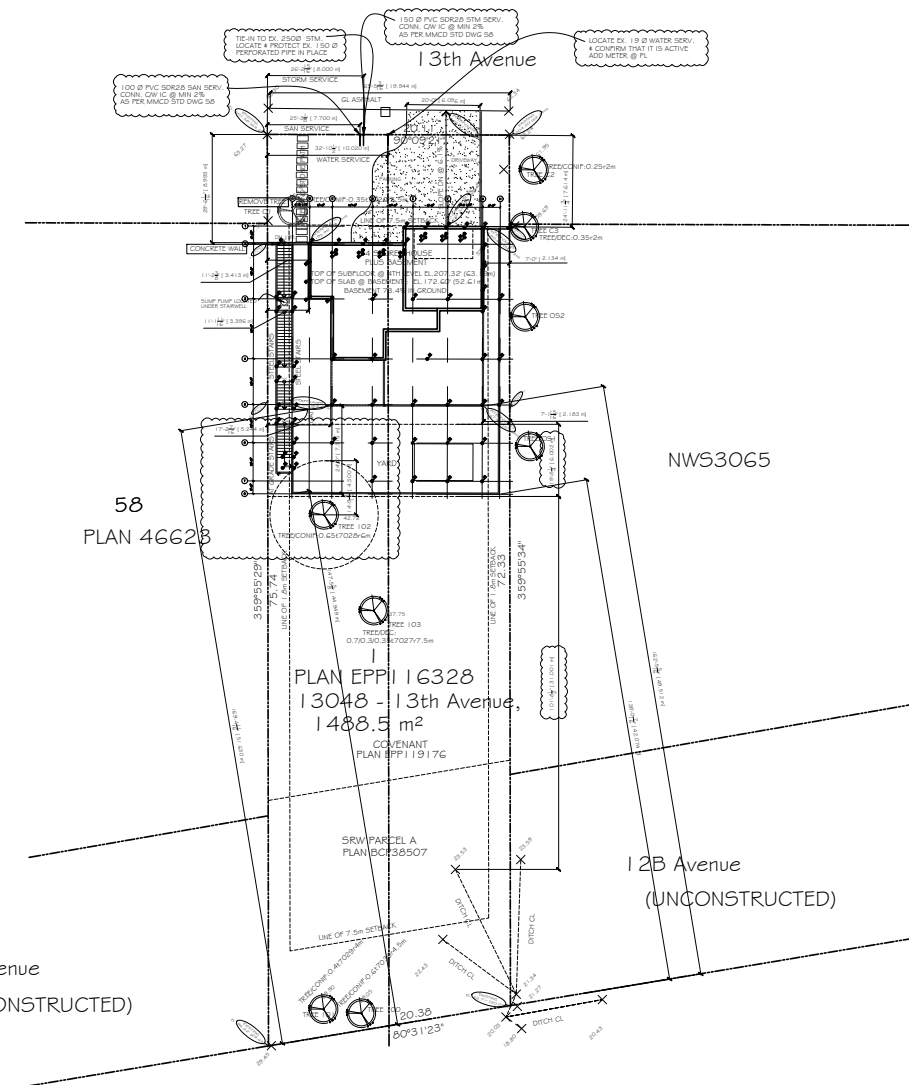
TOTAL BASEMENT FLOOR AREA: 2,048 S.F.

COVERED PATIO/BALCONY
ALLOWABLE: (5,000 S.F. * 10%) = 500.0 S.F.
PROPOSED: 679.0 S.F.

FRONT PORCH RESERVED: 160.0 S.F.
COVERED PATIO: 519.0 S.F.
TOTAL AREA: 679.0 S.F.

BUILDING HEIGHT
ALLOWABLE: 23.95' (7.3 m)
PROPOSED: 37.84' (11.53 m)

AVERAGE GRADE CALCULATION @ HOUSE
193.92 + 180.68 + 178.89 + 147.92 = EL. 182.12 (55.51 m)



BURLINGTON NORTHERN RAILWAY
PART (6.19 ACRES)
SRW PLAN 10769

SITE PLAN - 13048 13 AVE

Tree Preservation Summary

Surrey Project No: 18-0373-00


Address: 13048 13 Avenue

Registered Arborist: Rhythm Batra #PN-8932A

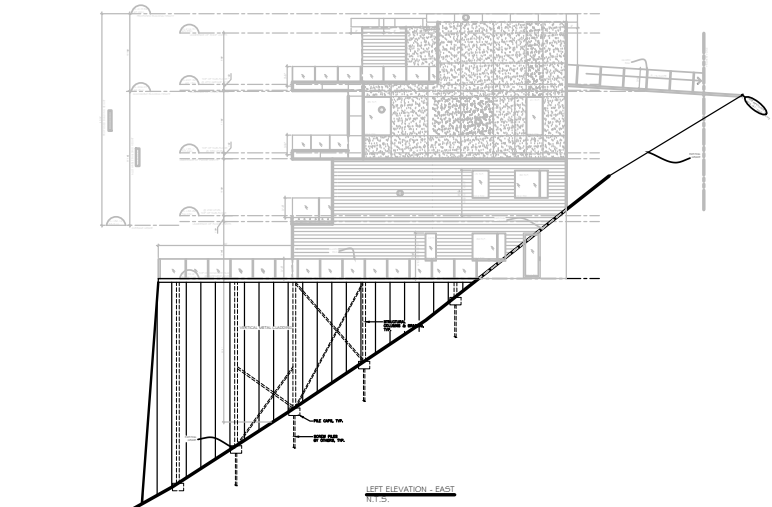
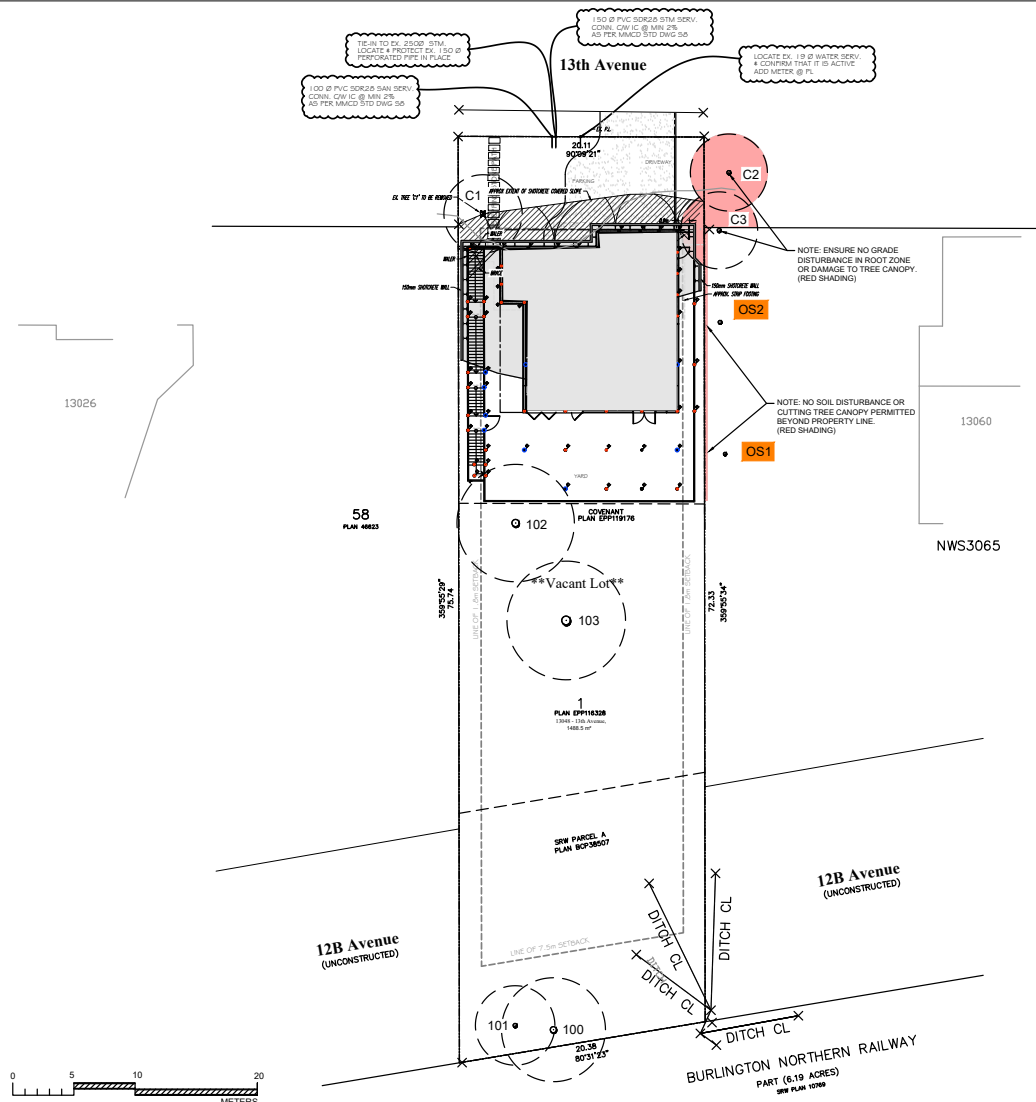
On-Site Trees	Number of Trees
Protected Trees Identified (on-site and shared trees, including trees within boulevards and proposed streets and lanes, but excluding trees in proposed open space or riparian areas)	7
Protected Trees to be Removed	1
Protected Trees to be Retained (excluding trees within proposed open space or riparian areas)	6
Total Replacement Trees Required: - Alder & Cottonwood Trees Requiring 1 to 1 Replacement Ratio 0 X one (1) = 0 - All other Trees Requiring 2 to 1 Replacement Ratio 1 X two (2) = 2	2
Replacement Trees Proposed	TBD
Replacement Trees in Deficit	TBD
Protected Trees to be Retained in Proposed [Open Space / Riparian Areas]	NA

