



City of
Richmond

Report to Development Permit Panel

To: Development Permit Panel

Date: February 18, 2020

From: Wayne Craig
Director of Development

File: DP 18-835723

Re: Application by Prosper Homes Ltd. for a Development Permit at 9500 Finn Road

Staff Recommendation

That a Development Permit be issued which would permit the construction of a single detached dwelling at 9500 Finn Road on a site zoned "Agriculture (AG1)" zone and designated as an Environmentally Sensitive Area (ESA).

A handwritten signature in black ink, appearing to read "Wayne Craig", written over the printed name and title.

Wayne Craig
Director of Development

WC:el
Att. 2

Staff Report

Origin

Prosper Homes Ltd. has applied to the City of Richmond for permission to develop a single detached dwelling at 9500 Finn Road on a site zoned “Agriculture (AG1)” and designated as Environmentally Sensitive Area (ESA) in the Official Community Plan (OCP).

The site currently contains a house, a garage, a concrete pad, and a shed, which will be removed.

Development Information

The Environmentally Sensitive Areas (ESA) on this property is approximately 778 m² (8,374 ft²), including an approximately 85 m² (915 ft²) Upland Forest (UPFO) ESA at the southwestern corner of the property and an approximately 693 m² (7,459 ft²) Freshwater Wetland (FRWT) ESA along the eastern side of the property (See Plan #1).

The development proposal involves the construction of a new single detached dwelling with attached garage and a new septic system. The proposed development will not encroach into the ESA; however, works will be required in the ESA to remove structures previously installed on site. Impacts to the ESA will be remediated through the compensation to be secured through this Development Permit.

Please refer to the attached Development Application Data Sheet (Attachment 1) for a comparison of the proposed development data with the relevant bylaw requirements.

Background

Development surrounding the subject site is as follows:

- To the north and west, properties zoned “Agricultural (AG1)” containing single family dwellings; and
- To the east and south, Woodward’s Slough, a hub within the Ecological Network, and one of Richmond’s few non-channelized watercourses.

Staff Comments

The proposed scheme attached to this report has satisfactorily addressed the Environmentally Sensitive Area issues and other staff comments identified as part of the review of the subject Development Permit application.

Analysis

Site Planning

The existing house, garage, concrete pad, and shed, which all encroach into or are located within the ESA, will be removed (see Plan #2 in the Development Permit drawing package). The proposed single detached dwelling and septic system will be located at the northwest portion of the lot and within the farm house plate, and will not encroach into the ESAs (see Plan #3). The existing driveway on the northeast corner of the property, which encroaches into the FRWT

ESA, will be relocated to the northwest corner of the property. The proposed farm home plate on the property is less than 50% of the lot area, which is in compliance with the “Agriculture (AG1)” zone.

Tree Retention and Replacement

The applicant has submitted a Certified Arborist’s Report; which identifies on-site and off-site tree species, assesses tree structure and condition, and provides recommendations on tree retention and removal relative to the proposed development.

- The report assesses six bylaw-sized trees and one hedgerow on the subject property, as well as one tree and two hedgerows on City’s property.
- All bylaw-sized trees on site, as well as the Plum tree and the Emerald Cedar hedge located on City’s property near the northeast corner of the subject property, are in fair health and condition. These trees and hedgerow are located within the ESA, will not be in conflict with construction or restoration, and will be retained and protected on site.
- One Emerald Cedar hedgerow located along the west property line, outside of the ESA, will be removed; no compensation is required as per the Tree Protection Bylaw.

A row of Emerald Cedar hedge located on city’s property in front of the existing house is approved for removal due to conflict with construction (T1 18-824845); no compensation is required. The applicant advised that only a portion of this hedge will be removed, as necessary, to accommodate the new driveway. A Tree Management Plan can be found in Plan #4.

Historical aerial photos show that three city trees have been removed along the front property line of the site. Six replacement trees at 2.75m in height (coniferous) or 7cm in DBH (deciduous) are proposed to compensate for the tree removed. The number of replacement trees proposed meets the 2:1 tree replacement ratio stated in the OCP. Parks Operation staff have reviewed and approved the replacement proposal. The applicant is proposing to plant six Western Red Cedar trees, each at 2.75 m in height, in the FRWT ESA area (See Plan #7).

To ensure that the trees identified for retention are protected, the applicant is required to submit to the City a contract with a Certified Arborist for the supervision of all works conducted within the ESAs and in close proximity to tree protection zones. The contract must include the scope of work required, the number of proposed monitoring inspections at specified stages of construction, any special measures required to ensure tree protection, and a provision for the Arborist to submit a post-construction impact assessment to the City for review.

Biologist’s Environmental Assessment

An environmentally sensitive area assessment report was prepared by Marlim Ecological Consulting Ltd. (report dated December 2019). The report indicates that:

- Woodward’s Slough is located east of the subject property. The area within 15 m of this watercourse is classified as a Riparian Management Area (RMA) and an Environmentally Sensitive Area (ESA) as identified in the City of Richmond’s Riparian Areas Regulation (RAR) Response Strategy. City’s practice is that when a RMA and an ESA are overlapping, the ESA takes precedence. A map of the ESA can be found in Plan #1.

- The ESA area on the eastern portion of the property is classified as a Freshwater Wetland (FRWT), which is characterized by areas with vegetation and soils influenced by the presence of freshwater in the rooting zone of plants. The current condition of this area is highly disturbed. The vegetation consists mainly of mowed lawn to the top-of-bank where vegetation cuttings have been placed to control some invasive Himalayan blackberry bushes. The blackberry patch extends east three to four metres on to City property.
- The ESA on the southwestern portion of the property is classified as Upland Forest (UPFO), which is characterized by treed areas adjacent to a watercourse. The current condition of this ESA is highly disturbed. The vegetation consists mainly of mowed lawn with one mature Horse Chestnut tree and one Mock Orange shrub. There were no invasive plants found within this area.
- The proposed development will not encroach into the ESA; however, works will be completed in the ESA to remove structures previously installed on site and address previous impacts.
 - A concrete pad (partially encroaches into city's land southeast of the subject site) and small wooden shed were installed within the FRWT ESA immediately southeast of the existing driveway entrance. These structures in addition to a portion of the footprint of the existing house and patio cover approximately 124 m² (1,335 ft²) of the eastern ESA.
 - The paved driveway currently covers approximately 140 m² (1,507 ft²) in the eastern ESA.
 - Approximately 8 m² of the existing western garage is located within the UPFO ESA.
 - These unauthorized structures installed in the ESA likely impacted the function of the ESA (i.e., reduced habitat and food resources for wildlife) by clearing vegetation and increasing impervious surfaces. The structures will be demolished prior to commencement of construction and the impacted area will be restored as per the ESA Restoration Planting Plan (See Plan #5). A Tree and Shrub Planting plan can be found on Plan #7.
- Installation of temporary protective fencing will help prevent encroachment into the ESA.
 - Temporary protective construction fencing (orange snow fencing) is proposed 2.0 m beyond the ESA boundary; the fence will be installed on site in two stages:
 - The first stage of temporary protective construction fence installation has been completed. Due to existing structures within the ESA, the temporary protective fence has been installed through the ESA in some areas. This practice was limited to areas where existing structures are to be demolished (see Plan #8).
 - After the completion of demolition and debris removal, the temporary protective fence will be moved to the ultimate proposed fencing location as identified on Plan #8. The fence will remain in place throughout the duration of the proposed construction activities.

- The areas contained within the protective fence are not to be disturbed at any point during the demolition or construction and may only be accessed during the restoration of the ESA.
 - A 1.35 m tall split-rail fence will be installed along the ESA boundary following completion of restoration works in the ESA. The location of the fence is identified on the ESA Restoration Planting Plan (Plan #5) and the fence details can be found on Plan #9).
- Erosion and Sediment Control (ESC) measures will be installed on the property side of the protective fence. These measures will help reduce the likelihood of release of sediment-laden water from the site.
 - Erosion and Sediment Control measures include installation of silt fence and straw wattles.
 - The ESC measures have been installed and inspected on January 6, 2020.

Proposed Environmentally Sensitive Area Enhancement

- Compensation for previous and existing impacts to the ESA on the subject property will focus on re-establishing a native vegetation community, increasing habitat complexity, and providing cover for native terrestrial and amphibian species.
 - Following removal of the existing structures, weed free uncompacted top soil will be applied to ensure an adequate growth medium for restoration planting.
 - An approximately 73 m² (786 ft²) patch of Himalayan Blackberry along the top-of-bank east of the existing concrete pad will be removed by the applicant (see Plan #6), and the areas where the invasive species are proposed to be grubbed out will be seeded with native grass seed mix to prevent invasive plants from growing.
 - An area of approximately 85 m² (915 ft²) of the UPFO ESA and 623 m² (6,706 ft²) of the FRWT ESA will be planted.
 - The landscape plan, prepared based on the ESA Restoration Planting Plan, can be found in Plan #7. The required compensation planting plan includes approximately 182 trees and 784 shrubs. Planting will adhere to the Canadian Landscape Standards.
 - The proposed compensation plan will not only result in no net loss in area but also a net gain in habitat quality and increased ecosystem function.
 - Restoration planting and placement of woody debris will provide habitat complexity, food, and shelter for many terrestrial and amphibian species.
 - Installation of a seeded compost blanket will promote native growth, add nutrients to the soil, and aid in soil moisture retention.
 - The proposed compensation plan will also increase permeable surface cover, aid in filtration of runoff, and increase tree canopy cover in the long-term.

