PUBLIC HEARING BINDER

4670 Capilano Road

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17)	**Public Input** - Correspondence / submissions from the public since 1st Reading given April 16, 2018

AGENDA INFORMATION		Dept. Manager	GM/ Director	CAO
☑ Regular Meeting	Date: April 16, 2018			
☐ Other:	Date:			

The District of North Vancouver

REPORT TO COUNCIL

March 16, 2018
File: 08.3060.20/041.17

AUTHOR: Darren Veres, Development Planner

SUBJECT: Bylaws 8292 and 8293: Rezoning and Housing Agreement for an Eight-Unit Townhouse Project: 4670 Capilano Road

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RECOMMENDATION

THAT the "District of North Vancouver Rezoning Bylaw 1370 (Bylaw 8292)" to rezone the subject site from Single Family Residential 7200 Zone (RS3) to Comprehensive Development Zone 117 (CD117) be given FIRST reading;

AND THAT "Housing Agreement Bylaw 8293, 2017 (4670 Capilano Road)" which authorizes a Housing Agreement to prevent future restrictions on the subject property, be given FIRST reading;

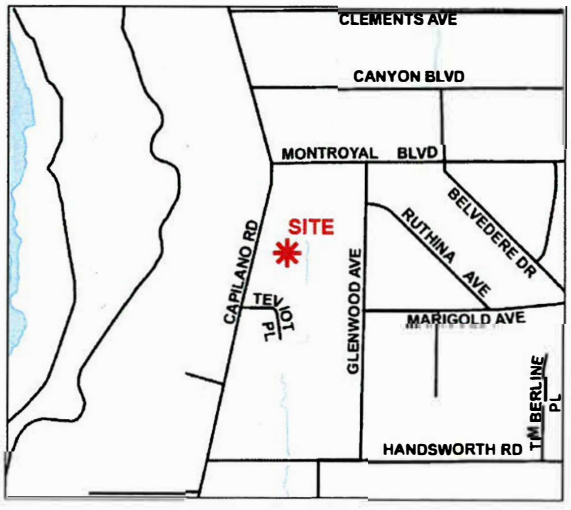
AND THAT "District of North Vancouver Rezoning Bylaw 1370 (Bylaw 8292)" be referred to a public hearing.

REASON FOR REPORT

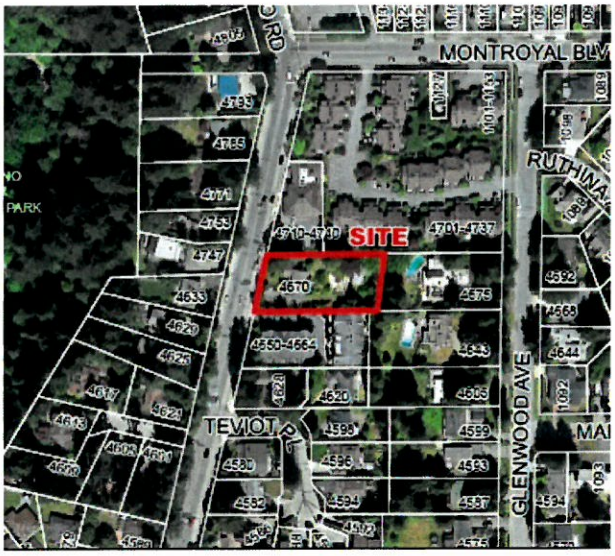
The applicant proposed to redevelop one single-family lot with eight ground-oriented townhouses.

The proposed project requires Council's consideration of:

- Bylaw 8292 to rezone the subject properties;
- Bylaw 8293 to authorize a housing agreement to ensure all future owners are eligible to rent their units; and
- Issuance of a Development Permit.



SUBJECT PROPERTY

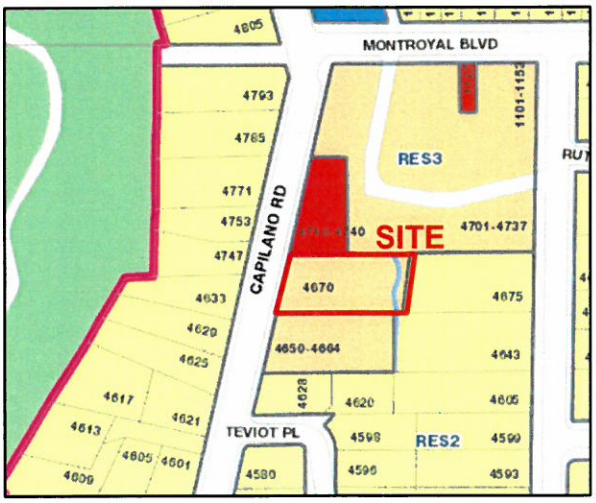


The site is located mid-block along the east side of Capilano Road and consists of one single-family lot. Adjacent properties consist of townhouses and a commercial strip-mall to the north, single-family homes to the east and west, and townhouses to the south.

EXISTING POLICY

Official Community Plan

The Official Community Plan (OCP) designates the site as "Residential Level 3: Attached Residential", which envisions ground-oriented multifamily housing at a density of up to approximately 0.8 FSR.



The Upper Capilano Local Area Plan (1999), which is the reference policy document for this neighbourhood, designates this site for "Ground-Oriented Residential" with approximately 17 units on this site and the site to the south. The site to the south consists of eight townhouse units.

The proposal is consistent with the land use designations of both plans.

The surrounding properties are designated in the OCP as Residential Level 3: Attached Residential, Residential Level 2: Detached Residential, and Commercial Retail Mixed Use Level 1.

The proposed townhouse units are all three bedroom units, which will be attractive to families, and as such, the proposal responds to Goal #2 of the OCP to "encourage and enable a diverse mix of housing type to accommodate the lifestyles and needs of people at all stages of life." It also addresses the intent of the housing diversity policies in Section 7.1 of the OCP by providing units suitable for families (Policy 7.1.4).

Zoning

The subject property is zoned Residential Single-Family 7200 Zone (RS3) and therefore requires rezoning to permit this multi-family project. Bylaw 8292 proposes the establishment of a new Comprehensive Development Zone 117 (CD117) tailored specifically to this project. The proposed CD117 zone prescribes permitted uses and zoning provisions such as a maximum number of eight units, height, setbacks, and parking requirements.

Strata Rental Protection Policy

Corporate Policy 8-3300-2 "Strata Rental Protection Policy" applies to this project as the rezoning application would permit development of more than five units. The policy requires a Housing Agreement to ensure that future strata bylaws do not prevent owners from renting their units and Bylaw 8293 is provided to implement that Policy.