Off-Site Trees	Number of Trees
Protected Off-Site Trees to be Removed	0
Total Replacement Trees Required: - Alder & Cottonwood Trees Requiring 1 to 1 Replacement Ratio 0 X one (1) = 0 - All other Trees Requiring 2 to 1 Replacement Ratio 0 X two (2) = 0	0
Replacement Trees Proposed	NA
Replacement Trees in Deficit	NA

Summary report and plan prepared and submitted by: Mike Fadum and Associates Ltd.

Signature of Arborist: 	Date: March 28, 2024
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LEGEND	
	TREE TO BE RETAINED
	TREE TO BE REMOVED
	MINIMUM NO DISTURBANCE ZONE
	TREE LOCATIONS TAKEN FROM PREVIOUS SURVEY

NO.	DATE	BY	REVISION
1	JAN11/15	MK	REVISED RETAINING WALLS
2	APR17/23	MK	UPDATED SURVEY & REVISED SITE PLAN
3	JUN09/23	MK	REVISIONS
4	DEC09/23	MK	SITE PLAN AND ELEVATIONS
5	MAR11/24	MK	EXCAVATION PLAN

NO.	DATE	BY	REVISION
6	MAR22/24	MK	EXCAVATION PLAN

MIKE FADUM AND ASSOCIATES LTD.
VEGETATION CONSULTANTS

#105, 8277 129 St.
 Surrey, British Columbia
 V3W 0A6
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PROJECT TITLE
13048 13 AVENUE
SURREY, B.C.

SHEET TITLE
T1 - TREE REMOVAL AND PRESERVATION PLAN

CLIENT _____

DRAWN MK
 SCALE AS SHOWN
 DATE DECEMBER 18, 2017

T-1
 SHEET 1 OF 2

(the "City")

DEVELOPMENT VARIANCE PERMIT

NO.: 7918-0373-01

Issued To:

(the "Owners")

Address of Owner:

1. This development variance permit is issued subject to compliance by the Owner with all statutes, by-laws, orders, regulations or agreements, except as specifically varied by this development variance permit.
2. This development variance permit applies to that real property including land with or without improvements located within the City of Surrey, with the legal description and civic address as follows:

Parcel Identifier: 031-696-244
Lot 1 Section 8 Township 1 New Westminster District Plan EPP116328
13048 - 13 Avenue

(the "Land")

3. Surrey Zoning By-law, 1993, No. 12000, as amended is varied as follows:
 - (a) In Section G.1(b) Height of Buildings of Part 16 "Single Family Residential Zone (RF)", the maximum building height for of any portion of a principal building with a roof slope of less than 1:4 is increased from 7.3 metres to 11.5 metres;
 - (b) In Section F. Yards and Setbacks of Part 16 "Single Family Residential Zone (RF)", the minimum setback for buildings and structures is reduced from 1.8 metres to 0 metres for the retaining walls on each side lot line;
 - (c) In the table in Section B.2 of Part 7A "Streamside Protection", the minimum distance from top of bank for a "Natural Class B Stream" (yellow-coded) is reduced from 15.0 metres, as measured from top-of-bank, to a minimum of 31 metres from the high water mark (equivalent to a maximum of approximately 26 metres below top-of-bank).
4. This development variance permit applies to only that portion of the buildings and structures on the Land shown on Schedule A and Schedule B which are attached hereto

and forms part of this development variance permit. This development variance permit does not apply to additions to, or replacement of, any of the existing buildings shown on attached Schedule A or Schedule B which is attached hereto and forms part of this development variance permit.

5. The Land shall be developed strictly in accordance with the terms and conditions and provisions of this development variance permit.
6. This development variance permit shall lapse if the Owner does not substantially start any construction with respect to which this development variance permit is issued, within two (2) years after the date this development variance permit is issued.
7. The terms of this development variance permit or any amendment to it, are binding on all persons who acquire an interest in the Land.
8. This development variance permit is not a building permit.

AUTHORIZING RESOLUTION PASSED BY THE COUNCIL, THE DAY OF , 20 .
ISSUED THIS DAY OF , 20 .