- In order to ensure that the proposed landscaping works are completed, the applicant is required to provide a landscape security of \$72,405.74 in association with the Development Permit.
- In order to ensure that the ESA planting will not be removed, a restrictive covenant will be registered on Title, indicating that the landscaping within the ESAs cannot be removed or modified without the City's approval.
- Monitoring and maintenance of the proposed restoration works is required.
 - The work proposed at this site will adhere to best management practise and comply with the Federal Fisheries Act.
 - Monitoring will be completed by the QEP weekly (at a minimum) during construction and cumulative monitoring reports will be sent to the City of Richmond monthly.
 - Following the completion of construction and ESA planting, the QEP will provide a completion report to the City verifying restoration has been completed.
 - The ESA will be monitored once a year for three years to confirm the requirements of the mitigation and compensation strategies are being met. A contract between the applicant and a Qualified Environmental Professional for the proposed construction environmental monitoring, erosion and sediment control monitoring, ESA restoration and planting works will be required as a condition to Development Permit issuance.
 - Following the completion of the three-year monitoring period, the property owner is responsible for maintenance and protection of the ESA. This work includes maintaining the permanent protective fence to isolate the ESA from encroachment and, when possible, the control of invasive species. Languages will be included in the ESA restrictive covenant mentioned above to identify this obligation of the property owners.

Floodplain Management Implementation Strategy

The proposed redevelopment must meet the requirements of the Richmond Flood Plain Designation and Protection Bylaw 8204. Registration of a flood-plain covenant on Title identifying a minimum habitable elevation of 2.9 m GSC is required prior to Development Permit issuance.

Site Servicing

A Servicing Agreement will not be required for this development. Utility connections and frontage improvements will be addressed at Building Permit stage via one or more work orders. These improvements are detailed in the Development Permit Considerations (Attachment 2) and include but not limited to the installation of a new fire hydrant along the site frontage and water service connection.

Financial Impact or Economic Impact

The subject application results in an insignificant Operational Budget Impact (OBI) for off-site City infrastructure (such as roadworks, waterworks, storm sewers, sanitary sewers, street lights, street trees and traffic signals).

Conclusions

As the restoration works adequately addresses and offsets the anticipated impacts to the Environmentally Sensitive Area (ESA) features on the subject site, staff recommend that the Development Permit be endorsed, and issuance by Council be recommended.



Edwin Lee
Planner 2

EL:cas

Attachment 1: Development Application Data Sheet

Attachment 2: Development Permit Considerations



City of Richmond

Development Application Data Sheet

Development Applications Department

DP 18-835723**Attachment 1**

Address: 9500 Finn Road

Applicant: Prosper Homes Ltd.

Owner: Dean Kitsch

Planning Area(s): Gilmore

	Existing	Proposed
Site Area:	1,425 m ²	1,425 m ²
Land Uses:	Single-Family Residential	No Change
OCP Designation:	Agriculture	No Change
Zoning:	Agriculture (AG1)	No Change
Number of Units:	1	No Change

	Bylaw Requirement	Proposed	Variance
Maximum Floor Area:	400 m ²	400 m ²	none permitted
Farm Home Plate	Max. 50% of the lot area = 712.5 m ²	290 m ²	none
Lot Coverage:	240 m ²	240 m ²	none
Setback – Front Yard:	Min. 6.0 m	6.0 m	none
Setback – West Side Yard:	Min. 1.2 m	1.5 m	none
Setback – East Side Yard:	Min. 6.0 m	12.34 m	none
Setback – Rear Yard:	Min. 10.0 m	n/a	none
Height (m):	Max. 9.0 m	8.27 m	none
Lot Size:	828.0 m ²	1,425 m ²	none
Off-street Parking Spaces:	2	3	none



**City of
Richmond**

Development Permit Considerations

Development Applications Department
6911 No. 3 Road, Richmond, BC V6Y 2C1

Address: 9500 Finn Road

File No.: DP 18-835723

Prior to approval of the Development Permit, the developer is required to complete the following:

1. Submission of a Contract entered into between the applicant and a Certified Arborist for supervision of any on-site works conducted within the Environmentally Sensitive Area (ESA) as outlined in the ESA Development Permit Report (Revision 3 Amendment) prepared by MarLim Ecological Consulting Ltd. (dated February 2020), or within the tree protection zone of the trees to be retained on site and on adjacent city's property. The Contract should include the scope of work to be undertaken, including: the proposed number of site monitoring inspections, and a provision for the Arborist to submit a post-construction assessment report to the City for review.
2. Receipt of a landscaping security acceptable to the Director of Development for landscaping and monitoring of in the Environmentally Sensitive Area over a 3 year period in the amount of \$72,405.74 (based on the costs estimate provided by a CSLA registered landscape Architect including 10% contingency).
3. Registration of a legal agreement on title to ensure that landscaping retained and planted within the Environmentally Sensitive Area as identified in the ESA Development Permit Report (Revision 3 Amendment) by MarLim Ecological Consulting Ltd. is maintained as outlined in the ESA Restoration Planting Plan by MarLim Ecological Consulting Ltd. and the Tree and Shrub Planting Location Plan by CSR Environmental, and will not be abandoned or removed. Language should be included in the legal document that, following the completion of the three-year monitoring period, the property owner is responsible for maintenance and protection of the ESAs. This work includes maintaining the permanent protective fence to isolate the ESAs from encroachment and, when possible, the control of invasive species.
4. Submission of a Contract entered into between the applicant and a Qualified Environmental Professional to monitor and provide annual reporting to the City on the ESA area for three years. The Contract should include the scope of work to be undertaken, including:
 - a. Monitoring will be completed by the QEP weekly (at a minimum) during construction and cumulative monitoring reports will be sent to the City of Richmond monthly;
 - b. Following the completion of construction and ESA planting, the QEP will provide a completion report to the City verifying restoration has been completed; and
 - c. The ESA will be monitored once a year for three years to confirm the requirements of the mitigation and compensation strategies are being met.
6. Registration of a flood plain covenant on title identifying a minimum habitable elevation of 2.90 m GSC. The site is in Gilmore.

Prior to Building Permit Issuance, the developer must complete the following requirements:

1. At the developer's sole cost via City Work Order*, design and construct/install utility connections and frontage improvements. Works include, but may not be limited to the following:
 - a. **Water Works:**
 - Using the OCP Model, there is 291.0 L/s of water available at a 20 psi residual at the Finn Road frontage. Based on your proposed development, your site requires a minimum fire flow of 95 L/s.
 - The Developer is required to submit Fire Underwriter Survey (FUS) or International Organization for Standardization (ISO) fire flow calculations to confirm the development has adequate fire flow for onsite fire protection. Calculations must be signed and sealed by a Professional Engineer and be based on Building Permit Stage building designs.

Initial: _____

- At Developer's cost, the City is to:
 - Install a new 25mm water service connection at the Finn Road frontage to serve the proposed development, complete with a water meter and meter chamber.
 - Cut and cap, at main along Finn Road, the existing water service connection serving the development site.
 - Install a new Fire Hydrant along frontage. Developer to coordinate with Richmond Fire Rescue on exact location.

b. Storm Sewer Works:

- The Developer is required to connect to the existing storm connection at the northwest corner of the site.

c. Frontage Improvements:

- The Developer is required to coordinate with BC Hydro, Telus and other private communication service providers:
 - When relocating/modifying any of the existing power poles, guy wires and above ground structures within the property frontages.
 - To determine if additional above ground structures are required and coordinate their locations (e.g. Vista, PMT, LPT, Shaw cabinets, Telus Kiosks, etc). These should be located on site.

d. General Items:

- The Developer is required to enter into, if required, additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering, including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.
2. Submission of a Construction Parking and Traffic Management Plan to the Transportation Department. Management Plan shall include location for parking for services, deliveries, workers, loading, application for any lane closures, and proper construction traffic controls as per Traffic Control Manual for works on Roadways (by Ministry of Transportation) and MMCD Traffic Regulation Section 01570.
 3. If applicable, payment of latecomer agreement charges associated with eligible latecomer works.
 4. Obtain a Building Permit (BP) for any construction hoarding. If construction hoarding is required to temporarily occupy a public street, the air space above a public street, or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. For additional information, contact the Building Approvals Department at 604-276-4285.

Note:

- * This requires a separate application.

- Where the Director of Development deems appropriate, the preceding agreements are to be drawn not only as personal covenants of the property owner but also as covenants pursuant to Section 219 of the Land Title Act.

All agreements to be registered in the Land Title Office shall have priority over all such liens, charges and encumbrances as is considered advisable by the Director of Development. All agreements to be registered in the Land Title Office shall, unless the Director of Development determines otherwise, be fully registered in the Land Title Office prior to enactment of the appropriate bylaw.

The preceding agreements shall provide security to the City including indemnities, warranties, equitable/rent charges, letters of credit and withholding permits, as deemed necessary or advisable by the Director of Development. All agreements shall be in a form and content satisfactory to the Director of Development.

- Additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering may be required including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.
- Applicants for all City Permits are required to comply at all times with the conditions of the Provincial *Wildlife Act* and Federal *Migratory Birds Convention Act*, which contains prohibitions on the removal or disturbance of both birds and their nests. Issuance of Municipal permits does not give an individual authority to contravene these legislations. The City of Richmond recommends

Initial: _____

that where significant trees or vegetation exists on site, the services of a Qualified Environmental Professional (QEP) be secured to perform a survey and ensure that development activities are in compliance with all relevant legislation.

Signed

Date



City of Richmond

Development Permit

No. DP 18-835723

To the Holder: Prosper Homes Ltd.
Property Address: 9500 Finn Road
Address: c/o Chan Sandher
8291 No. 5 Road,
Richmond, BC V6Y 2V5

1. This Development Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and any and all buildings, structures and other development thereon.
3. Subject to Section 692 of the Local Government Act, R.S.B.C.: buildings and structures; off-street parking and loading facilities; roads and parking areas; and landscaping and screening shall be constructed generally in accordance with Plans #1 to #9 attached hereto.
4. Sanitary sewers, water, drainage, highways, street lighting, underground wiring, and sidewalks, shall be provided as required.
5. As a condition of the issuance of this Permit, the City is holding the security in the amount of \$72,405.74 to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Holder if the security is returned. The condition of the posting of the security is that should the Holder fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the City may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Holder. Should the Holder carry out the development permitted by this permit within the time set out herein, the security shall be returned to the Holder. The City may retain the security for up to one year after inspection of the completed landscaping in order to ensure that plant material has survived.
6. If the Holder does not commence the construction permitted by this Permit within 24 months of the date of this Permit, this Permit shall lapse and the security shall be returned in full.