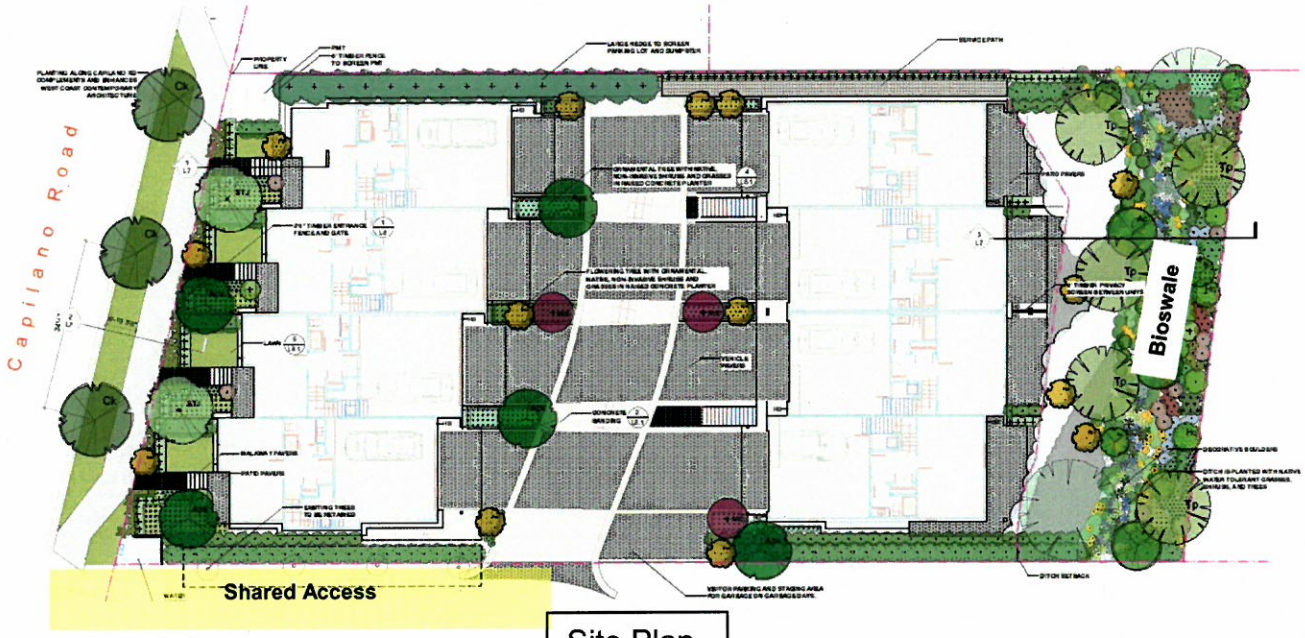
Housing Affordability and Diversity

In accordance with the Rental and Affordable Housing Strategy, this application is meeting goal number one of expanding the supply and diversity of housing through the provision of family-oriented townhouse units which are in high demand and short supply in the District. These town homes offer ground-oriented family alternatives to single detached home ownership and will be attractive to young couples who are part of the District's "missing generation."

ANALYSIS:

Site Plan and Project Description

The project consists of eight townhouses in two buildings (see site plan of following page). One building fronts Capilano Road while the other faces an internal courtyard and drive aisle. A landscaped bioswale runs along the east side of the property. The townhouses are each three storeys in height and have their own ground-level parking garages. The garages are accessed off a shared driveway with the property to the south at 4650 – 4664. This access was secured with an easement when the adjacent property was developed.



Site Plan

All of the units have three bedrooms on the upper level and range in size from 171m² (1,850 sq ft) to 204m² (2,220 sq ft), excluding the garages. The individual buildings are approximately 10.7 m (35.3 ft) in height. Renderings of the project are below.

Rendering of proposal looking north along Capilano Road

Rendering of proposal looking east from Capilano Road

Development Permit

The subject properties are located within Development Permit Areas for the following purposes:

- Form and Character of Multi-Family Development (Ground-Oriented Housing);
- Energy and Water Conservation and Greenhouse Gas Emission Reductions;
- Protection of Development from Hazardous Conditions: Wildfire Hazard: Wildfire Interface Area; and
- Protection of the Natural Environment: Streamside Protection.

A detailed development permit report, outlining the projects' compliance with the applicable DPA guidelines, will be provided for Council's consideration at the Development Permit stage should the rezoning advance.

Advisory Design Panel

The application was considered by the Advisory Design Panel (ADP) on November 9, 2017 and the Panel recommended approval of the project subject to review of items to the satisfaction of staff. In response, the following revisions have been made:

- A variety of planting including seven Beech trees have been added to the central space for additional softening of the central courtyard area;
- North elevation has been revised to add more contrast though the use of different material and colour, plus longer flat roof overhang to create shadow.
- Planting added to along the north pathway to provide for additional screening from the adjacent commercial parking lot.

A detailed review of development permit issues, outlining the project's compliance with the applicable development permit guidelines will be provided for Council's consideration should the application proceed through the rezoning process.

Accessibility

The District's Accessible Design Policy encourages ground-oriented units to include accessible design features where feasible. The proposal does not include grade-level access to any of the townhouse units without the use of stairs. Despite this limitation, the applicant is proposing to install some accessible design measures in all of units to support aging in place.

The proposal also includes a conduit in all staircases for future electrical installation for a lift, and reinforced backing for support.

Vehicle Parking

The proposal includes 16 parking spaces in two-car garages accessed off an internal lane. The proposal includes one dedicated visitor space plus the potential for additional visitor parking on the individual driveway aprons.

Off-site improvements

The application includes improved street frontages with street tree plantings and streetlight upgrades, curb, gutter, and paving improvements.

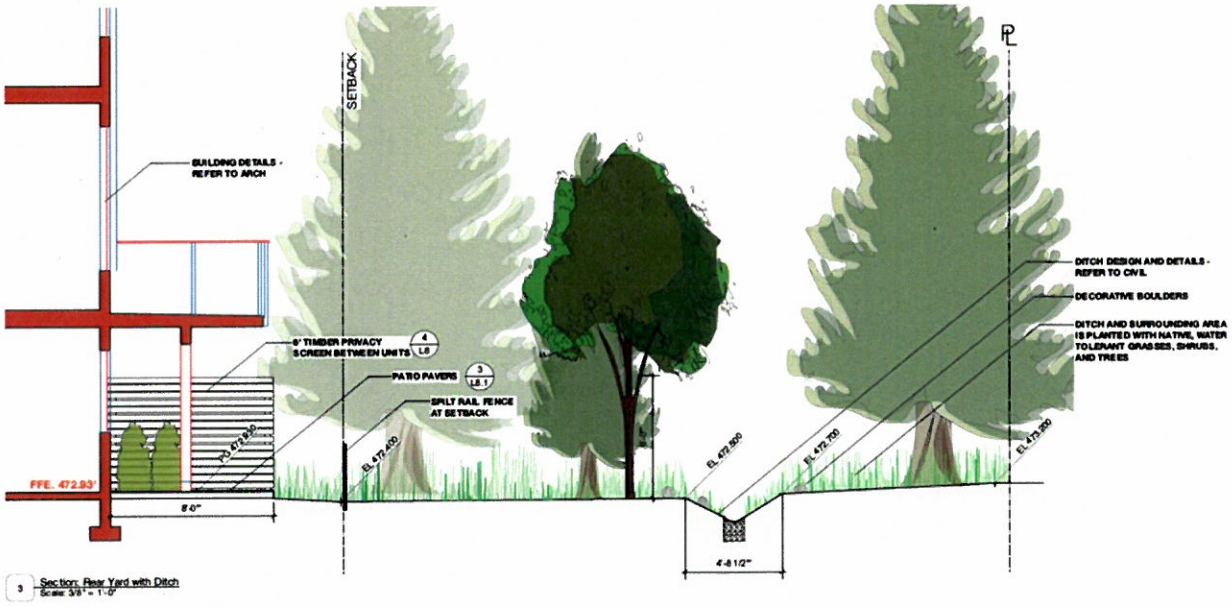
Community Amenity Contribution

The District's Community Amenity Contribution (CAC) Policy outlines expectations for contribution for projects which result in an increase in density. A CAC of $162,408 will be included in the proposed CD117 Zone. It is anticipated that the CACs from this development will be directed toward public art; park and trail improvements; the affordable housing fund; or, other public realm infrastructure improvements.

Landscaping

Landscaping is proposed around the perimeter of the site and throughout the interior courtyard and drive aisles.

A central feature of the landscape plan is a bioswale that runs along the eastern property line where a small drainage ditch currently exists. The bioswale will be planted with native non-invasive, water-tolerant grasses, shrubs, trees, and includes a number of decorative boulders. The new development will be setback from this area by a five metre buffer area and will be protected with a 1m (3 ft) split-rail environmental fence (see below).



Should the rezoning proposal proceed, a more detailed review of landscape issues will be included in the development permit report.

Trees

Thirteen onsite tree, three District trees, and three trees on the neighbouring property to south have been identified for removal to accommodate the proposed development. In place of these trees, the

applicant is proposing to replant 34 trees which are mix of deciduous and coniferous and include five 3.5m Western Red Cedars in the bioswale.

Concurrence:

The project has been reviewed by staff from the Environment, Building and Permits, Legal, Parks, Engineering, Community Planning, Urban Design, Transportation, the Fire Department, and the Arts Office.

Construction Traffic Management Plan:

In order to reduce development's impact on pedestrian and vehicular movements, the applicant is required to provide a Construction Traffic Management Plan (CTMP) as a condition of a Development Permit. The plan must outline how the applicant will coordinate with the mixed-use project located at 5020 Capilano Road, should that project also advance, to minimize construction impacts on pedestrian and vehicle movement along Capilano Road. The plan is required to be approved by the District prior to issuance of a building permit.