Mayor – Brenda Locke

City Clerk and Director of Legislative
Services – Jennifer Ficocelli



CHRISTOPHE VAISSEAU
BUILDING DESIGNER
T: 604.614.6627
E: chrivais@cvdesigns.ca
WWW.CVDESIGNS.CA

13048 13TH AVE

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REV	DATE	REMARKS
1	MAY 21, 2022	ISSUED FOR PERMIT
2	MAY 22, 2023	FORNIT RECORDS
3	MAY 12, 2023	FORNIT RECORDS
4	OCT 10, 2023	FORNIT RECORDS

CLIENT :	DATE :
PROJECT :	SCALE :
CONTENT :	PROJECT No. :
	SHEET No. :
	REVISION :

DATE :	OCT 2022
SCALE :	1/16" = 1'-0"
PROJECT No. :	
SHEET No. :	A 1.1
REVISION :	

GENERAL NOTES

- THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE B.C. BUILDING CODE 2018.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND WILL BE RESPONSIBLE FOR SAME.
- ALL WORK SHALL CONFORM TO THE B.C. BUILDING CODE (2018) AND ALL LOCAL MUNICIPAL CODES AND BY-LAWS.
- CONTRACTOR OR BUILDER TO VERIFY ROUGH OPENINGS OF ALL DOORS, WINDOWS, FITTINGS, AFFIXATIONS, AND BUILT-IN EQUIPMENT PRIOR TO CONSTRUCTION.
- SLOPE FINISHED GRADE AWAY FROM THE BUILDING MINIMUM 1/4" TO 1" TO PROVIDE ADEQUATE DRAINAGE.
- CONCRETE STRENGTH SHALL CONFORM TO 9.3.1 B.C. BUILDING CODE 2018 AND CONFORM WITH STRUCTURAL ENGINEER.
- ARCHITECTURAL CONCRETE TO BE WELL VENTILATED, CLEAR OF ANY HONEYCOMB AND TO HAVE A SMOOTH EVEN TEXTURED FINISH.
- CONCRETE SLABS TO BE SEALED IN ACCORDANCE WITH SUBSECTION 9.13.4.7 OF THE B.C. BUILDING CODE (2018 EDITION).
- ROOF TRUSS MANUFACTURERS TO PROVIDE SHOP DRAWINGS SEALED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO INSTALLATION.
- ROOF VENTING SHALL BE 1/300 OF INSULATED CEILING SPACE. VENTS SHALL BE UNIFORMLY DISTRIBUTED.
- WALL PLANTS SHALL BE #2 OR BETTER KD SPRUCE. ALL BUI BEAMS SHALL BE #2 OR BETTER KD SPRUCE. STUDS SHALL CONFORM TO RESIDENTIAL STANDARDS OF THE CURRENT B.C.B.C. CONFORM WITH STRUCTURAL ENGINEER.
- FRAMING TO BE ANCHORED WITH 1/2" DIA. ANCHOR BOLTS @ 4'-0" O.C. MAXIMUM OR ANCHOR STRAPS @ 4'-0" O.C. POSTS TO BE ANCHORED WITH METAL FOOT ANCHORS. CONFORM WITH STRUCTURAL ENGINEER.
- DIMENSIONS SHOWN TO THE OUTSIDE OF BUILDING FACE ARE TO THE OUTSIDE FACE OF WALL SHEATHING.
- DOUBLE FLOOR JOISTS UNDER ALL PARALLEL PARTITIONS. PLACE JOISTS TO SUIT PLUMBING, HEATING, ETC.
- INLETS TO BE 2 - 2" X 1'0" WITH DOUBLE PLATE ON TOP UNLESS NOTED OTHERWISE.
- ALL WOOD IN CONTACT WITH CONCRETE TO BE DAMP PROTECTED WITH 50# BUILDING FELT.
- PASTEN ALL GYPSUM WALL BOARD (G.W.B.) IN CONFORMANCE WITH SUB SECTION 9.29.5.5 OF THE B.C. BUILDING CODE (2018 EDITION).
- 9.29.5.5 (1) - B.C.B.C. 2018 - FOR SINGLE-LAYER GYPSUM BOARD APPLICATION, NAILS SHALL BE SPACED NOT MORE THAN 180 mm O.C. ON CEILING SUPPORTS AND NOT MORE THAN 202 mm APART ALONG VERTICAL WALL SUPPORTS. EXCEPT THAT NAILS MAY BE SPACED IN PAIRS ABOUT 30 mm APART EVERY 300 mm ALONG SUCH WALL OR CEILING SUPPORTS.
- 9.29.5.5 (2) - B.C.B.C. 2018 - WHERE SINGLE-LAYER GYPSUM BOARD IS APPLIED WITH DRYWALL SCREWS, THE SCREWS SHALL BE SPACED NOT MORE THAN 300 mm O.C. ALONG SUPPORTS, EXCEPT ON VERTICAL SURFACES THE SCREWS MAY BE SPACED NOT MORE THAN 400 mm O.C. WHERE THE SUPPORTS ARE NOT MORE THAN 400 mm O.C.
- PRE-FAB. GAS FIREPLACE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND TO THE REQUIREMENTS OF THE CANADIAN GAS ASSOCIATION. INSTALL NON-COMBUSTIBLE HEARTH TO MEET THE REQUIREMENTS OF SUBSECTION 9.22.3 OF THE B.C. BUILDING CODE (2018 EDITION). FINISH MATERIALS AS PER OWNER'S SPECIFICATIONS.
- PROVIDE ATTIC ACCESS HATCHES AS PER ARTICLE 9.19.2 OF THE B.C. BUILDING CODE (2018 EDITION). ALL HATCHES TO BE MINIMUM 21.5" X 23.25" (545 mm X 590 mm)
- ELECTRICAL, PLUMBING AND VENTILATION MUST COMPLY WITH ALL RELEVANT CODES AND REGULATIONS IN ALL RESPECTS.
- EVERY EFFORT HAS BEEN MADE TO CAREFULLY PREPARE THESE DRAWINGS AND AVOID MISTAKES. HOWEVER, THE POSSIBILITY OF HUMAN ERROR DOES EXIST AND THEREFORE THE BUILDING CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS, MATERIALS AND CONDITIONS SHOWN ON THE STRUCTURAL NOTES AND FLOOR PLANS AND ASSUME RESPONSIBILITY FOR ALL BY USING THE PLANS HE ACCEPTS THAT RESPONSIBILITY.
- THE SCOPE OF THIS HOME DESIGN DOES NOT ALLOW FOR SITE CONDITIONS WHICH MAY AFFECT THE STRUCTURAL INTEGRITY OF THE DESIGN. IT IS HIGHLY ADVISED THAT THE CONTRACTOR AND/OR OWNER ENGAGE THE SERVICES OF A PROFESSIONAL STRUCTURAL ENGINEER TO FULLY ASSES THE ABILITY OF THE STRUCTURE TO HANDLE ALL THE LOADS TO WHICH IT MAY COME IN CONTACT WITH. THE DESIGNER HAS NEITHER THE LEGAL ABILITY OR THE RESPONSIBILITY TO COUNSEL THE OWNER IN THIS REGARD.