Development Permit
No. DP 18-835723

To the Holder: Prosper Homes Ltd.
Property Address: 9500 Finn Road
Address: c/o Chan Sandher
8291 No. 5 Road,
Richmond, BC V6Y 2V5

7. The land described herein shall be developed generally in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit which shall form a part hereof.
- This Permit is not a Building Permit.

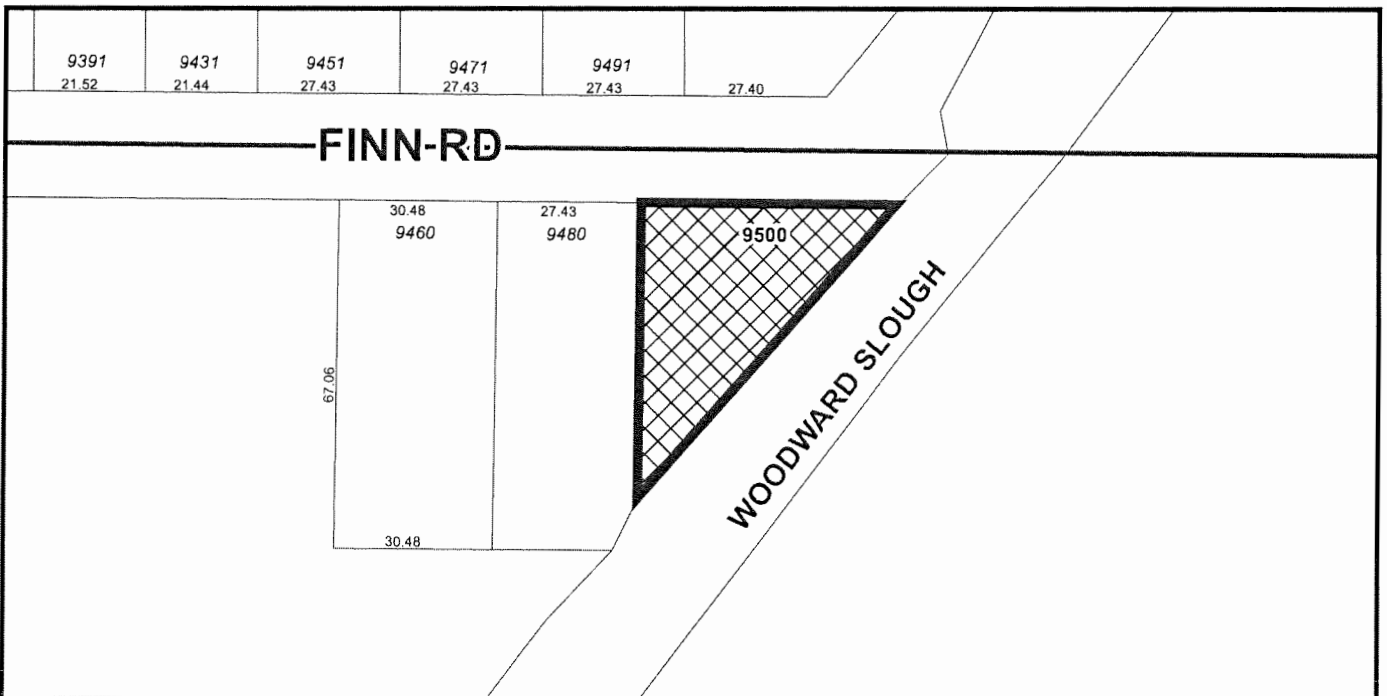
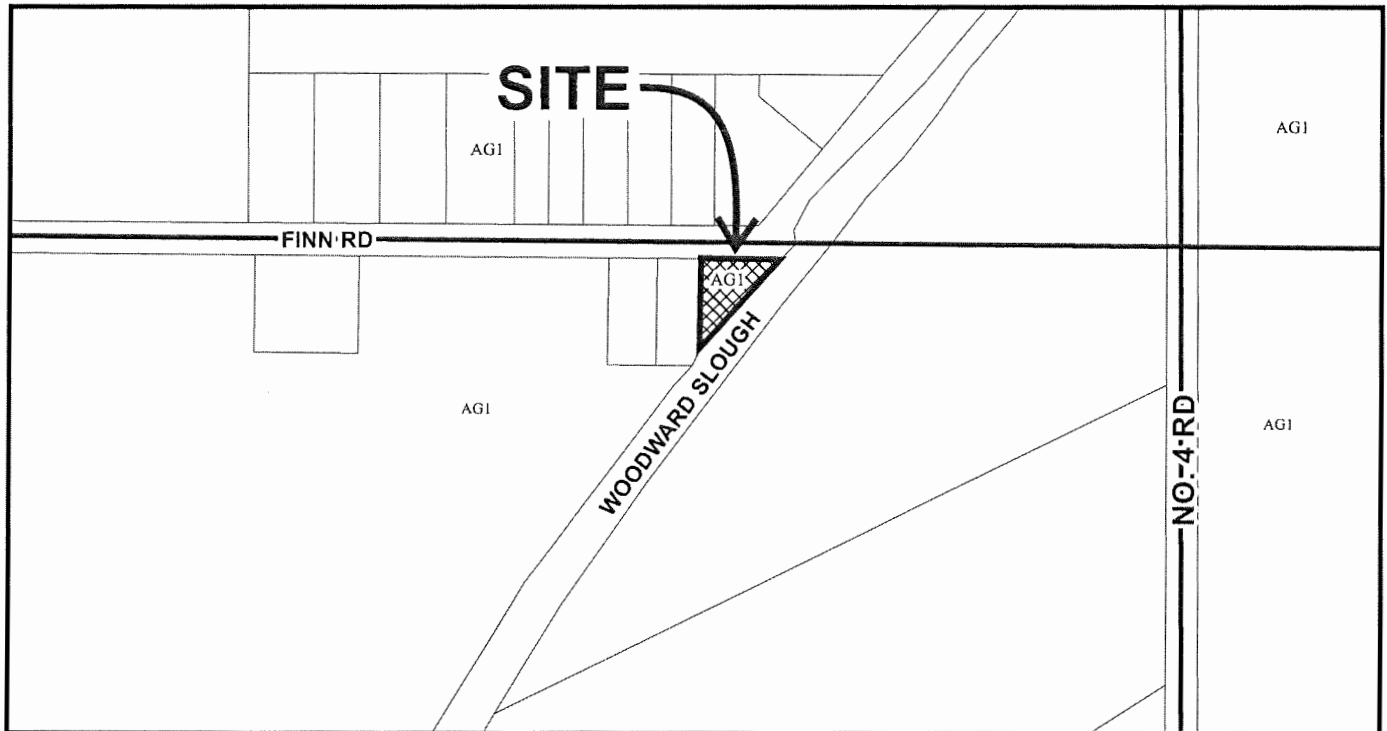
AUTHORIZING RESOLUTION NO. ISSUED BY THE COUNCIL THE
DAY OF , .

DELIVERED THIS DAY OF , .

MAYOR



City of Richmond

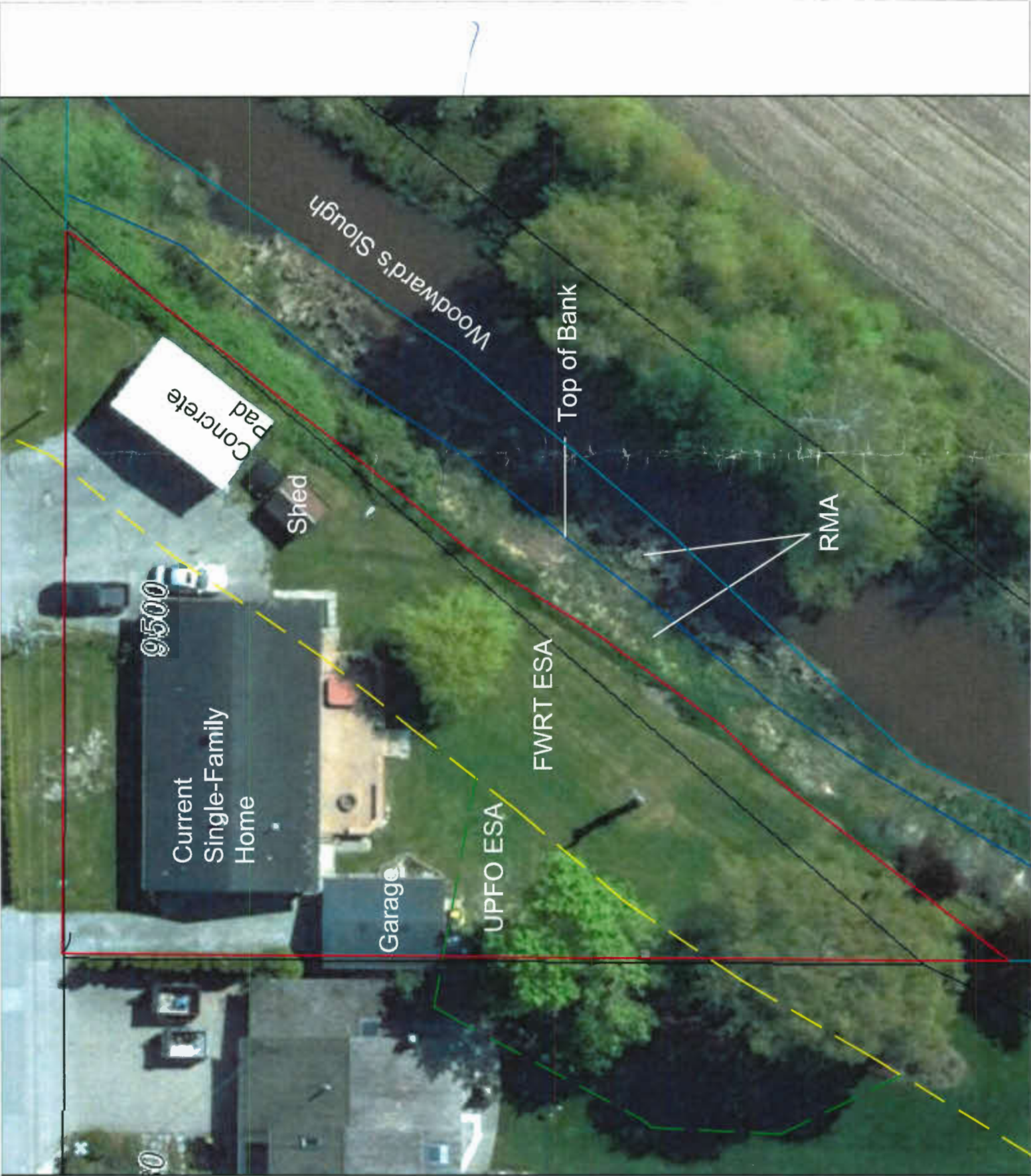


DP 18-835723
SCHEDULE "A"

Original Date: 09/19/18

Revision Date:

Note: Dimensions are in METRES



Legend:

Property Boundary

Top Of Bank

Original Natural Boundary

FWRT ESA

UPFO ESA

RMA Boundary


Note: The RMA is located east of the Original Natural Boundary line to Woodward's Slough.