In particular, the Construction Traffic Management Plan must:

1. Provide safe passage for pedestrians, cyclists, and vehicle traffic;
2. Outline roadway efficiencies (i.e. location of traffic management signs and flaggers);
3. Make provisions for trade vehicle parking which is acceptable to the District and minimizes impacts to neighbourhoods;
4. Provide a point of contact for all calls and concerns;
5. Provide a sequence and schedule of construction activities;
6. Identify methods of sharing construction schedule with other developments in the area;
7. Ascertain a location for truck marshalling;
8. Address silt/dust control and cleaning up from adjacent streets;
9. Provide a plan for litter clean-up and street sweeping adjacent to site; and,
10. Include a communication plan to notify surrounding businesses and residents.

PUBLIC INPUT:

Public Information Meeting:

The applicant held a facilitated Public Information Meeting on October 12, 2017.

Notices were distributed to 81 addresses within approximately a 100 metre radius of the site. One sign was placed on the property to notify passersby of the meeting, and advertisements were placed in the North Shore News on October 4th and 6th.

The meeting was attended by approximately nine residents. Concerns raised at the meeting and in emails received during the feedback period included smells and sounds from the adjacent commercial property, encroachment into the ditch area, projected unit price, and increased traffic on Capilano Road. There was also a suggestion to incorporate the same variety of Beech trees which are found in the property to the south.

In response to these concerns and suggestions, the applicant has incorporated the following revisions to the proposal:

- provided increased screening between the buildings and the commercial property to the north with a large hedge and solid privacy fence;
- removed all development from the ditch setback area and included a protective fence;
- incorporated beech trees into the landscape plan; and
- provided a draft construction traffic management plan which will minimize impacts to neighbours during the construction period for the project.

Vehicular traffic demand can be accommodated by the existing road network. Access is proposed to be shared with the property to the south.

With respect to housing affordability, the proposal complies with the Rental and Affordable Housing Strategy in that it proposes to replace an older single-family home with eight town houses which are an alternative to single-family housing and may be more affordable than many of the existing single-family homes in the area, and will contribute CACs, which may be allocated to affordable housing subject to Council's direction on the long term funding strategy.

IMPLEMENTATION:

Implementation of this project will require a rezoning, and a Housing Agreement, as well as issuance of a development permit and registration of legal agreements.

Bylaw 8292 (Attachment 1) rezones the subject site from RS3 to a new Comprehensive Development Zone 117 (CD117) which:

- establishes the permitted residential uses;
- allows home occupations as an accessory use;
- establishes the maximum permitted floor area on the site;
- establishes a density bonus equal to an FSR of 0.8 subject to payment of a $162,408 CAC and entering into a housing agreement to restrict future strata rental restrictions;
- establishes setback and building height regulations; and,
- establishes parking regulations specific to this project.

Bylaw 8293, (Attachment 2) authorizes the District to enter into a Housing Agreement to ensure that there will be no future restrictions on renting the units.

A legal framework will be required to support the project and it is anticipated that a development covenant will be used to secure items such as the details of off-site servicing requirements. Additional legal documents required for the project will include:

- a development covenant to reference the general form and layout of project as well as requirements for off-site servicing;
- a stormwater management covenant;
- a registration of housing agreement regarding prohibition of rental restrictions for strata units; and
- an engineering servicing agreement (including construction management plan).

CONCLUSION:

This project is consistent with the directions establishes in the District's OCP and the Upper Capilano Local Area Plan Reference Policy Document. It addresses the OCP housing objectives related to the provision of a range of housing options, in this case, family housing in a townhouse format.

The rezoning proposal is now ready for Council's consideration.

Options:

The following options are available for Council's consideration:

1. Introduce Bylaws 8292, and 8293 and refer Bylaw 8292 to a Public Hearing (staff recommendation); or,

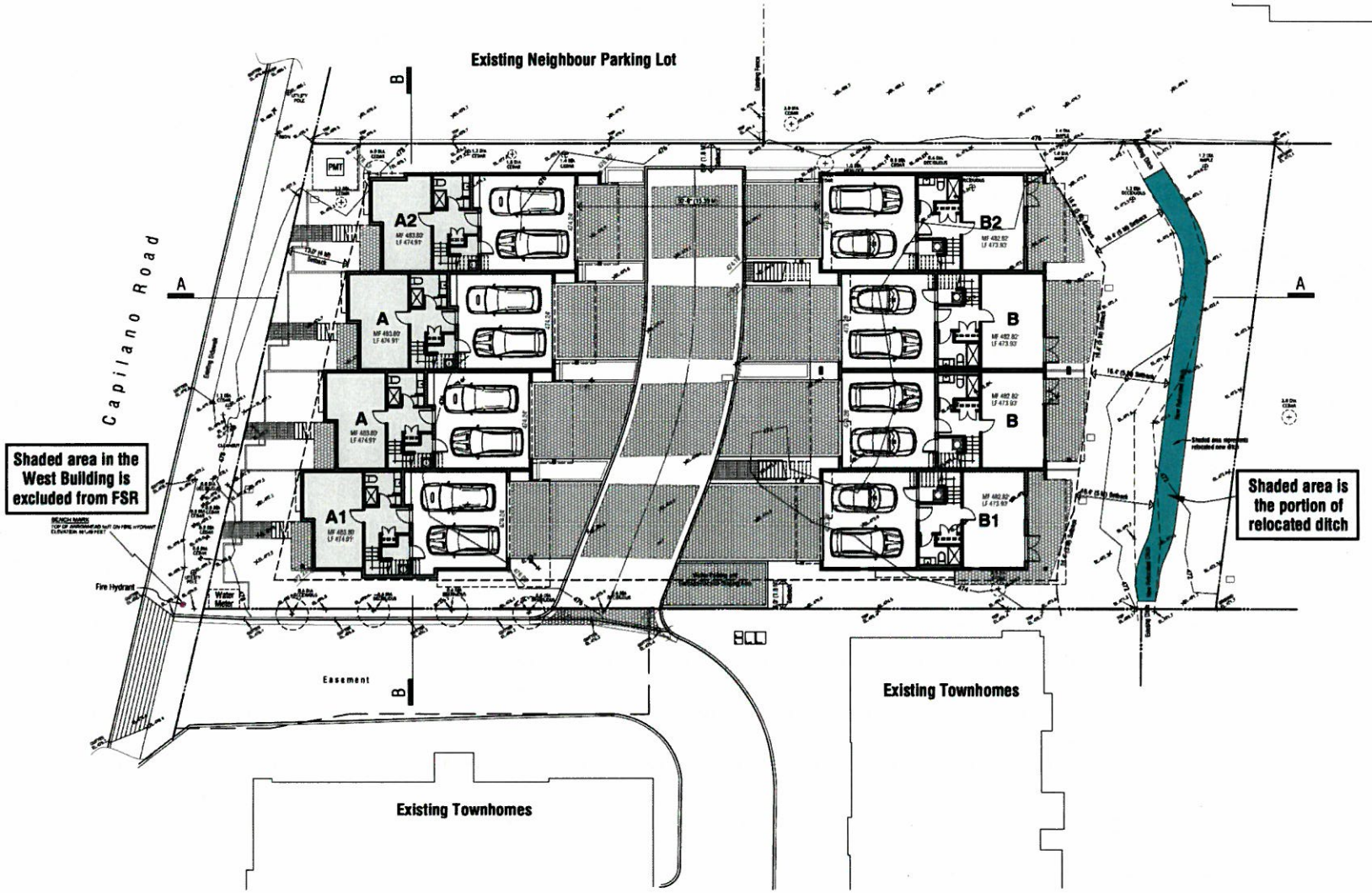
2. Defeat the bylaws at First Reading.

Darren Veres
Development Planner

Attachments:
1. Architectural and Landscape Plans
2. Bylaw 8292 – Rezoning
3. Bylaw 8293 – Housing Agreement

REVIEWED WITH:

				External Agencies:	
❑ Sustainable Community Dev.	____	❑ Clerk's Office	____	❑ Library Board	____
❑ Development Services	____	❑ Communications	____	❑ NS Health	____
❑ Utilities	____	❑ Finance	____	❑ RCMP	____
❑ Engineering Operations	____	❑ Fire Services	____	❑ NVRC	____
❑ Parks	____	❑ ITS	____	❑ Museum & Arch.	____
❑ Environment	____	❑ Solicitor	____	❑ Other:	____
❑ Facilities	____	❑ GIS	____		
❑ Human Resources	____	❑ Real Estate	____		



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Revisions:
Issued for Rezoning & Development Permit
August 8, 2017
Re-issued for Rezoning & Development Permit
February 28, 2018

ATTACHMENT 1

Client:
Wedgewood Ventures Ltd.