SITE INFO

LEGAL DESCRIPTION
PLAN OF LOT 1,
SECTION 8, TOWNSHIP 11, N.W.D. PLAN BCF 42201
ZONE R2

CIVIC ADDRESS
13048 13 AVENUE
SURREY, B.C.

SITE AREA
16,022 S.F.

SITE COVERAGE
ALLOWABLE: 23% (3,687 S.F.)
PROPOSED: 21% (3,372 S.F.)

FLOOR AREA RATIO
ALLOWABLE: 5,000 S.F.
PROPOSED: 4,954 S.F.

FLOOR AREA
4TH LEVEL: 660 S.F.
ATTACHED GARAGE: 487 S.F.
3RD LEVEL: 1,582 S.F.
2ND LEVEL: 1,749 S.F.
BASEMENT LEVEL AREA OVER: 299 S.F.
COVERED AREA OVER: 179 S.F.
TOTAL AREA: 4,954 S.F.

TOTAL BASEMENT FLOOR AREA: 2,048 S.F.

COVERED PATIO/BALCONY
ALLOWABLE: (5,000 S.F. * 10%) = 500.0 S.F.
PROPOSED: 679.0 S.F.

FRONT PORCH RESERVED: 160.0 S.F.
COVERED PATIO: 519.0 S.F.

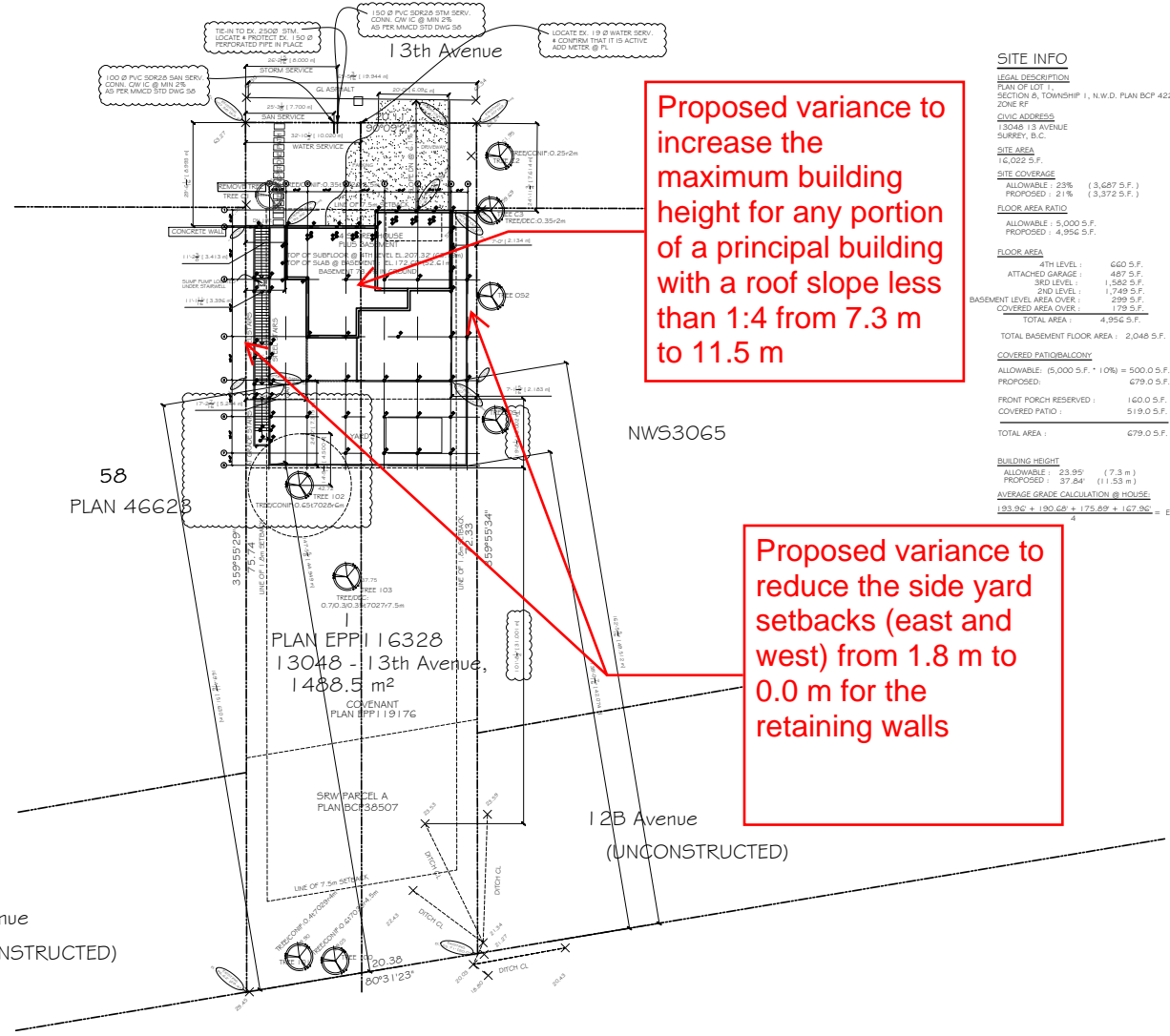
TOTAL AREA: 679.0 S.F.

BUILDING HEIGHT
ALLOWABLE: 23.95' (7.3 m)
PROPOSED: 37.84' (11.53 m)

AVERAGE GRADE CALCULATION @ HOUSE
193.92 + 180.68 + 175.89 + 147.92 = EL. 182.12 (55.51 m)

Proposed variance to increase the maximum building height for any portion of a principal building with a roof slope less than 1:4 from 7.3 m to 11.5 m

Proposed variance to reduce the side yard setbacks (east and west) from 1.8 m to 0.0 m for the retaining walls