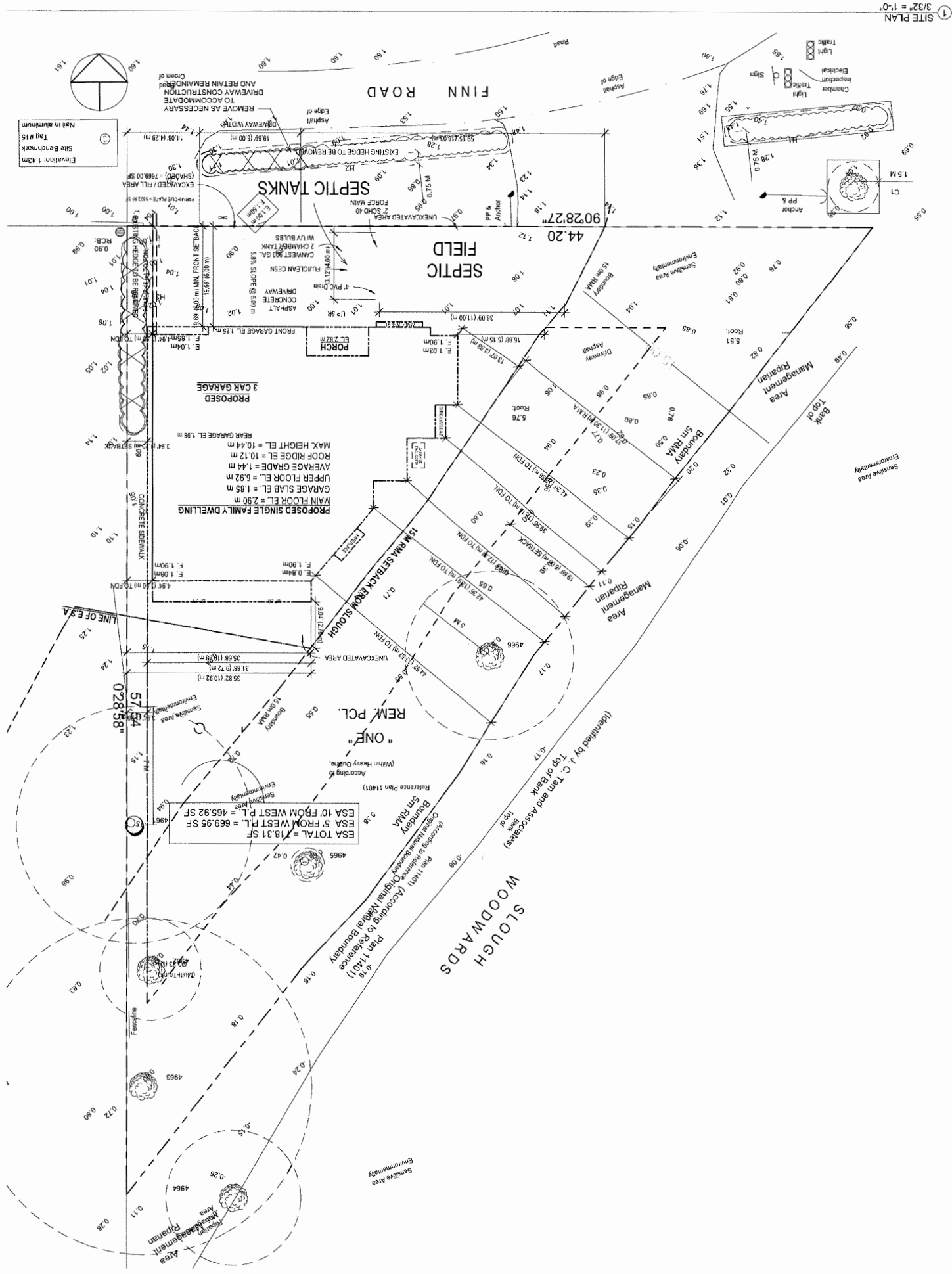
FEB 18 2020

DP 18-835723

PLAN #1

Note: Image sourced from RIM mapping system. All feature lines sourced from topographic land survey.

<div><div><div>MARLIM ECOLOGICAL CONSULTING LTD.</div></div></div>	Aerial Map of 9500 Finn Road, Richmond		Marlim Project: 362.17.01
	File: 362.17.01 - Aerial Map		Date: February 2020
	Tel: 250-564-4338 Email: mail@marlimecological.com Website: marlimecological.com Marlim Ecological Consulting Ltd.		Page: 1



**PROPOSED
SITE PLAN**

PLAN # 3 FEB 1963

DP 18-835723

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370 • 6029 199 STREET LANGLEY, BC
EMAIL: INFO@JOSSHOMEDESIGN.COM

DRAWN JS FEBRUARY 4, 2020

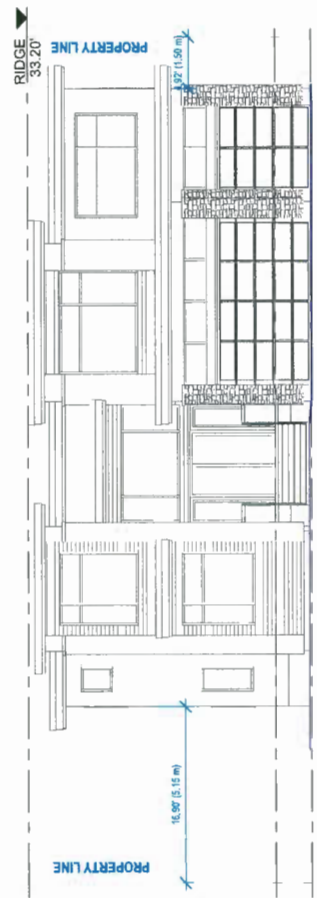
9500 FINN ROAD,
RICHMOND

PROJECT	100000000
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PROPOSED SITE PLAN

DRAWING TITLE

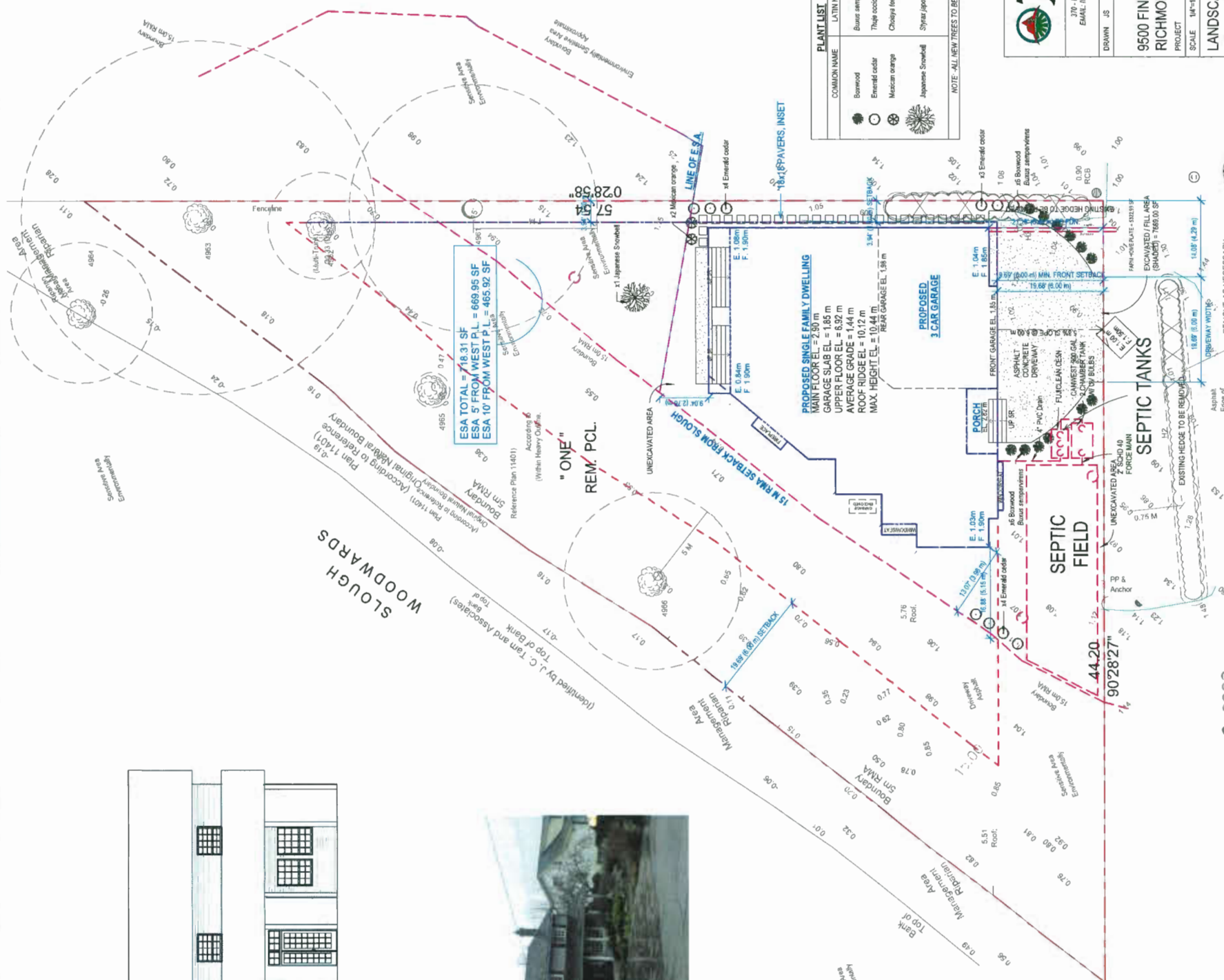
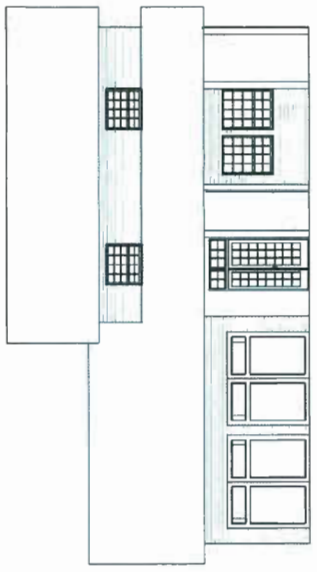
ADD A2