Project:
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Site Plan
1" = 10'-0"
February 28, 2018

A-1.03

West Building Front Elevation From Capilano Road

West Building Front Elevation From Capilano Road

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Issued for Rezoning & Development Permit
August 9, 2017

Re-Issued for Rezoning & Development Permit
February 26, 2018

Client
Wedgewood Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type A - West Building
3D Renders

NTS
February 26, 2018

A-2.02

East Building Front Elevation From Courtyard

East Building Rear Elevation

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Revisions:

Issued for Rezoning & Development Permit
August 9, 2017

Re-Issued for Rezoning & Development Permit
February 23, 2018

Client:

Wedgewood Ventures Ltd.

Project:

4670 Capilano

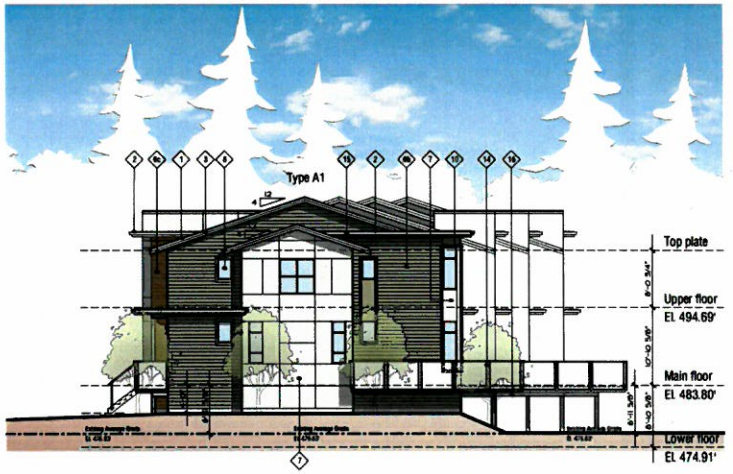
4670 Capilano Road
North Vancouver, BC

Type B - East Building Renders

NTS
February 26, 2018

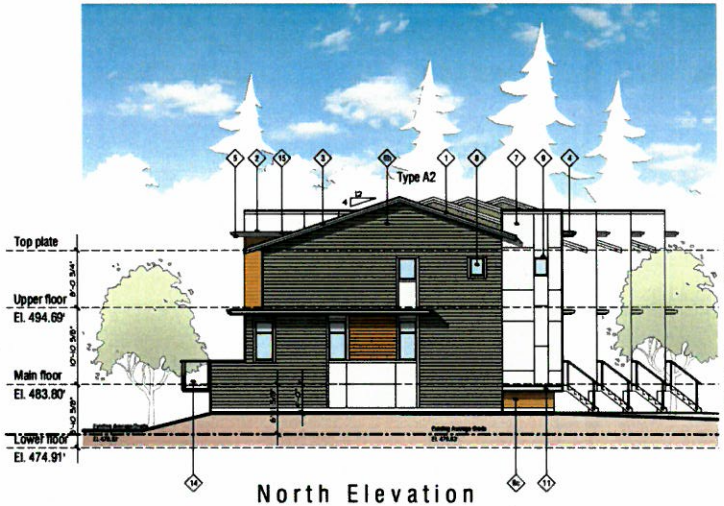
A-3.02

West Elevation (Capilano Road)



South Elevation

East Elevation



North Elevation

Exterior Finish Legend

1 Pitch Roof	Asphalt roof shingles Pabco Premier, Pewter Gray	6a Lap Siding	HardiePlank Lap Siding, smooth, painted Benjamin Moore, HC-77 Alexandria Beige	8 Windows	Vinyl frames, White Windows	12 Entry Front Doors	Wood veneer fibreglass, painted
2 Low Slope Roof	2 ply SBS roofing membrane	6b Lap Siding	HardiePlank Lap Siding, smooth, painted Benjamin Moore, HC-110 Wethersfield Moss	9 Trims Windows & Doors	2x4 wood, painted Painted to matching adjacent cladding colour	13 Garage Doors	Overhead garage door w/ glazed panels, Painted to matching adjacent cladding colour
3 Gable Fascia	2 x 4 on 2 x 10 wood, painted Benjamin Moore, OC-57 Heron White	6c Lap Siding	HardiePlank Lap Siding, smooth, painted Custom colour to simulate wood cedar	10 Window Shadow Box	1x4 HardieTrim Board, smooth, painted Painted to matching adjacent cladding colour	14 Guard Rail	Aluminum rails with inset glazing, Natural anodized rails
4 Fascia	2 x 10 wood, painted Benjamin Moore, OC-57 Heron White	7 Panel & Reveal	HardiePanel, smooth, painted, aluminum reveal to match See elevations for colour	11 Belly Band	2x10 wood, painted Benjamin Moore, OC-57 White Heron	15 Gutter & RWL	Pre-finished aluminum, White
5 Soffit	HardieSoffit Perforated, painted Benjamin Moore, OC-57 Heron White					16 Posts & Beams	Wood, painted Benjamin Moore, OC-57 White Heron

0 4 8 12 16 20 FT

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August 9, 2017
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February 28, 2018

Client
Wedgewood Ventures Ltd.

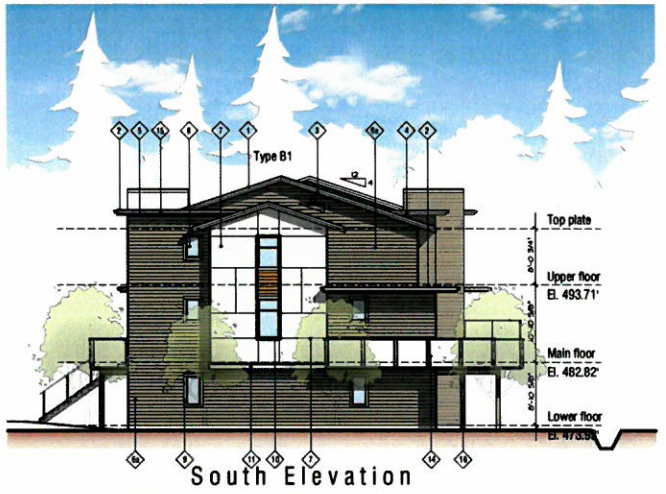
Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type A - West Building Elevations