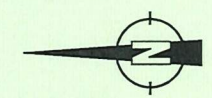
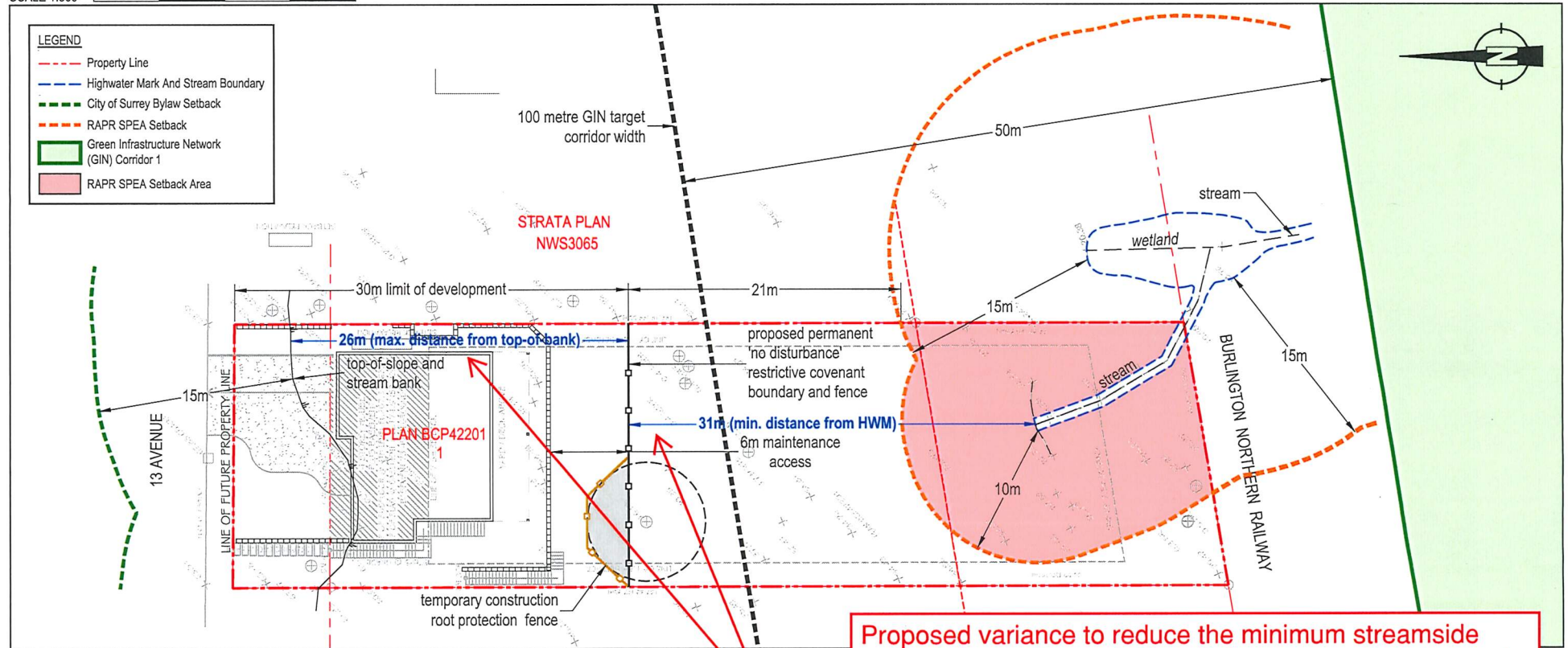


BURLINGTON NORTHERN RAILWAY
PART (6.19 ACRES)
SRW PLAN 10769

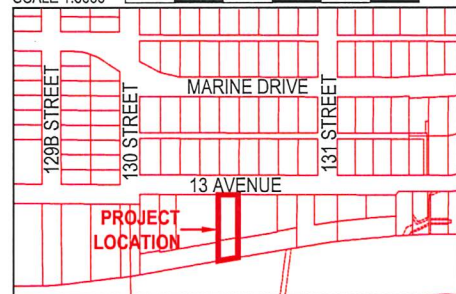
Schedule B

PLAN
SCALE 1:300

LEGEND	
	Property Line
	Highwater Mark And Stream Boundary
	City of Surrey Bylaw Setback
	RAPR SPEA Setback
	Green Infrastructure Network (GIN) Corridor 1
	RAPR SPEA Setback Area



LOCATION
SCALE 1:5000



Proposed variance to reduce the minimum streamside setback from a Natural Class B Stream on a lot of record from 15 metres, as measured from top-of-bank, to a minimum of 31 metres from the high water mark (equivalent to 26 metres below the top-of-bank).

- REFERENCE DRAWINGS**
1. Email: A11-13048-13th Ave May 5-20.dwg, Received May 11, 2020; Lorne Ebenal.
 2. File No. 201606. "B.C. Land Surveyors Plan Showing Location of Trees and Spot Elevations on Lot 1, Section 8, Township 1, NWD Plan BCP42201". February 08, 2016. John Bresnick and Associates.
 3. 2019 Legal Base from City of Surrey.

MR. HUNDAL

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Surrey, BC

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Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2

office: 604-944-0502
facsimile: 604-944-0507
saper-vedere@enviowest.ca

SETBACKS				
DESIGN: RWS	DRAWN: CEV	CHECKED: RWS	REVISION: 08	REVISION DATE: June 22, 2020
SCALE: As Shown			DRAWING NUMBER: 2195-01-02	
DATE: January 18, 2018				

DATE: 2020-06-22 - 1:49pm
FILE: C:\Users\lucy\Documents\Projects\2020\Surrey\White Red\2195-01\Wd\CAD\Final\2195-01-02R08 Setbacks.dwg
LAYOUT: 2195-01-02

APPENDIX IV

**City of Surrey
PLANNING & DEVELOPMENT REPORT**

Application No.: 7918-0373-00

Planning Report Date: June 29, 2020

PROPOSAL:

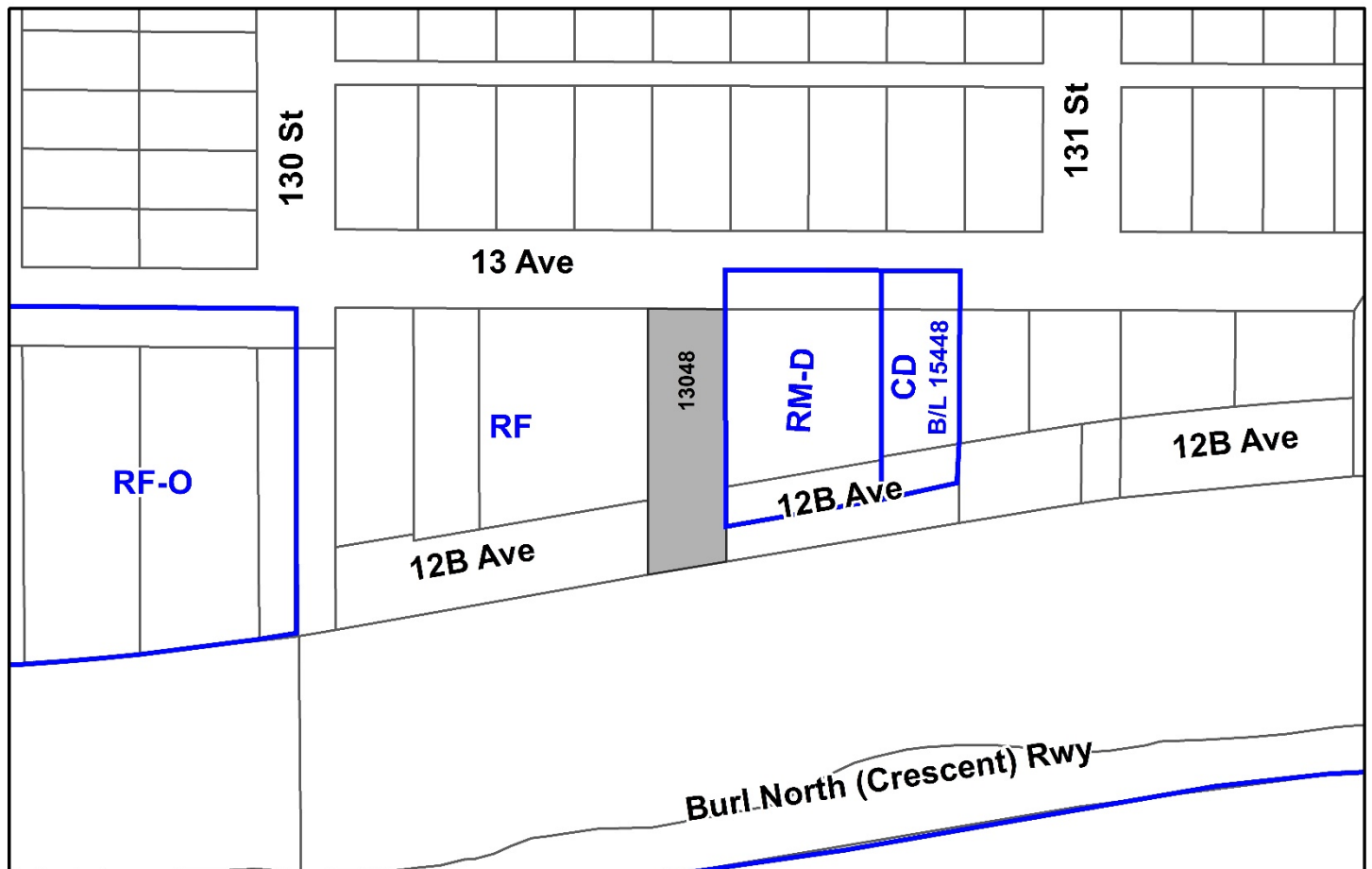
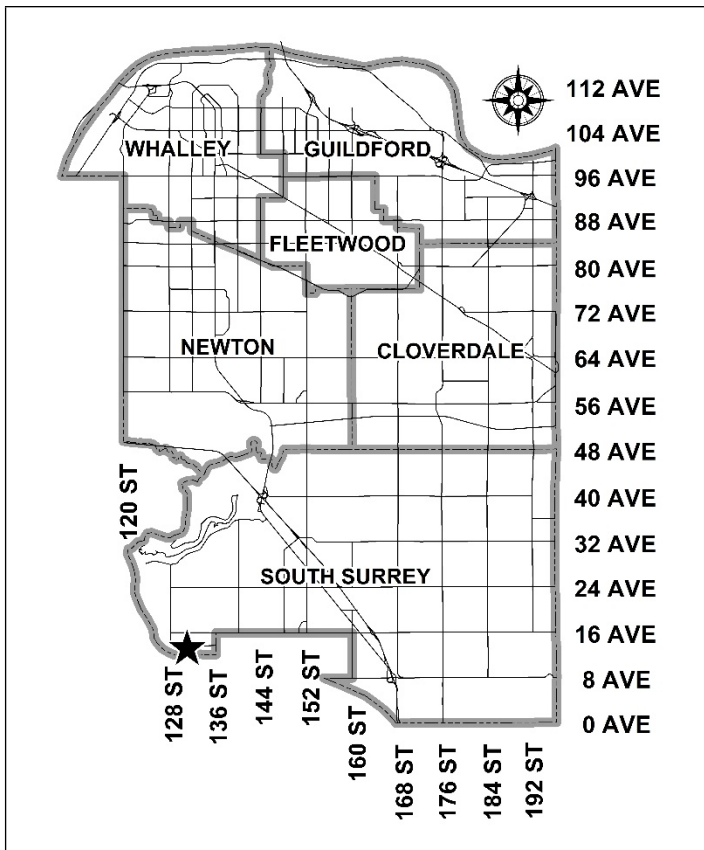
- **Development Permit**
- **Development Variance Permit**

to permit the development of a new single family dwelling on a lot of record.

LOCATION: 13048 - 13 Avenue

ZONING: RF

OCP DESIGNATION: Urban



RECOMMENDATION SUMMARY

- Approval to draft Development Permit for Hazard Lands and Sensitive Ecosystems.
- Approval for Development Variance Permit to proceed to Public Notification.

DEVIATION FROM PLANS, POLICIES OR REGULATIONS

- The applicant is proposing to reduce the minimum streamside setback from the Top of Bank of a "Natural Class B Stream," to increase the building height, and to reduce the side yard (east and west) setbacks.

RATIONALE OF RECOMMENDATION

- A Class B watercourse engages the southern boundary of the property. The subject property is located upslope of the watercourse and the top-of-bank is beyond the north property line.
- Adhering to the required streamside setbacks under the Zoning By-law would render the entire lot undevelopable. As this is a "lot of record" (i.e., existed prior to September 12, 2016), the amount of encroachment into the streamside setback is considered reasonable to allow for a single family dwelling to be constructed on the property.
- The applicant has provided a Geotechnical Report, an Ecosystem Development Plan (EDP) and Impact Mitigation Plan (IMP), and a *Riparian Areas Protection Regulation (RAPR)* Assessment Report in support of the proposed variance to the streamside setback. The proposed dwelling will comply with the Provincial *RAPR* setbacks and is a minimum of 31 metres as measured from the high-water mark.
- Fencing and signage will be installed along the boundary of the Streamside Protection Area to identify it as an environmentally sensitive area where no encroachment or disturbance is allowed. The no encroachment or disturbance boundary will be established approximately 20 metres south of the north property line. A Restrictive Covenant will be registered to delineate the no encroachment or disturbance boundary, which will protect approximately 940 square metres of the south portion of the property.
- The proposed variance to the building height allows for a reasonable sized dwelling to be constructed on the property. As viewed from the street, the building height is less than the maximum building height of 7.3 metres.
- The proposed variance to the side yard (east and west) setbacks are for retaining walls that will ensure that the dwelling is geotechnically safe. The retaining walls will be located at minimum 15 metres from the closest building on the adjacent properties while the proposed dwelling itself will comply with the minimum building side yard setback of 1.8 metres.

RECOMMENDATION

The Planning & Development Department recommends that:

1. Council authorize staff to draft Development Permit No. 7918-0373-00 for Hazard Lands (Steep Slopes) and Sensitive Ecosystems (Streamside Areas and Green Infrastructure Areas), generally in accordance with the attached drawings (Appendix I) and the finalized Ecosystem Development Plan and Geotechnical Report.
2. Council approve Development Variance Permit No. 7918-0373-00 (Appendix IV) varying the following, to proceed to Public Notification:
 - (a) to increase the maximum building height of the RF Zone allowed from 7.3 metres to 11.5 metres;
 - (b) to reduce the minimum east and west side yard setbacks of the RF Zone from 1.8 metres to 0 metres for the retaining walls on each side lot line; and
 - (c) to reduce the minimum streamside setback distance from top of bank for a Class B (yellow-coded) stream from 15 metres, as measured from top-of-bank, to a minimum of 31 metres from the high water mark (equivalent to a maximum of approximately 26 metres below top-of-bank).
3. Council instruct staff to resolve the following issues prior to final approval:
 - (a) ensure that all engineering requirements and issues including restrictive covenants, dedications, and rights-of-way where necessary, are addressed to the satisfaction of the General Manager, Engineering;
 - (b) submission of a finalized landscaping plan and landscaping cost estimate to the specifications and satisfaction of the Planning and Development Department;
 - (c) submission of a finalized tree survey and a statement regarding tree preservation to the satisfaction of the City Landscape Architect;
 - (d) the applicant satisfy the deficiency in tree replacement on the site, to the satisfaction of the Planning and Development Department;
 - (e) submission of a finalized Ecosystem Development Plan and Impact Mitigation Plan to the satisfaction of City staff;
 - (f) completion of the road closure and acquisition of a portion of 13 Avenue;
 - (g) registration of a Section 219 Restrictive Covenant for Engineered foundation and slope stability, and to establish a "no build" and "no disturbance" area at the geotechnical setback line based on the geotechnical report prepared by GeoPacific Consultants Ltd., dated February 26, 2020; and
 - (h) registration of a Section 219 Restrictive Covenant to protect the environmental setback area.