STREETSCAPE
Finn Road
SCALE: 1/8"=1'-0"



NIGHTBOURING PHOTOS



PLANT LIST		
COMMON NAME	LATIN NAME	SIZE QUANTITY
Bornwood	Bornwood	# 3 12
Emerald cedar	Thuja occidentalis	# 5 9
Mexican orange	Choisya ternata	# 3 2
Japanese Snowball	Syringa japonica	3.5m 1

370 - 803 199 STREET LANGLEY, BC
EMAIL: INFO@JOSSDESIGN.COM
TEL: 779 255-9773

DRAWN JS
FEBRUARY 4, 2020

9500 FINN ROAD,
RICHMOND
PROJECT

SCALE 1/4"=1'-0"

LANDSCAPE PLAN &
STREETSCAPE

DRAWING TITLE

ADD A3
SHEET NUMBER



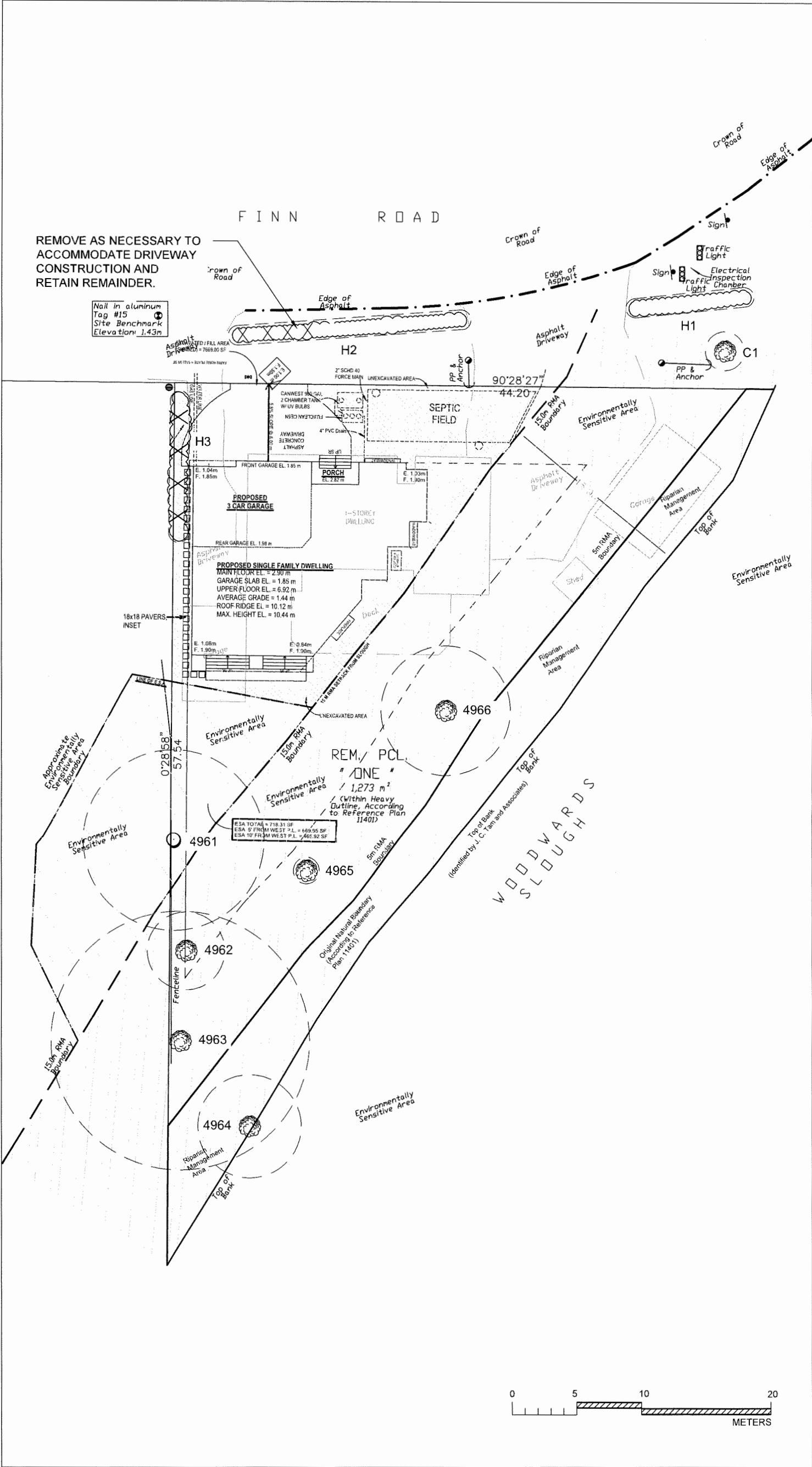
FINN ROAD

FEB 18 2020

LANDSCAPE PLAN
OP 18-835723

PLAN #3A

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LEGEND

TREE TO BE RETAINED

TREE TO BE REMOVED

MINIMUM NO DISTURBANCE ZONE

TREE IN RMA AREA

MIKE FADUM AND ASSOCIATES LTD. VEGETATION CONSULTANTS

#105, 8277 129 St.
Surrey, British Columbia
V3W 0A6
Ph: (778) 593-0300
Fax: (778) 593-0302
Email: mfadum@fadum.ca

CLIENT

FILE NO.

PROJECT TITLE
TREE PRESERVATION AND PROTECTION PLAN

9500 FINN ROAD
RICHMOND, B.C.

REVISIONS:

NO.	DATE	BY	REVISION
1	APR11/19	MK	SITE PLAN
2	FEB07/20	MK	SITE PLAN

SHEET TITLE

T1 - TREE PRESERVATION AND REMOVAL PLAN

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DRAWN

MK

SCALE

AS SHOWN

DATE

FEBRUARY 19, 2019

T-1

SHEET 1 OF 2

18-835723

FEB 18 2020

PLAN #4

4

MIKE FADUM AND ASSOCIATES LTD. VEGETATION CONSULTANTS

#105, 8277 129 St.
Surrey, British Columbia
V3W 0A6
Ph: (778) 593-0300
Fax: (778) 593-0302
Email: mfadum@fadum.ca

CLIENT

FILE NO.

PROJECT TITLE
TREE PRESERVATION
AND PROTECTION PLAN

9500 FINN ROAD
RICHMOND, B.C.

REVISIONS:

NO.	DATE	BY	REVISION
1	APR 11/19	MK	SITE PLAN

NOTE: NON BY-LAW TREES HAVE BEEN REMOVED FROM THE PLANS.

NOTE: TREE PROTECTION FENCING SHALL BE CONSTRUCTED TO MUNICIPAL STANDARDS. REASSESS TREES WITH LOT GRADING PLANS.

NOTE: REPLACEMENT TREES SHALL CONFORM TO BCSLA/BCLNA LANDSCAPE STANDARDS. SPECIES AND LOCATIONS TO BE DETERMINED AT LANDSCAPE STAGE.