1/8" = 1'-0"
February 28, 2018

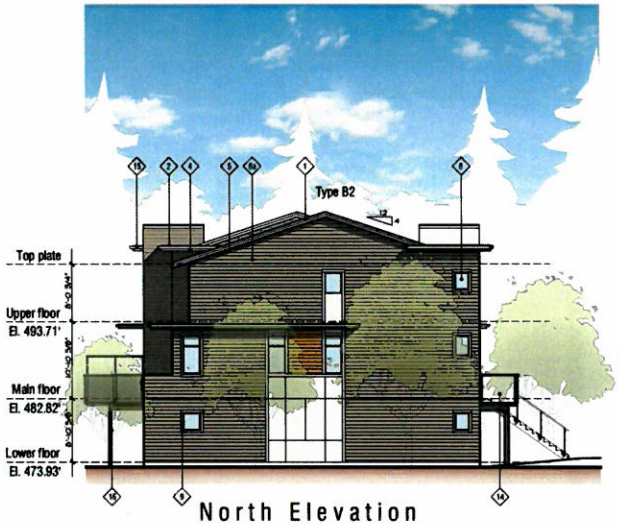
A-2.01

West Elevation



South Elevation

East Elevation



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0 4 8 12 16 20 FT

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Revisions

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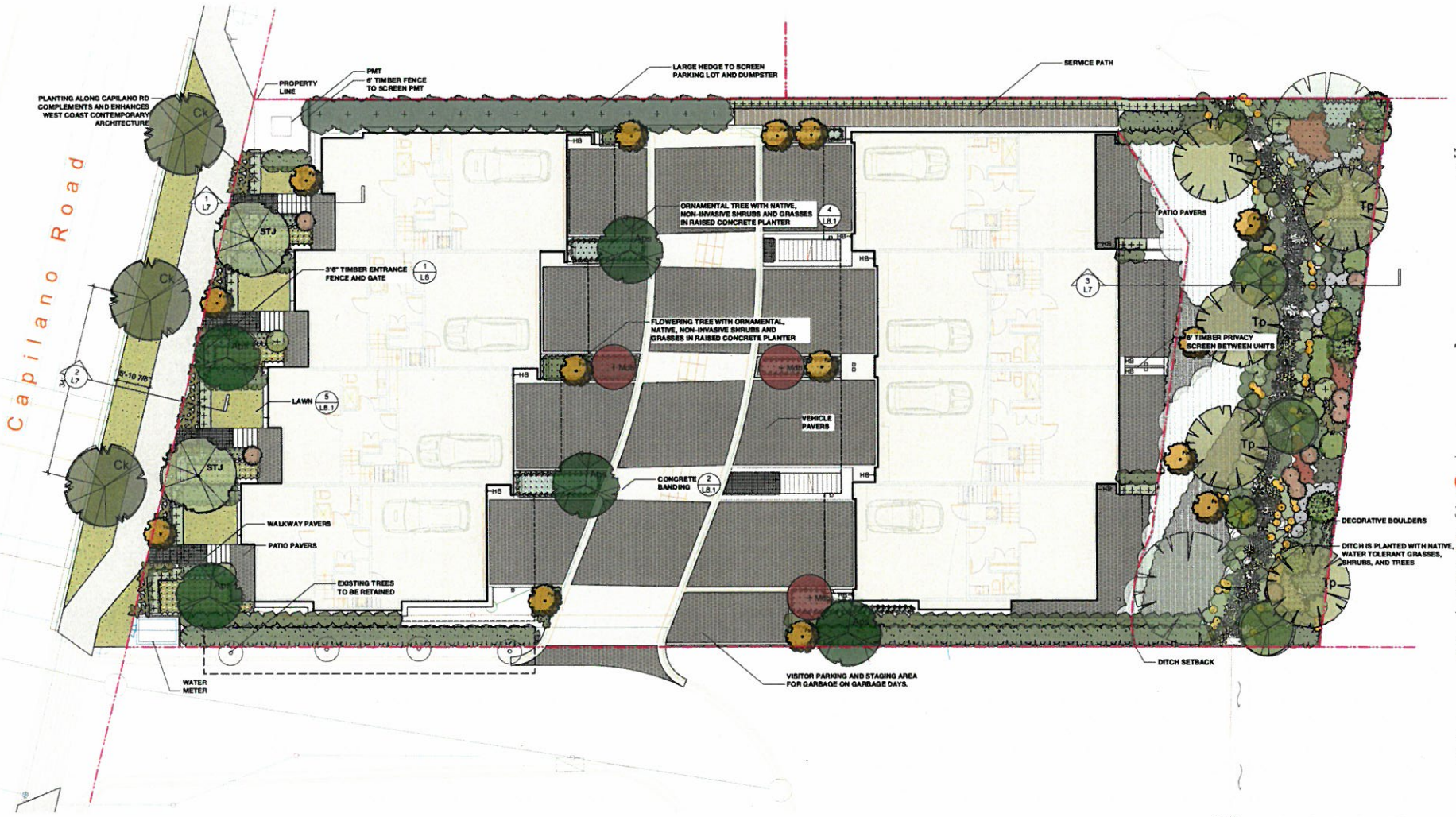
Wedgewood Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type B - East Building Elevations

1/8" = 1'-0"
February 26, 2018

A-3.01



Revision
No. Date Revision Notes

Issue
No. Date Issue Notes
A 17-08-08 Issued for RZ and DP
B 18-02-02 Re-Issued for DP

Professional Seal

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1990 West 2nd Avenue
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Project
4760 Capilano Road

Drawing Title
Landscape Plan

Project Manager: QE
Project #: 21716
Drawn By: VG
Scale: 1/8"=1'0"
Reviewed By: Reviewed By
Date: 17/08/02
Drawing No: L3.0 — of — 11

Plot Date:
18-3-12
21716-4760 Cap Rd Master v2018.vwx

ATTACHMENT 2

The Corporation of the District of North Vancouver

Bylaw 8292

A bylaw to amend District of North Vancouver Zoning Bylaw 3210, 1965

The Council for The Corporation of the District of North Vancouver enacts as follows:

1. Citation

This bylaw may be cited as "District of North Vancouver Rezoning Bylaw 1370 (Bylaw 8292)".

2. Amendments:

2.1 District of North Vancouver Zoning Bylaw 3210, 1965 is amended as follows:

a) Section 301 (2) by inserting the following zoning designation:

"Comprehensive Development Zone 117 CD117"

b) Part 4B Comprehensive Development Zone Regulations by inserting the following, inclusive of Schedule B.

"4B117 Comprehensive Development Zone 117 CD117

The CD117 zone is applied to:

4670 Capilano Road, Lot A of Lot 3 Block D District Lot 595 Plan 9296,
PID: 009-669-953

4B 117-1 Intent

The purpose of the CD117 Zone is to establish specific land use and development regulations for an eight-unit townhouse project.

4B 117- 2 Permitted Uses:

The following *principal* uses shall be permitted in the CD117 Zone:

(a) Uses Permitted Without Conditions:

Not Applicable

(b) Conditional Uses:

(i) Residential building, multiple-family townhouse

4B 117-3 Conditions of Use

(a) Balcony enclosures not permitted

4B 117-4 Accessory Use

(a) *Accessory uses* are permitted and may include but are not necessarily limited to:

(i) Home occupations in accordance with the regulations in Section 405 of the Zoning Bylaw, 1965

4B 117-5 Density

(a) The maximum permitted density in the CD117 Zone is limited to a floor space ratio (FSR) of 0.45, and a maximum of 1 unit;

(b) For the purposes of calculating floor space ratio, the following are exempted:

i. garage spaces up to a maximum of 41.7 m^2 (449 sq ft)
ii. floor area contain within that part of the buildings having an adjacent exposed perimeter wall of less than 1.22m (4.0 ft) from the main floor geodetic to the finished grade up to a maximum of 464m^2 (5,000 sq ft) are excluded

(c) Balcony enclosures are not permitted.

4B 117-6 Amenities

(a) Despite subsection 4B117-5, density in the CD117 Zone is increased to a maximum floor space of 1,482m^2 (15,951 sq ft), inclusive of any density bonus for energy performance and a maximum of 8 units, if the owner:

1. Enters into a Housing Agreement prohibiting any restrictions preventing the owners in the project from renting their units; and

2. Contributes $162,408 to the municipality to be used for any or all of the following amenities (with allocation to be determined by the municipality in its sole discretion): public art; park, trail, environmental, pedestrian or other public realm, infrastructure improvements; municipal, recreation or social service facility or service / facility improvements; and/or the affordable housing fund.

4B 117-7 Maximum Principal Building Size:

Not applicable

4B 117-8 Setbacks:

a) Buildings shall be set back from property lines to the closest building face as established by development permit and in accordance with the following regulations:

Setback	Buildings (Minimum Setback)
Front (west property line)	4.0m (13ft) to the building face
Rear (east property line)	11.3m (37ft) to the building face
Side (north property line)	1.83m (6ft) to the building face
Side (south property line)	1.83m (6ft) to the building face

b) No projecting features of a building can be within 1.2m (4ft) of a side property line.

4B 117-9 Building Orientation:

Not applicable

4B 117-10 Building Depth and Width:

Not applicable

4B 117-11 Coverage:

(a) Building Coverage shall not exceed 48%.

(b) Site Coverage shall not exceed 75%.

4B 117-12 Height:

The maximum permitted height for each building is 11.2m (36.8ft).

4B 117-13 Flood Construction Requirements:

Not applicable

4B 117-14 Landscaping:

(a) All land areas not occupied by buildings, structures, parking spaces, loading spaces, driveways, manoeuvring aisles and sidewalks shall be landscaped or finished in accordance with an approved landscape plan; and

(b) All electrical kiosks and garbage and recycling container pads not located underground or within a building shall be screened with landscaping.

4B 117-15 Subdivision Requirements:

Not applicable

4B 117-16 Additional Accessory Structure Regulations:

Not applicable.