SITE CONTEXT & BACKGROUND

Direction	Existing Use	OCP	Existing Zone
Subject Site	Vacant single family property	Urban	RF
North (Across 13 Avenue):	Single family property	Urban	RF
East:	Duplex	Urban	RM-D
South:	Burlington Northern Railway	Urban	RF
West:	Single family dwelling	Urban	RF

Context & Background

- The subject property is 1,340 square metres in size, designated Urban in the Official Community Plan and zoned "Single Family Residential Zone (RF).
- The property is currently vacant and is encumbered by a Class B (yellow-coded) watercourse on the south portion of the property.

DEVELOPMENT PROPOSAL**Planning Considerations**

- The applicant is proposing to construct a new single family dwelling, which is subject to a Development Permit for Hazard Lands (Steep Slopes) and Sensitive Ecosystems (Streamside Areas and Green Infrastructure Areas).
- The streamside setback for the Class B (yellow-coded) watercourse is located within 13 Avenue and therefore, the proposal also requires a variance to reduce the streamside setback from 15 metres, as measured from top-of-bank, to a minimum of 31 metres from the high water mark (equivalent to a maximum of 26 metres below top-of-bank). The applicant is also proposing to increase the allowable building height for a roof with slopes less than 3/12 from 7.3 metres to 11.5 metres, and to reduce the side yard (east and west) setbacks from 1.8 metres to 0 metres for retaining walls.

	Proposed
Lot Area	
Gross Site Area:	1,340 square metres
Road Purchase Area:	147 square metres
Undevelopable Area:	n/a
Net Site Area:	1,487 square metres

Referrals

Engineering:	The Engineering Department has no objection to the project as outlined in Appendix II.
Parks, Recreation & Culture:	The applicant is required to provide compensation to the Green City Program for the removal of two (2) City trees.

Transportation Considerations

- The applicant proposes to drill soil anchors to support the new single family dwelling within what is currently 13 Avenue road right-of-way. In order to utilize 13 Avenue, the applicant is required to purchase approximately 147 square metres of road right-of-way from the City. The applicant is required to complete a road closure and acquisition application prior to issuance of the associated Development Permit and Development Variance Permit, to purchase that portion of 13 Avenue.
- The Engineering Department has no objections to the partial road closure and acquisition application.

Sustainability Considerations

- The applicant will meet all of the typical sustainable development criteria, as indicated in the Sustainable Development Checklist.

POLICY & BY-LAW CONSIDERATIONS

Regional Growth Strategy

- The subject property is designated "General Urban" in the Metro Vancouver Regional Growth Strategy.

Official Community Plan

Land Use Designation

- The subject property is designated "Urban" in the Official Community Plan.

Themes/Policies

- The proposal was prepared and reviewed by Qualified Professionals, and includes a Geotechnical Report, Ecosystem Development Plan, Riparian Areas Regulation (RAR) Assessment Report, and Arborist Report (*D2.2, 2.4, 2.6, 2.7*).
- The applicant is proposing to plant approximately 340 square metres of native species to preserve and enhance the riparian area (*D1.8, 1.9*).

Zoning By-law

- The table below provides an analysis of the development proposal in relation to the requirements of the Zoning By-law, including the "Single Family Residential Zone (RF)", streamside setbacks and parking requirements.

RF Zone (Part 16)	Permitted and/or Required	Proposed
Yards and Setbacks		
Front Yard (north):	7.5 metres	7.5 metres (after partial road closure)
Side Yard (east):	1.8 metres	2.1 metres (to building) *0 metres (to retaining wall)
Side Yard (west):	1.8 metres	3.3 metres (to building) *0 metres (to retaining wall)
Rear (south):	7.5 metres	48.3 metres
Building Height		
Principal Building	7.3 metres	11.5 metres
Accessory Building	n/a	n/a
Streamside (Part 7A)		
Streamside Setbacks		
Class B (yellow-coded) Stream:	15 metres	31 metres from the high water mark

Setback and Heights Variances

- The applicant is requesting the following variances:
 - to increase the maximum building height of the RF Zone from 7.3 metres to 11.5 metres.
 - to reduce the minimum side yard (east and west) setbacks of the RF Zone from 1.8 metres to 0 metres for retaining walls.
- The proposed building has a primary roof that consists of flat sections and a mono-sloped roof at 2/12 slope. With slopes less than 3/12, the max building height is 7.3 metres to the peak of the roof.
- The proposed variance to the building height will allow for a reasonably sized dwelling to be constructed on the property. As viewed from the street, the building height is less than the maximum building height of 7.3 metres and is consistent with the neighbourhood streetscape.

- Under the Zoning By-law, retaining walls are considered *structures* and therefore, must comply with the *fencing* provisions of Part 4. General Provisions of the Zoning By-law, which require such structures comply with the height and yard restrictions of that zone. In this case, the maximum height of the retaining wall is 9 metres and it must be setback 1.8 metres from side lot lines.
- The proposed variance to the side yard (east and west) setbacks are for retaining walls that will ensure that the dwelling is geotechnically safe. The retaining walls will be located at minimum 15 metres from the closest building on the adjacent properties while the proposed dwelling itself will comply with the minimum building side yard setback of 1.8 metres.
- Staff support the requested variances to proceed for consideration.

Streamside Variance

- The applicant is requesting the following streamside variance:
 - to reduce the minimum setback distance for a Class B (yellow-coded) stream from 15 metres, as measured from top-of-bank, to a minimum of 31 metres from the high water mark (equivalent to a maximum of approximately 26 metres below top-of-bank).
- Adhering to the required streamside setbacks under the Zoning By-law would render the entire lot undevelopable. As this is a “lot of record” (i.e., existed prior to September 12, 2016), the amount of encroachment into the streamside setback is considered reasonable to allow for a single family dwelling to be constructed on the property.
- The proposed variance to the streamside setback would allow the applicant to construct a new single family dwelling on the property.
- The applicant has provided a Geotechnical Report, an Ecosystem Development Plan (EDP) and Impact Mitigation Plan (IMP), and a *Riparian Areas Protection Regulation (RAPR)* Assessment Report in support of the proposed variance to the streamside setback. The proposed dwelling will comply with the Provincial *RAPR* setbacks and is a minimum of 31 metres as measured from the high-water mark.
- Fencing and signage will be installed along the boundary of the Streamside Protection Area to identify it as an environmentally sensitive area where no encroachment or disturbance is allowed. The no encroachment or disturbance boundary will be established approximately 20 metres south of the north property line. A Restrictive Covenant will be registered to delineate the no encroachment or disturbance boundary, which will protect approximately 940 square metres of the south portion of the property.
- Staff support the requested variances to proceed for consideration.