SHEET TITLE

T2 - TREE PROTECTION PLAN

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DRAWN

MK

SCALE

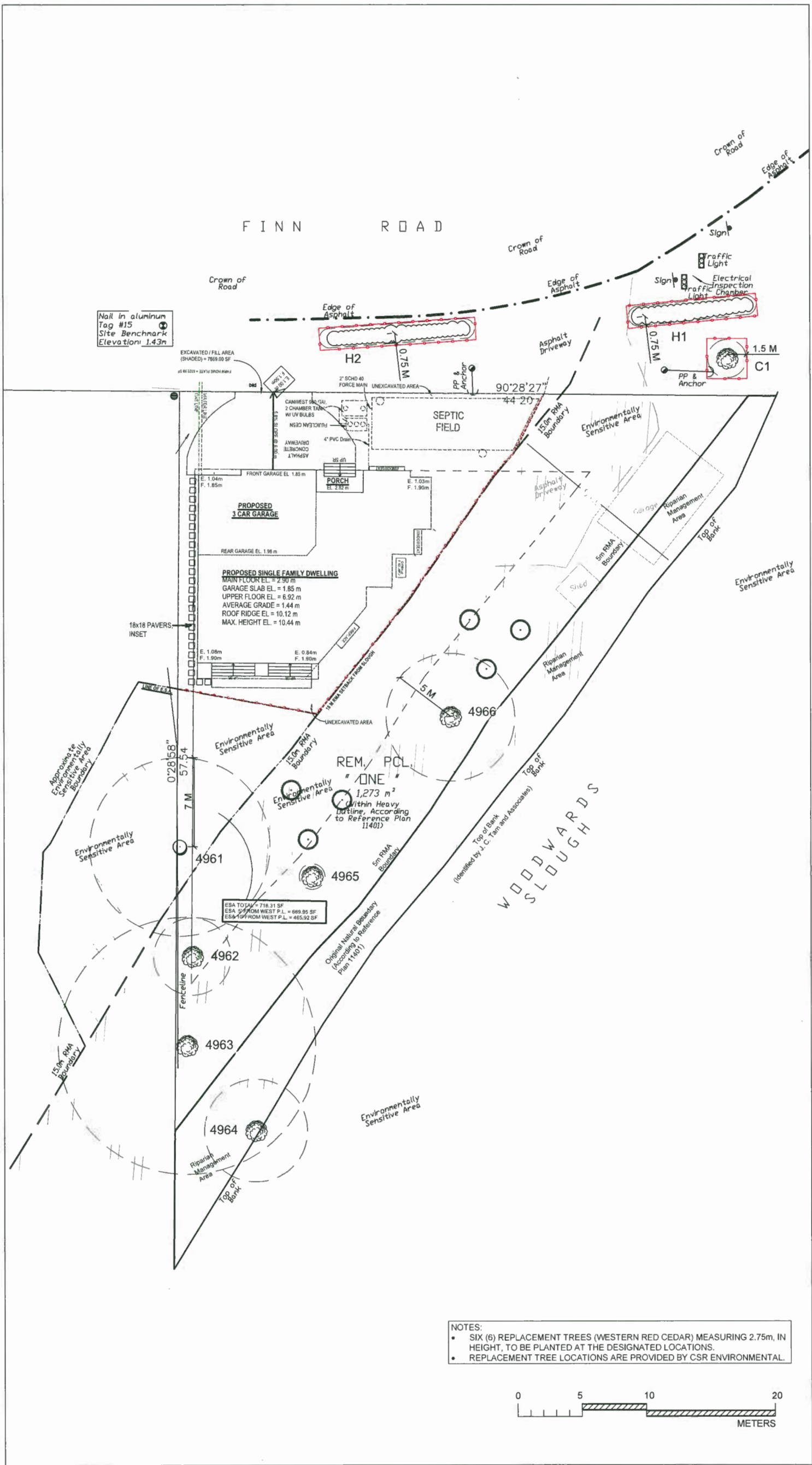
AS SHOWN

DATE

FEBRUARY 19, 2019

T-2

SHEET 2 OF 2



LEGEND

- TREE TO BE RETAINED
- TREE IN RMA AREA
- CONIFEROUS REPLACEMENT TREE (Western red cedar - 2.75m. ht. min.)
- MINIMUM NO DISTURBANCE ZONE
- TREE PROTECTION FENCING

Planting will adhere to the Canadian Landscape Standards:

- Topsoil will be weed free and placed un-compacted to a depth of 50cm.
- All shrubs and ferns must be well established in 1-gallon pots or larger. All conifer and deciduous trees must be at least 1m tall and in 2-gallon pots or larger.
- On-site irrigation shall be available during the duration of on-site plant storage and through the first summer growing season.
- The ideal planting time is in the fall (October-November) in order to ensure the highest possible plant survival rates. If planting is done outside of these windows, the Owner should plan a watering schedule (in summer) or protection from frost (in winter) based on recommendations from the QEP.
- Typical spacing for plants should include 2m triangular spacing for trees and 1m triangular spacing for all shrubs, herbs and ferns.
- Mulch should be installed at the time of planting to a depth of 5-10cm to help retain soil moisture and suppress weed growth.

Other Planting Specifications:

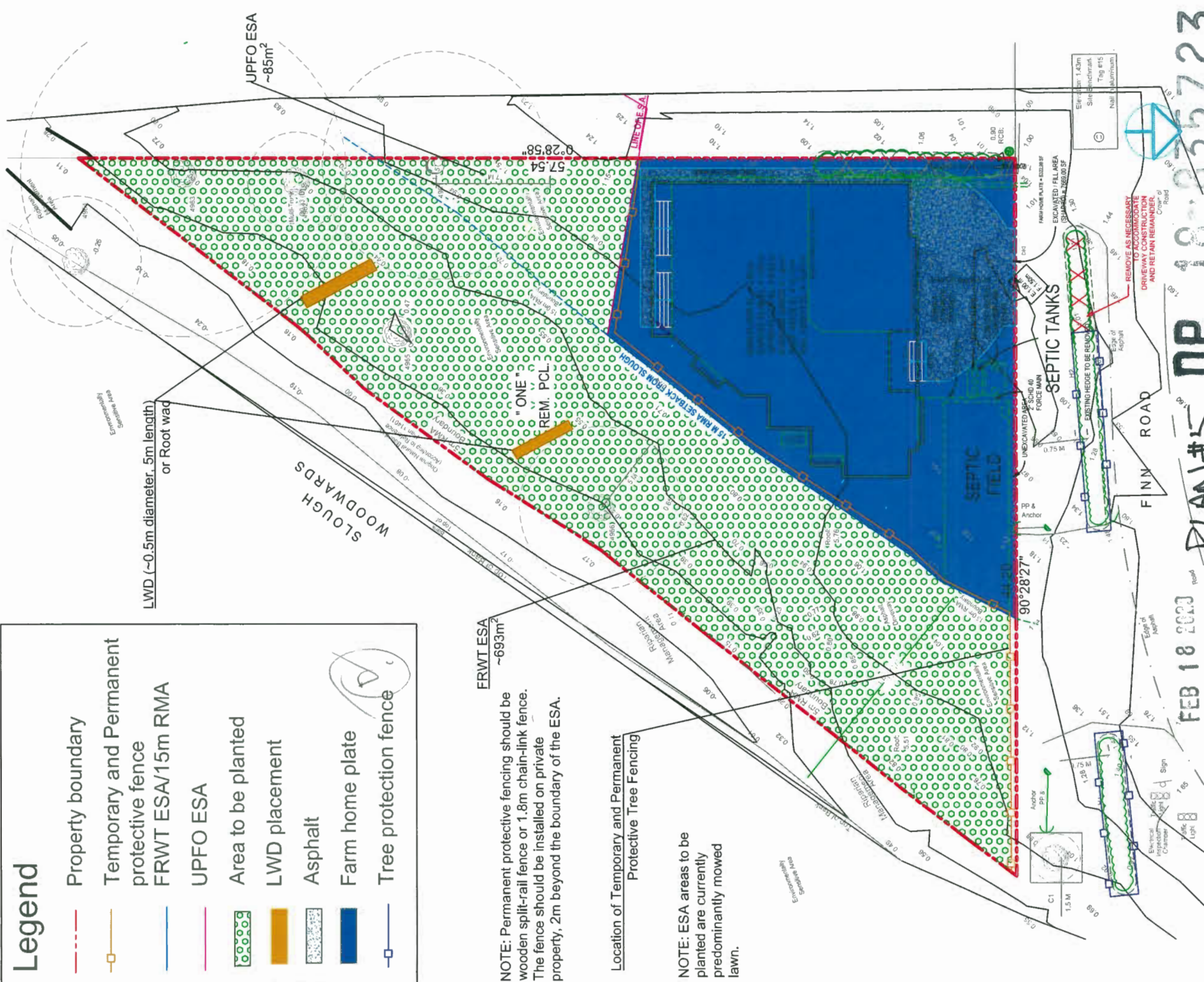
- Plants will be laid out in the field by QEP depending on moisture requirements and shading.
- The following tree replacement requirements were provided by the City in adherence to the Replacement Tree Guidelines outlined under the Tree Protection Bylaw 8057:
 - Six trees at 2.75m (height) coniferous / 7cm (DBH)
- Following planting, a seeded compost blanket will be laid across exposed soil to control erosion and establish herbaceous vegetation in the understorey. The seed mix will include a native grass mix and a native wildflower mix.

Table 1: Species details for Restoration Planting Plan.

	Common Name	Latin Name	Fruit Bearing	Moisture Requirements*	UPFO ESA	FRWT ESA
Trees	Western hemlock	<i>Tsuga heterophylla</i>	no	m-w	5	20
	Black cottonwood	<i>Populus balsamifera</i>	no	m-w	0	20
	Red alder	<i>Alnus rubra</i>	no	m	4	20
	Pacific dogwood	<i>Cornus nuttallii</i>	no	m	4	20
	Paper Birch	<i>Betula papyifera</i>	no	m-w	0	20
	Vine maple	<i>Acer circinatum</i>	no	m	4	15
	Bitter cherry	<i>Prunus emarginata</i>	yes	d-m	4	25
	Black hawthorn	<i>Crataegus douglasii</i>	no	m-w	0	15
Replacement trees		-			6	
Trees Total						
Shrubs	Saskatoon berry	<i>Amelachier alnifolia</i>	yes	m-w	10	80
	Sitka willow	<i>Salix sitchensis</i>	no	m-w	6	50
	Red elderberry	<i>Sambucus racemosa</i>	yes	m	10	85
	Salal	<i>Gaultheria shallon</i>	no	d-m	6	48
	Red-osier dogwood	<i>Cornus sericea</i>	no	m	6	60
	Salmonberry	<i>Rubus spectabilis</i>	yes	m-w	10	85
	Nootka rose	<i>Rosa nutkaka</i>	no	m	6	50
	Thimbleberry	<i>Rubus parviflorus</i>	yes	m	10	80
Shrubs Total					64	538
Planting Plan Total					85	699

* d= dry, m= moist, w= wet

* d= dry, m = moist, w= wet





Red arrow points towards the existing garage encroaching on CoR property and Himalayan blackberry to the east.



M A R L I M
ECOLOGICAL CONSULTING LTD

Legend

- Property boundary
- Farm home plate
- Environmental sensitive area
- Himalayan blackberry
- Top of bank
- Proposed single-family dwelling
- Grass seed after blackberry removal
- Existing buildings
- Restoration Planting Area

Note: Himalayan blackberry bushes will be removed by the applicant and the affected area (the applicants property, and the City of Richmonds property) will be seeded with native grass seed mix to prevent invasive plants from growing.

Note: The exposed soil in the seeded area will be covered with cocoamat or straw to prevent erosion.