4B 117-17 Parking and Loading Regulations:

(a) Parking spaces shall be provided on the basis of 2 spaces/unit plus 1 visitor space; and

(b) All parking spaces shall meet the minimum length and width standards established in Part 10 of the District of North Vancouver Zoning Bylaw."

2.2 The Zoning Map is amended in the case of the lands illustrated on the attached map (Schedule A) by rezoning the land from the Residential Single Family 7200 Zone (RS3) to Comprehensive Development Zone 117 (CD117).

READ a first time

PUBLIC HEARING held

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk

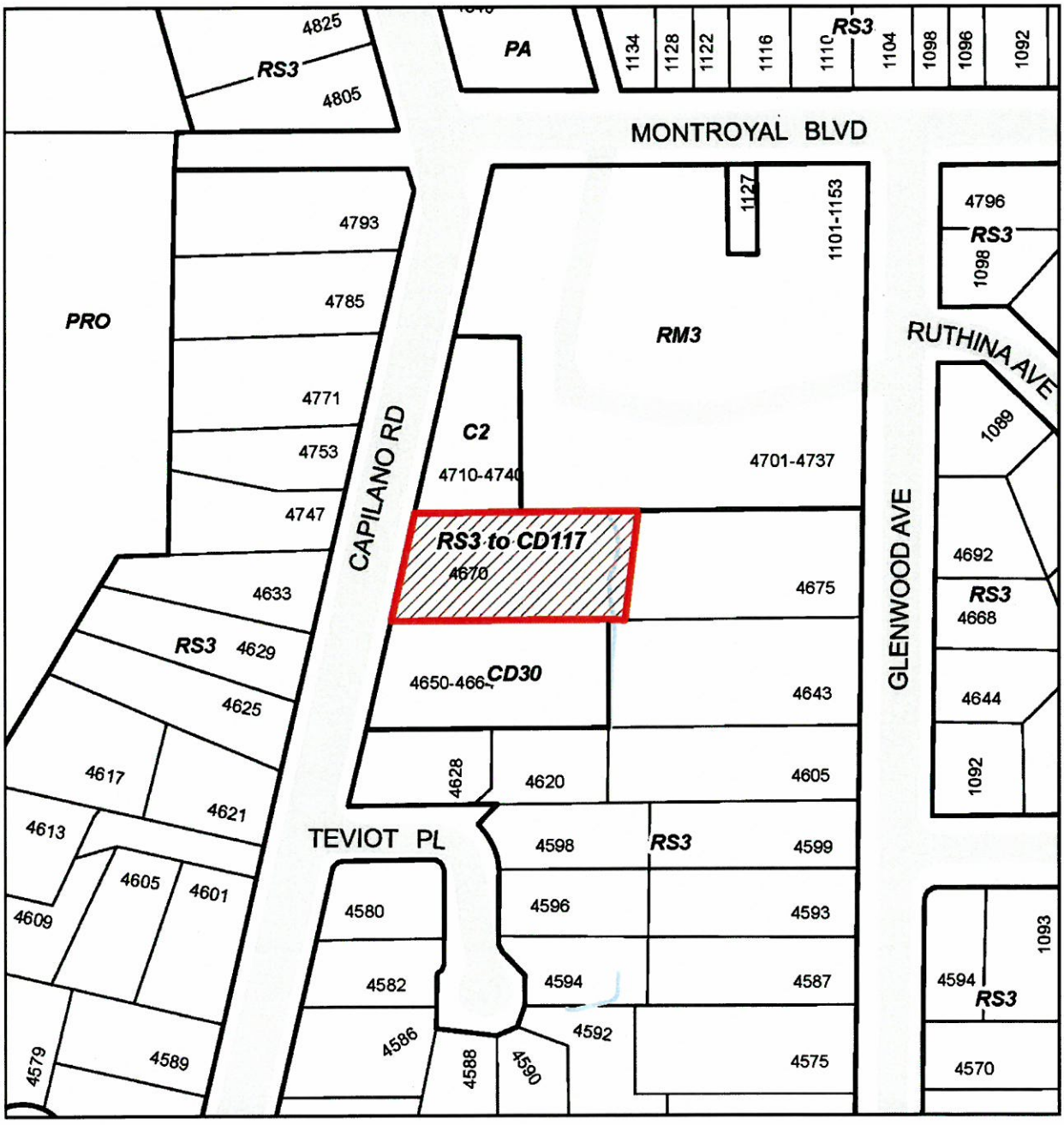
Certified a true copy

Municipal Clerk

Schedule A to Bylaw 8292

BYLAW 8292

The District of North Vancouver Rezoning Bylaw 1370 (Bylaw 8292)



RESIDENTIAL SINGLE FAMILY 7200 ZONE (RS3) TO
COMPREHENSIVE DEVELOPMENT ZONE 117 (CD117)

N

Document: 3428591

ATTACHMENT 3

The Corporation of the District of North Vancouver

Bylaw 8293

A bylaw to enter into a Housing Agreement
(4670 Capilano Road)

The Council for The Corporation of the District of North Vancouver enacts as follows:

1. Citation

This bylaw may be cited as "Housing Agreement Bylaw 8293, 2017 (4670 Capilano Road)".

2. Authorization to Enter into Agreement

2.1 The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Wedgewood Capilano Homes Ltd. (Inc. No. BC1043762) substantially in the form attached to this Bylaw as Schedule "A" with respect to the following lands:

(a) PID 009-699-953 Lot A of Lot 3 Block D District Lot 595 Plan 9296

3. Execution of Documents

The Mayor and Municipal Clerk are authorized to execute any documents required to give effect to the Housing Agreement.

READ a first time

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk

Certified a true copy

Municipal Clerk

Schedule "A" to Bylaw 8293

SECTION 219 COVENANT – HOUSING AGREEMENT

THIS AGREEMENT is dated for reference the ____ day of _____, 20____

BETWEEN:

WEDGEWOOD CAPILANO HOMES LTD. (Inc. No. BC1043762) a company incorporated under the laws of the Province of British Columbia having an office at 450 East 21st Street, North Vancouver, BC V7L 3C2

(the "Developer")

AND:

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER, a municipality incorporated under the *Local Government Act*, RSBC 2015, c.1 and having its office at 355 West Queens Road, North Vancouver, BC V7N 4N5

(the "District")

WHEREAS:

1. The Developer is the registered owner of the Lands (as hereinafter defined);

2. The Developer wishes to obtain development permissions with respect to the Lands and wishes to create a condominium development which will contain residential strata units on the Lands;

3. Section 483 of the *Local Government Act* authorises the District, by bylaw, to enter into a housing agreement to provide for the prevention of rental restrictions on housing, and provides for the contents of the agreement; and

4. Section 219 of the *Land Title Act* (British Columbia) permits the registration in favour of the District of a covenant of a negative or positive nature relating to the use of land or a building thereon, or providing that land is to be built on in accordance with the covenant, or providing that land is not to be built on except in accordance with the covenant, or providing that land is not to be subdivided except in accordance with the covenant;

NOW THEREFORE in consideration of the mutual promises contained in it, and in consideration of the payment of $1.00 by the District to the Developer (the receipt and sufficiency of which are hereby acknowledged by the Developer), the parties covenant and agree with each other as follows, as a housing agreement under Section 483 of the *Local Government Act*, as a contract and a deed under seal between the parties, and as a covenant under Section 219 of the *Land Title Act*, and the Developer hereby further covenants and agrees that neither the Lands nor any building constructed thereon shall be used or built on except in accordance with this Agreement:

Article 1 DEFINITIONS

1.01 Definitions

In this agreement:

(a) *"Development Permit"* means development permit No. _____ issued by the District;

(b) *"Lands"* means land described in Item 2 of the *Land Title Act* Form C to which this agreement is attached;

(c) *"Owner"* means the Developer and any other person or persons registered in the Lower Mainland Land Title Office as owner of the Lands from time to time, or of any parcel into which the Lands are consolidated or subdivided, whether in that person's own right or in a representative capacity or otherwise;

(d) *"Proposed Development"* means the proposed development containing not more than 8 units to be constructed on the Lands in accordance with the Development Permit;

(e) *"Short Term Rentals"* means any rental of a Unit for any period less than 30 days;

(f) *"Strata Corporation"* means the strata corporation formed upon the deposit of a plan to strata subdivide the Proposed Development pursuant to the *Strata Property Act*;

(g) *"Unit"* means a residential dwelling strata unit in the Proposed Development; and

(h) *"Unit Owner"* means the registered owner of a Dwelling Unit in the Proposed Development.