DEVELOPMENT PERMITS

Sensitive Ecosystems (Streamside Areas) Development Permit Requirement

- The subject property falls within the Sensitive Ecosystems Development Permit Area (DPA) for Streamside Areas in the OCP, given the location of an existing Class B (yellow-coded) watercourse which flows south towards Boundary Bay. The Sensitive Ecosystems (Streamside Areas) Development Permit is required to protect aquatic and terrestrial ecosystems associated with streams from the impacts of development.
- In accordance with Part 7A Streamside Protection setbacks of the Zoning By-law, a Class B (yellow-coded) watercourse requires a minimum streamside setback of 15 metres for single family lots of record, as measured from the top of bank. The proposed setbacks do not comply with the requirements outlined in the Zoning By-law and therefore, a Development Variance Permit to reduce the streamside setback is required. See the Development Variance Permit section above for additional information.
- The riparian area will be protected through the registration of a Restrictive Covenant against the property to ensure safeguarding and maintenance of the Protection Area in perpetuity, in compliance with the OCP.
- An Ecosystem Development Plan, prepared by Rolf Sickmuller, *R.P. Bio.*, of Envirowest and dated May 12, 2020 was reviewed by staff and found to be generally acceptable, with some modifications to content and format of the report still required. The finalized report and recommendations will be incorporated into the Development Permit.

Sensitive Ecosystems (Green Infrastructure Areas) Development Permit Requirement

- The subject property falls within the Sensitive Ecosystems DPA for Green Infrastructure Areas in the OCP, given the location of a Biodiversity Conservation Strategy (BCS) Green Infrastructure Network (GIN) Corridor located south of the subject site. The Sensitive Ecosystems (Green Infrastructure Areas) Development Permit is required to protect environmentally sensitive and/or unique natural areas from the impacts of development.
- The City of Surrey Biodiversity Conservation Strategy (BCS) Green Infrastructure Network (GIN) map, adopted by Council on July 21, 2014 (Corporate Report No. R141; 2014), identifies a Regional BCS Corridor adjacent to the subject site, in the Sunnyside Acres BCS management area, with a High ecological value.
- The development proposal does not engage the GIN Corridor but does preserve and enhance approximately 342 square metres of riparian area outside of the GIN Corridor. This method of GIN enhancement will assist in the long-term protection of the natural features and allows the City to better achieve biodiversity at this location consistent with the guidelines contained in the BCS.
- An Ecosystem Development Plan, prepared by Rolf Sickmuller, *R.P. Bio.*, of Envirowest and dated May 12, 2020 was reviewed by staff and found to be generally acceptable, with some modifications to content and format of the report still required. The finalized report and recommendations will be incorporated into the Development Permit.

Hazard Lands (Steep Slope) Development Permit Requirement

- The subject property falls within the Hazard Lands (Steep Slope) Development Permit Area (DPA) in the OCP, as it contains steep slopes in excess of 20% gradient. The Hazard Land (Steep Slope) Development Permit is required to protect developments from hazardous conditions.
- The subject property slopes down to the south at approximately 41 degree slope, flattening out to approximately 14 degrees near the southern base of the property.
- A geotechnical report, prepared by Mohammad Deirszadeh, Ph.D., *P. Eng.*, of GeoPacific and dated February 26, 2020 was peer reviewed by Thomas Madden and Randy Williams, *P. Eng.*, of Golder Associates Ltd. and found to be generally acceptable by the peer reviewer. The report and peer review were reviewed by staff and found to conform to the OCP Development Permit guidelines for Hazard Lands. The finalized geotechnical report will be incorporated into the Development Permit.
- The geotechnical report investigated issues related to slope stability and natural storm water drainage, from a geotechnical perspective, to determine the feasibility of development on the site and proposed recommendations to ensure the ongoing stability of the slope.
- The consultant has determined that the development can be achieved provided that the recommendations in their report are incorporated into the overall design of the site. This includes not allowing the addition of trees on the steep slope, a perimeter drainage system that is pumped to 13 Avenue City facilities, and maintaining a "no-disturbance" and "maintenance access zone" measured 30 metres south from the north property line.
- Registration of a Section 219 Restrictive Covenant that requires the owner to develop the site in accordance with the conditions in the geotechnical report is required as a condition of final development permit issuance.
- At Building Permit stage, further geotechnical calculations and analyses will be required and the Building Division will require Letters of Assurance from a geotechnical engineer to ensure that the building plans comply with the recommendations in the approved geotechnical report.

TREES

- Mike Fadum, ISA Certified Arborist of Mike Fadum and Associates Ltd. prepared an Arborist Assessment for the subject property. The table below provides a summary of the tree retention and removal by tree species:

Table 1: Summary of Tree Preservation by Tree Species:

Tree Species	Existing	Remove	Retain
Alder and Cottonwood Trees			
Alder/Cottonwood	3	0	3
Deciduous Trees (excluding Alder and Cottonwood Trees)			
Bigleaf Maple	2	1	1
Coniferous Trees			
Lawson Falsecypress	1	1	0
Western Red Cedar	1	1	0
Douglas Fir	3	0	3
Total (excluding Alder and Cottonwood Trees)	7	3	4
Total Replacement Trees Proposed (excluding Boulevard Street Trees)		0	
Total Retained and Replacement Trees		4	
Contribution to the Green City Program		\$9,600	

- The Arborist Assessment states that there is a total of seven (7) mature trees on the site, excluding Alder and Cottonwood trees. Three (3) existing trees, approximately 30% of the total trees on the site, are Alder and Cottonwood trees. It was determined that seven (7) trees (including Alder and Cottonwood) can be retained as part of this development proposal. The proposed tree retention was assessed taking into consideration the location of services, building footprints, road dedication and proposed lot grading.
- For those trees that cannot be retained, the applicant will be required to plant trees on a 1 to 1 replacement ratio for Alder and Cottonwood trees, and a 2 to 1 replacement ratio for all other trees. This will require a total of six (6) replacement trees on the site. As the Geotechnical Report recommends that no trees be planted on the steep slope, zero replacement trees are proposed. Of the three (3) trees proposed for removal, two (2) trees are City boulevard trees.
- Parks staff assessed these trees and will require \$4,400 per tree for their removal as contribution to the Green City Program. This contribution will satisfy the requirements for four (4) of the six required replacement trees. Therefore, the deficit of two (2) replacement trees will require a cash-in-lieu payment of \$800 representing \$400 per tree, to the Green City Program, in accordance with the City's Tree Protection By-law.

- In summary, a total of four (4) trees are proposed to be retained on the site with a contribution of \$9,600 to the Green City Program.

INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report: **(appendices available upon request)**

Appendix I.	Site Plan
Appendix II.	Engineering Summary
Appendix III.	Summary of Tree Survey and Tree Preservation
Appendix IV.	Development Variance Permit No. 7918-0373-00

approved by Shawn Low

Jean Lamontagne
General Manager
Planning and Development

KS/cm

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