Himalayan Blackberry Restoration Plan

DP 18-835723

Marlim Project:
362.17.01

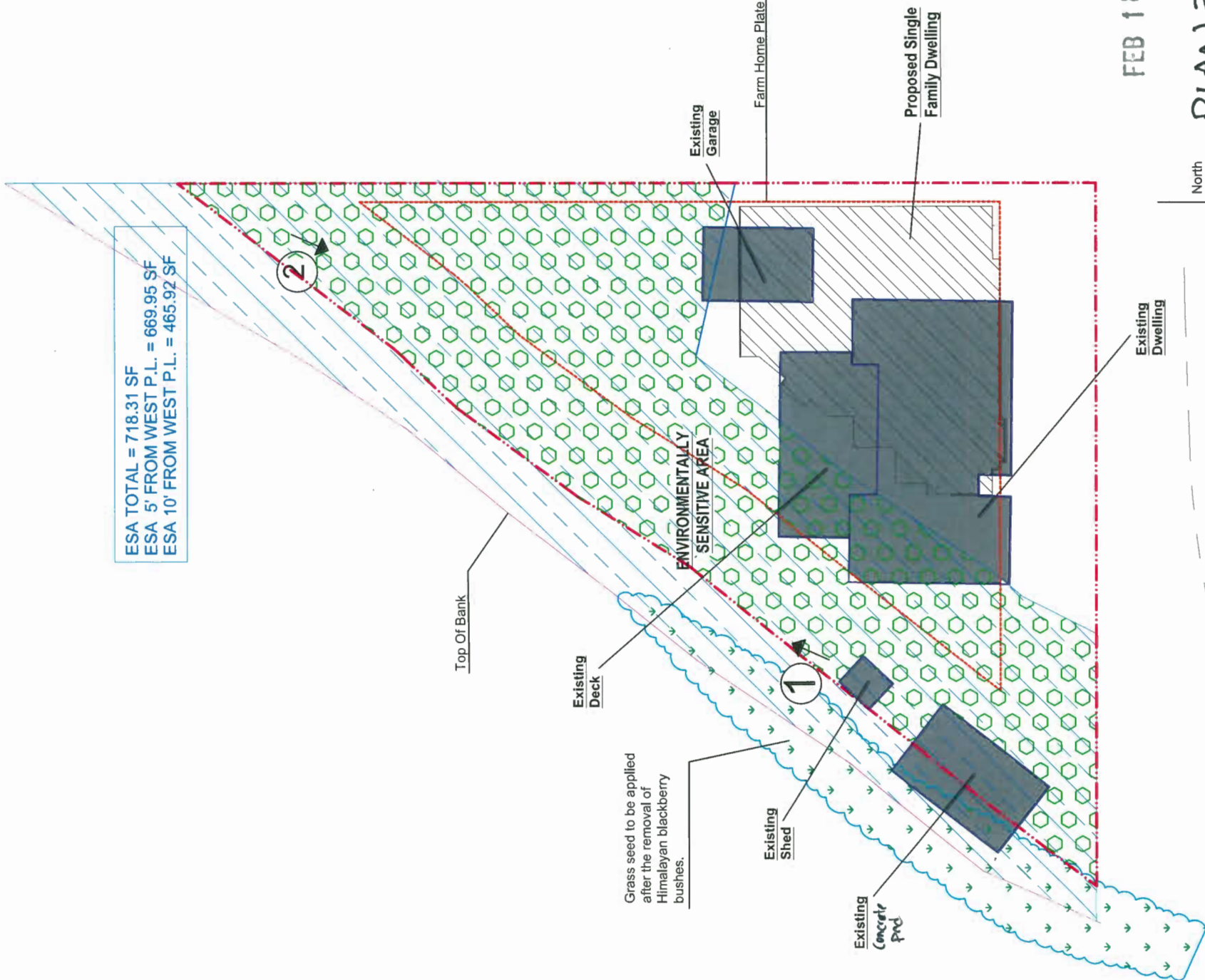
9500 Finn Road, Richmond

Date:
February 2020

Marlim Ecological Consulting Ltd.

Phone: 604-531-4338 Email: mail@marlimecological.com
Website: www.marlimecological.com

Page:
1



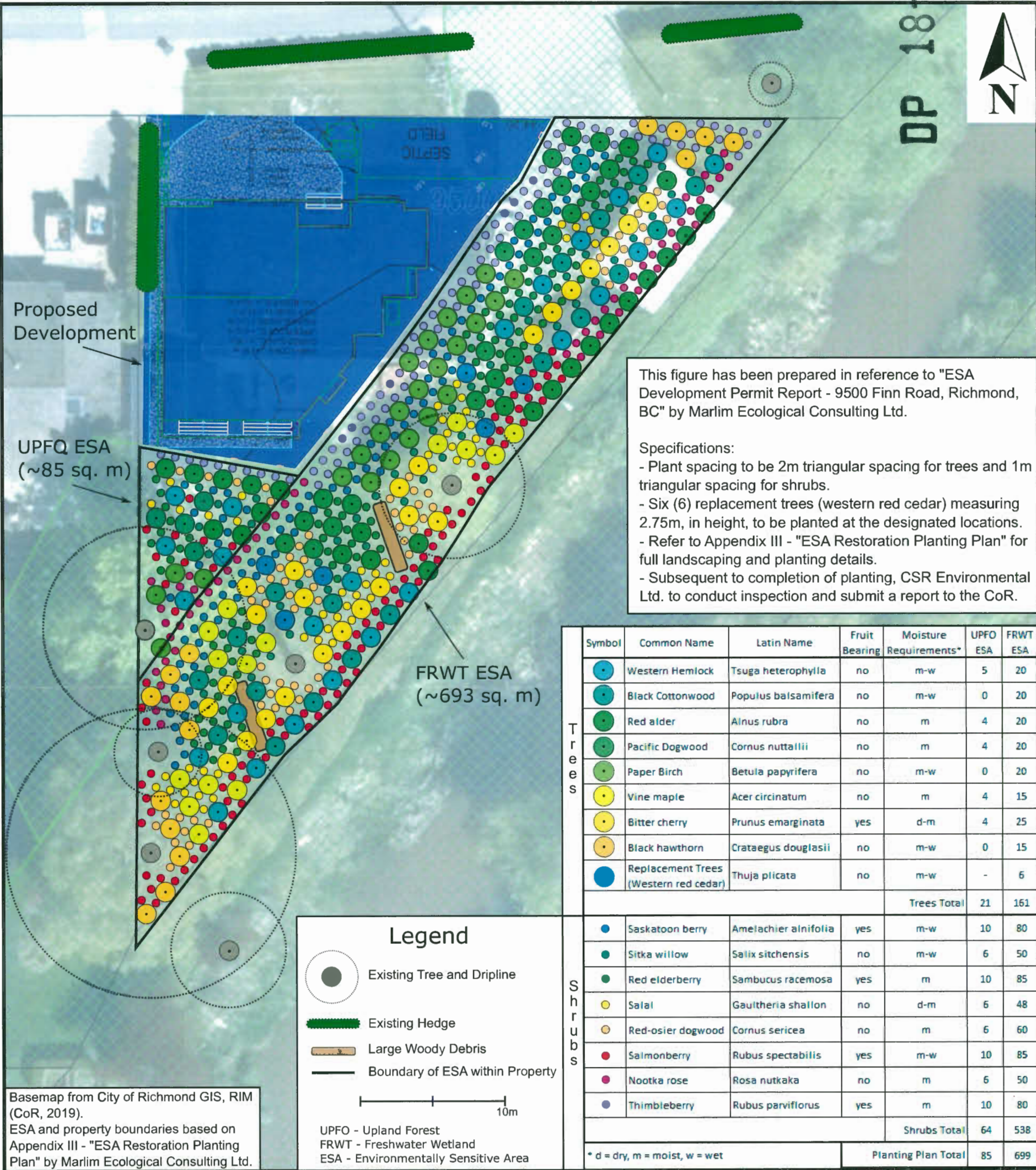
FEB 18 2023

PLAN #6

DP 18-835723

(5)

DP 18-835723
PUAW #7
FEB 18 2020



CSR ENVIRONMENTAL
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206 - 3855 Henning Drive
Burnaby, BC, V5C 6N3
TEL: 604-559-7100
www.csrenviro.com