Article 2 TERM

This Agreement will commence upon adoption by District Council of Bylaw 8293 and remain in effect until terminated by the District as set out in this Agreement.

Article 3 RENTAL ACCOMODATION

3.01 Rental Disclosure Statement

No Unit in the Proposed Development may be occupied unless the Owner has:

(i) before the first Unit is offered for sale, or conveyed to a purchaser without being offered for sale, filed with the Superintendent of Real Estate a rental disclosure statement in the prescribed form (the "Rental Disclosure Statement") designating all of the Units as rental strata lots and imposing at least a 99 year rental period in relation to all of the Units pursuant to the *Strata Property Act* (or any successor or replacement legislation), except in relation to Short Term Rentals and, for greater certainty, stipulating specifically that the 99 year rental restriction does not apply to a Strata Corporation bylaw prohibiting or restricting Short Term Rentals; and

(j) given a copy of the Rental Disclosure Statement to each prospective purchaser of any Unit before the prospective purchaser enters into an agreement to purchase in respect of the Unit. For the purposes of this paragraph 3.01(b), the Owner is deemed to have given a copy of the Rental Disclosure Statement to each prospective purchaser of any Unit in the building if the Owner has included the Rental Disclosure Statement as an exhibit to the disclosure statement for the Proposed Development prepared by the Owner pursuant to the *Real Estate Development Marketing Act*.

3.02 Rental Accommodation

The Units constructed on the Lands from time to time may always be used to provide rental accommodation as the Owner or a Unit Owner may choose from time to time, except that this section 3.02 does not apply to Short Term Rentals which may be restricted by the Strata Corporation to the full extent permitted by law.

3.03 Binding on Strata Corporation

This agreement shall be binding upon all Strata Corporations created by the subdivision of the Lands or any part thereof (including the Units) pursuant to the *Strata Property Act,* and upon all Unit Owners.

3.04 Strata Bylaw Invalid

Any Strata Corporation bylaw which prevents, restricts or abridges the right to use any of the Units as rental accommodations (other than Short Term Rentals) shall have no force or effect.

3.05 No Bylaw

The Strata Corporation shall not pass any bylaws preventing, restricting or abridging the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation (other than Short Term Rentals).

3.06 Vote

No Unit Owner, nor any tenant or mortgagee thereof, shall vote for any Strata Corporation bylaw purporting to prevent, restrict or abridge the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation (other than Short Term Rentals).

3.07 Notice

The Owner will provide notice of this Agreement to any person or persons intending to purchase a Unit prior to any such person entering into an agreement of purchase and sale, agreement for sale, or option or similar right to purchase as part of the disclosure statement for any part of the Proposed Development prepared by the Owner pursuant to the *Real Estate Development Marketing Act*.

Article 4 DEFAULT AND REMEDIES

4.01 Notice of Default

The District may, acting reasonably, give to the Owner written notice to cure a default under this Agreement within 30 days of delivery of the notice. The notice must specify the nature of the default. The Owner must act with diligence to correct the default within the time specified.

4.02 Costs

The Owner will pay to the District upon demand all the District's costs of exercising its rights or remedies under this Agreement, on a full indemnity basis.

4.03 Damages an Inadequate Remedy

The Owner acknowledges and agrees that in the case of a breach of this Agreement which is not fully remediable by the mere payment of money and promptly so remedied, the harm sustained by the District and to the public interest will be irreparable and not susceptible of adequate monetary compensation.

4.04 Equitable Remedies

Each party to this Agreement, in addition to its rights under this Agreement or at law, will be entitled to all equitable remedies including specific performance, injunction and declaratory relief, or any of them, to enforce its rights under this Agreement.

4.05 No Penalty or Forfeiture

The Owner acknowledges and agrees that it is entering into this Agreement to benefit the public interest in providing rental accommodation, and that the District's rights and remedies under this Agreement are necessary to ensure that this purpose is carried out, and the District's rights and remedies under this Agreement are fair and reasonable and ought not to be construed as a penalty or forfeiture.

4.06 Cumulative Remedies

No reference to nor exercise of any specific right or remedy under this Agreement or at law or at equity by any party will prejudice, limit or preclude that party from exercising any other right or remedy. No right or remedy will be exclusive or dependent upon any other right to remedy, but any party, from time to time, may exercise any one or more of such rights or remedies independently, successively, or in combination. The Owner acknowledges that specific performance, injunctive relief (mandatory or otherwise) or other equitable relief may be the only adequate remedy for a default by the Owner under this Agreement.

Article 5 LIABILITY

5.01 Indemnity

Except if arising directly from the negligence of the District or its employees, agents or contractors, the Owner will indemnify and save harmless each of the District and its board members, officers, directors, employees, agents, and elected or appointed officials,, and their heirs, executors, administrators, personal representatives, successors and assigns, from and against all claims, demands, actions, loss, damage, costs and liabilities that all or any of them will or may be liable for or suffer or incur or be put to any act or omission by the Owner or its officers, directors, employees, agents, contractors, or other persons for whom the Owner is at law responsible, or by reason of or arising out of the Owner's ownership, operation, management or financing of the Proposed Development or any part thereof.

5.02 Release

The Owner hereby releases and forever discharges the District, its elected officials, board members, officers, directors, employees and agents, and its and their heirs, executors, administrators, personal representatives, successors and assigns from and against all claims, demands, damages, actions or causes of action by reason of or arising out of advice or direction respecting the ownership, operation or management of the Proposed Development or any part thereof which has been or hereafter may be given to the Owner by all or any of them.

5.03 Survival

The covenants of the Owner set out in Sections 5.01 and 5.02 will survive termination of this Agreement and continue to apply to any breach of the Agreement or claim arising under this Agreement during the ownership by the Owner of the Lands or any Unit therein, as applicable.

Article 6 GENERAL PROVISIONS

6.01 District's Power Unaffected

Nothing in this Agreement:

(a) affects or limits any discretion, rights, powers, duties or obligations of the District under any enactment or at common law, including in relation to the use or subdivision of land;

(b) affects or limits any enactment relating to the use of the Lands or any condition contained in any approval including any development permit concerning the development of the Lands; or

(c) relieves the Owner from complying with any enactment, including the District's bylaws in relation to the use of the Lands.

6.02 Agreement for Benefit of District Only

The Owner and District agree that:

(a) this Agreement is entered into only for the benefit of the District:

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any occupant of any Unit or any future owner, occupier or user of any part of the Proposed Development, including any Unit, or the interests of any third party, and the District has no obligation to anyone to enforce the terms of this Agreement; and

(c) The District may at any time terminate this Agreement, in whole or in part, and execute a release and discharge of this Agreement in respect of the Proposed Development or any Unit therein, without liability to anyone for doing so.

6.03 Agreement Runs With the Lands

This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Unit after the date of this Agreement.

6.04 Release

The covenants and agreements on the part of the Owner and any Unit Owner and herein set forth in this Agreement have been made by the Owner and any Unit Owner as contractual obligations as well as being made pursuant to Section 483 of the *Local Government Act* (British Columbia) and as such will be binding on the Owner and any Unit Owner, except that neither the Owner nor any Unit Owner shall be liable for any default in the performance or observance of this Agreement occurring after such party ceases to own the Lands or a Unit as the case may be.

6.05 Priority of This Agreement

The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Unit in the Proposed Development, including any amendments to this Agreement as may be required by the Land Title Office or the District to effect such registration.

6.06 Agreement to Have Effect as Deed

The District and the Owner each intend by execution and delivery of this Agreement to create both a contract and a deed under seal.

6.07 Waiver

An alleged waiver by a party of any breach by another party of its obligations under this Agreement will be effective only if it is an express waiver of the breach in writing. No waiver of a breach of this Agreement is deemed or construed to be a consent or waiver of any other breach of this Agreement.

6.08 Time

Time is of the essence in this Agreement. If any party waives this requirement, that party may reinstate it by delivering notice to another party.

6.09 Validity of Provisions

If a Court of competent jurisdiction finds that any part of this Agreement is invalid, illegal, or unenforceable, that part is to be considered to have been severed from the rest of this Agreement and the rest of this Agreement remains in force unaffected by that holding or by the severance of that part.