Project: ESA Restoration Planting Plan: Planting Locations

Address: 9500 Finn Road, Richmond, BC

Job No.: 2019-172-01

Drawn By: MW

Checked By: MB

Scale: As shown

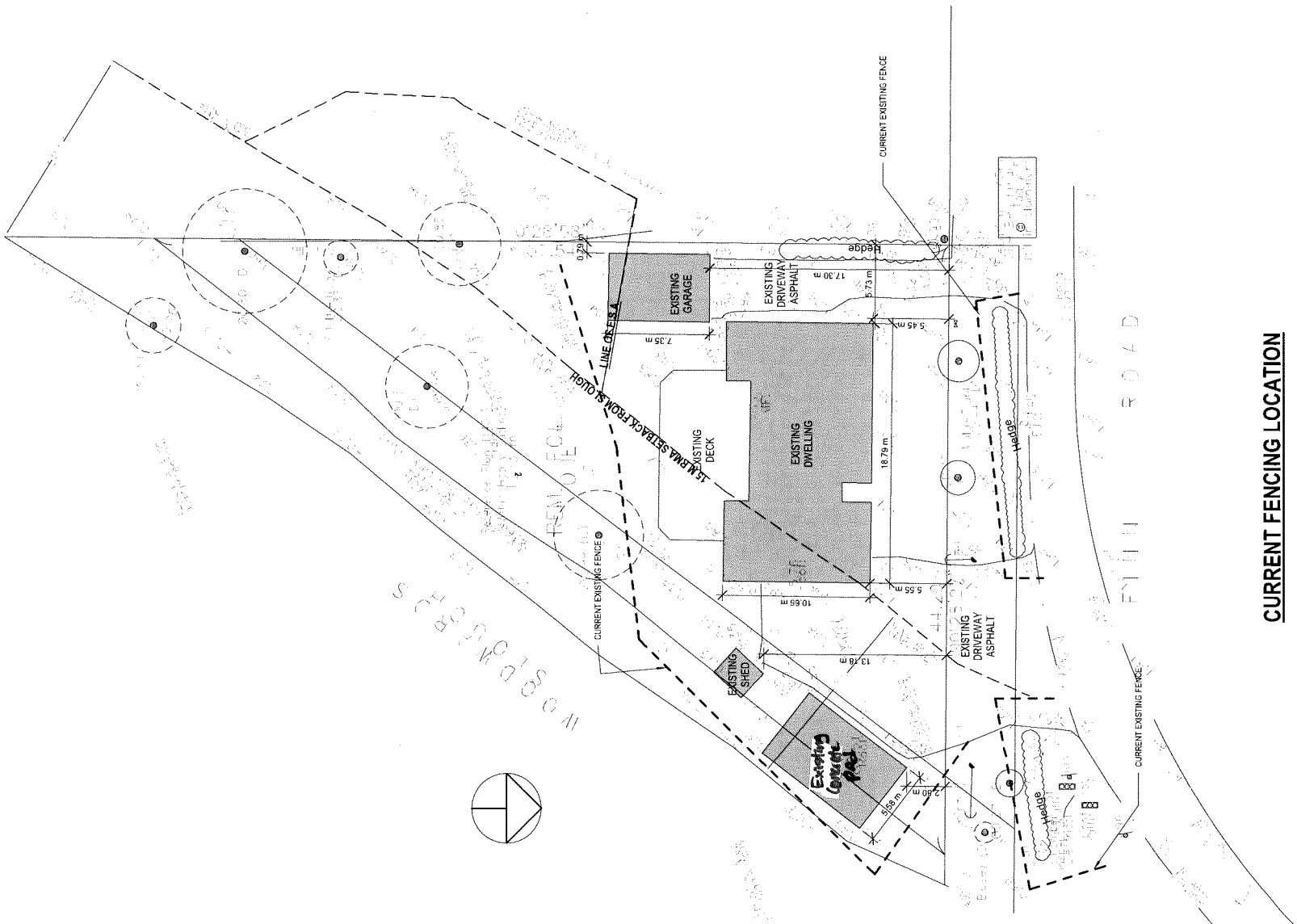
Date: 2020/02/04

Client Name: Dean Keitsch

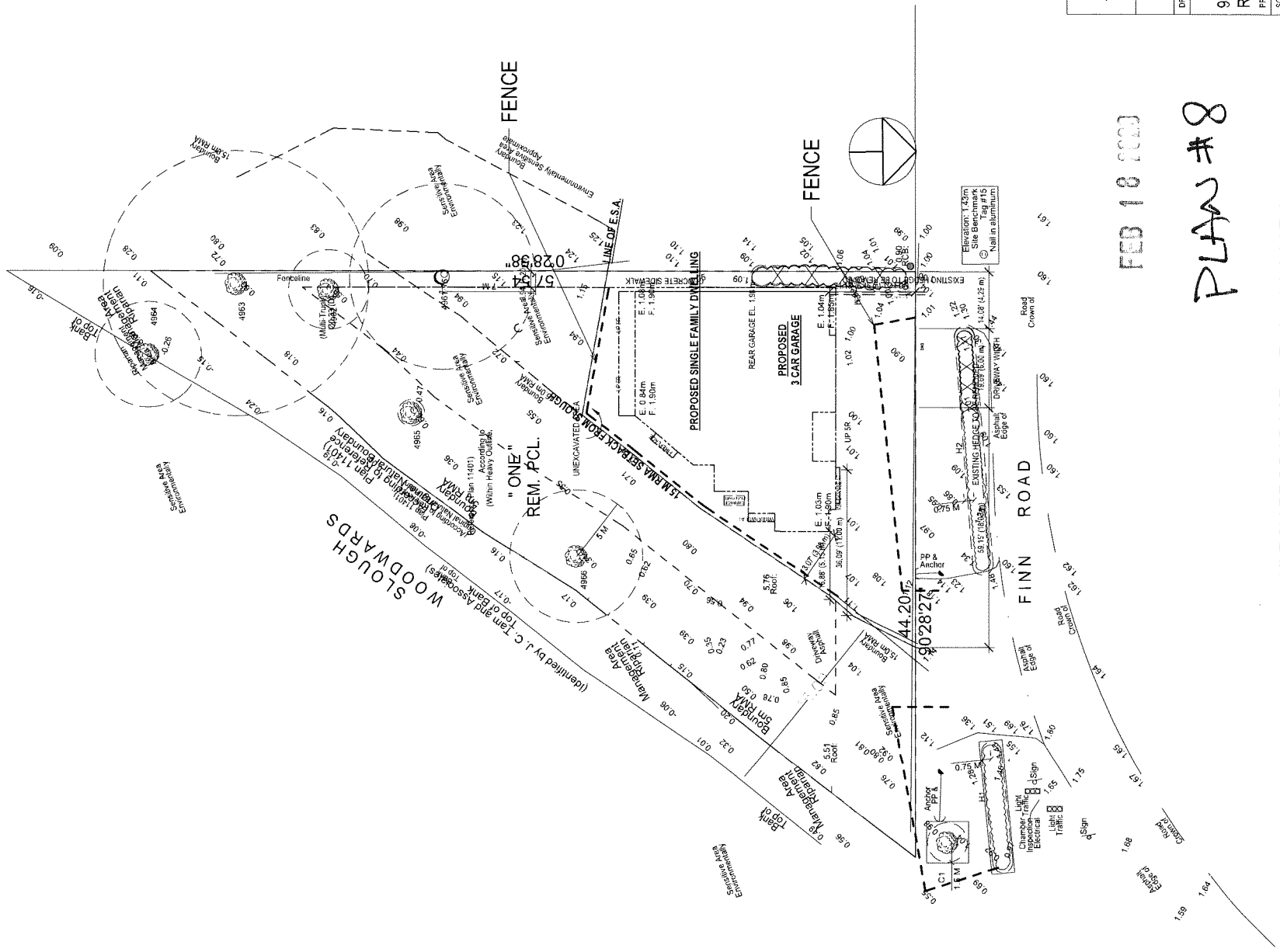
Drawing No.:

Figure 1

Drawing Title: Tree and Shrub Planting Locations



CURRENT FENCING LOCATION



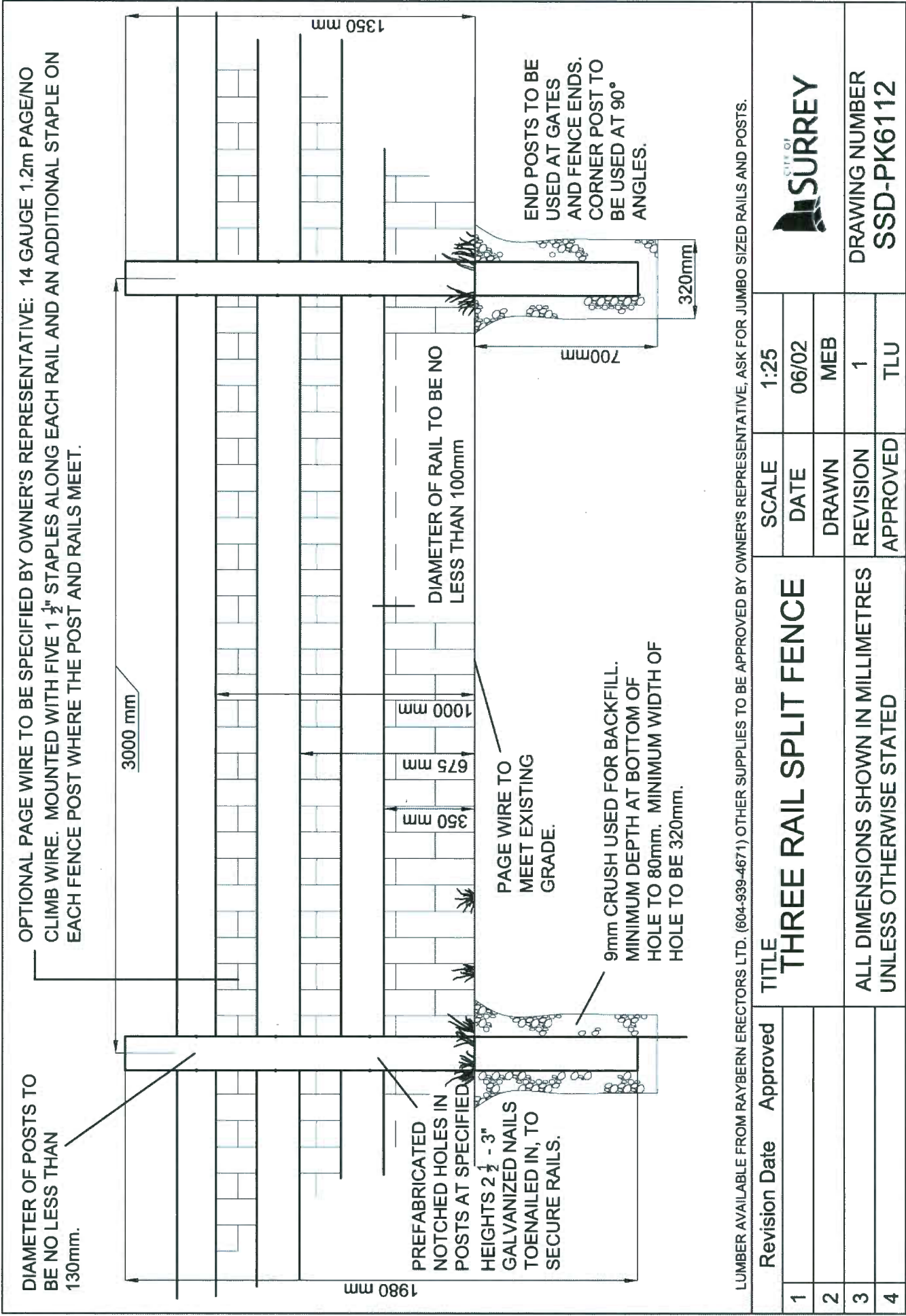
ULTIMATE PROPOSED FENCING LOCATION
DURING CONSTRUCTION

DP 18-835723

PLAN #8

FEB 18 2003

		370, 400 100 STREET LANGLEY, BC EMAIL: INFO@ASSOCIATEDDESIGN.COM TEL: 778 332-8873	
DRAWN	JS	FEBRUARY 4, 2020	
9500 FINN ROAD, RICHMOND		PROJECT	
SCALE 3/32"=1'-0"		FENCING PLAN	
DRAWING TITLE			
ADD A4		SHEET NUMBER	



PLAN #9
238
FEB 18 2020

DP 18-835723