6.10 Extent of Obligations and Costs

Every obligation of a party which is set out in this Agreement will extend throughout the Term and, to the extent that any obligation ought to have been observed or performed prior to or upon the expiry or earlier termination of the Term, such obligation will survive the expiry or earlier termination of the Term until it has been observed or performed.

6.11 Notices

All notices, demands, or requests of any kind, which a party may be required or permitted to serve on another in connection with this Agreement, must be in writing and may be served on the other parties by registered mail or by personal service, to the following address for each party:

If to the District:

District Municipal Hall
355 West Queens Road
North Vancouver, BC V7N 4N5

Attention: Planning Department

If to the Owner:

If to the Unit Owner:

The address of the registered owner which appears on title to the Unit at the time of notice.

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may

designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

6.12 Further Assurances

Upon request by the District, the Owner will promptly do such acts and execute such documents as may be reasonably necessary, in the opinion of the District, to give effect to this Agreement.

6.13 Enuring Effect

This Agreement will enure to the benefit of and be binding upon each of the parties and their successors and permitted assigns.

Article 7 INTERPRETATION

7.01 References

Gender specific terms include both genders and include corporations. Words in the singular include the plural, and words in the plural include the singular.

7.02 Construction

The division of this Agreement into sections and the use of headings are for convenience of reference only and are not intended to govern, limit or aid in the construction of any provision. In all cases, the language in this Agreement is to be construed simply according to its fair meaning, and not strictly for or against either party.

7.03 No Limitation

The word "including" when following any general statement or term is not to be construed to limit the general statement or term to the specific items which immediately follow the general statement or term similar items whether or not words such as "without limitation" or "but not limited to" are used, but rather the general statement or term is to be construed to refer to all other items that could reasonably fall within the broadest possible scope of the general statement or term.

7.04 Terms Mandatory

The words "must" and "will" and "shall" are to be construed as imperative.

7.05 Statutes

Any reference in this Agreement to any statute or bylaw includes any subsequent amendment, re-enactment, or replacement of that statute or bylaw.

7.06 Entire Agreement

(a) This is the entire agreement between the District and the Owner concerning its subject, and there are no warranties, representations, conditions or collateral agreements relating to this Agreement, except as included in this Agreement.

(b) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8293.

7.07 Governing Law

This Agreement is to be governed by and construed and enforced in accordance with the laws of British Columbia.

As evidence of their agreement to be bound by the terms of this instrument, the parties hereto have executed the *Land Title Act* Form C that is attached hereto and forms part of this Agreement.

GRANT OF PRIORITY

WHEREAS _____ (the "**Chargeholder**") is the holder of the following charge which is registered in the Land Title Office:

(a) _____(the "**Charge**");

AND WHEREAS the Chargeholder agrees to allow the Section 219 Covenant herein to have priority over the Charge;

THIS PRIORITY AGREEMENT is evidence that in consideration of the sum of $1.00 paid by THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER (the "**District**") to the Chargeholder, the receipt and sufficiency of which are hereby acknowledged, the Chargeholder covenants and agrees to subordinate and postpone all its rights, title and interest in and to the lands described in the Form C to which this Agreement is attached (the "**Lands**") with the intent and with the effect that the interests of the District rank ahead of the Charge as though the Section 219 Covenant herein had been executed, delivered and registered against title to the Lands before registration of the Charge.

As evidence of its Agreement to be bound by the above terms, as a contract and as a deed executed and delivered under seal, the Chargeholder has executed the Form C to which this Agreement is attached and which forms part of this Agreement.

The Corporation of the District of North Vancouver

Bylaw 8292

A bylaw to amend District of North Vancouver Zoning Bylaw 3210, 1965

The Council for The Corporation of the District of North Vancouver enacts as follows:

1. Citation

This bylaw may be cited as "District of North Vancouver Rezoning Bylaw 1370 (Bylaw 8292)".

2. Amendments:

2.1 District of North Vancouver Zoning Bylaw 3210, 1965 is amended as follows:

a) Section 301 (2) by inserting the following zoning designation:

"Comprehensive Development Zone 117 CD117"

b) Part 4B Comprehensive Development Zone Regulations by inserting the following, inclusive of Schedule B.

"4B117 Comprehensive Development Zone 117 CD117

The CD117 zone is applied to:

4670 Capilano Road, Lot A of Lot 3 Block D District Lot 595 Plan 9296,
PID: 009-669-953

4B 117-1 Intent

The purpose of the CD117 Zone is to establish specific land use and development regulations for an eight-unit townhouse project.

4B 117- 2 Permitted Uses:

The following *principal* uses shall be permitted in the CD117 Zone:

(a) Uses Permitted Without Conditions:

Not Applicable

(b) Conditional Uses:

(i) Residential building, multiple-family townhouse

4B 117-3 Conditions of Use

(a) Balcony enclosures not permitted

4B 117-4 Accessory Use

(a) *Accessory uses* are permitted and may include but are not necessarily limited to:

(i) Home occupations in accordance with the regulations in Section 405 of the Zoning Bylaw, 1965

4B 117-5 Density

(a) The maximum permitted density in the CD117 Zone is limited to a floor space ratio (FSR) of 0.45, and a maximum of 1 unit;

(b) For the purposes of calculating floor space ratio, the following are exempted:

i. garage spaces up to a maximum of 41.7 m^2 (449 sq ft)
ii. floor area contain within that part of the buildings having an adjacent exposed perimeter wall of less than 1.22m (4.0 ft) from the main floor geodetic to the finished grade up to a maximum of 464m^2 (5,000 sq ft) are excluded

(c) Balcony enclosures are not permitted.

4B 117-6 Amenities

(a) Despite subsection 4B117-5, density in the CD117 Zone is increased to a maximum floor space of 1,482m^2 (15,951 sq ft), inclusive of any density bonus for energy performance and a maximum of 8 units, if the owner:

1. Enters into a Housing Agreement prohibiting any restrictions preventing the owners in the project from renting their units; and

2. Contributes $162,408 to the municipality to be used for any or all of the following amenities (with allocation to be determined by the municipality in its sole discretion): public art; park, trail, environmental, pedestrian or other public realm, infrastructure improvements; municipal, recreation or social service facility or service / facility improvements; and/or the affordable housing fund.

4B 117-7 Maximum Principal Building Size:

Not applicable

4B 117-8 Setbacks:

a) Buildings shall be set back from property lines to the closest building face as established by development permit and in accordance with the following regulations:

Setback	**Buildings (Minimum Setback)**
Front (west property line)	4.0m (13ft) to the building face
Rear (east property line)	11.3m (37ft) to the building face
Side (north property line)	1.83m (6ft) to the building face
Side (south property line)	1.83m (6ft) to the building face

b) No projecting features of a building can be within 1.2m (4ft) of a side property line.

4B 117-9 Building Orientation:

Not applicable

4B 117-10 Building Depth and Width:

Not applicable

4B 117-11 Coverage:

(a) Building Coverage shall not exceed 48%.

(b) Site Coverage shall not exceed 75%.

4B 117-12 Height:

The maximum permitted height for each building is 11.2m (36.8ft).

4B 117-13 Flood Construction Requirements:

Not applicable

4B 117-14 Landscaping:

(a) All land areas not occupied by buildings, structures, parking spaces, loading spaces, driveways, manoeuvring aisles and sidewalks shall be landscaped or finished in accordance with an approved landscape plan; and

(b) All electrical kiosks and garbage and recycling container pads not located underground or within a building shall be screened with landscaping.

4B 117-15 Subdivision Requirements:

Not applicable

4B 117-16 Additional Accessory Structure Regulations:

Not applicable.

4B 117-17 Parking and Loading Regulations:

(a) Parking spaces shall be provided on the basis of 2 spaces/unit plus 1 visitor space; and

(b) All parking spaces shall meet the minimum length and width standards established in Part 10 of the District of North Vancouver Zoning Bylaw."

2.2 The Zoning Map is amended in the case of the lands illustrated on the attached map (Schedule A) by rezoning the land from the Residential Single Family 7200 Zone (RS3) to Comprehensive Development Zone 117 (CD117).

READ a first time April 16th, 2018

PUBLIC HEARING held

READ a second time

READ a third time

ADOPTED

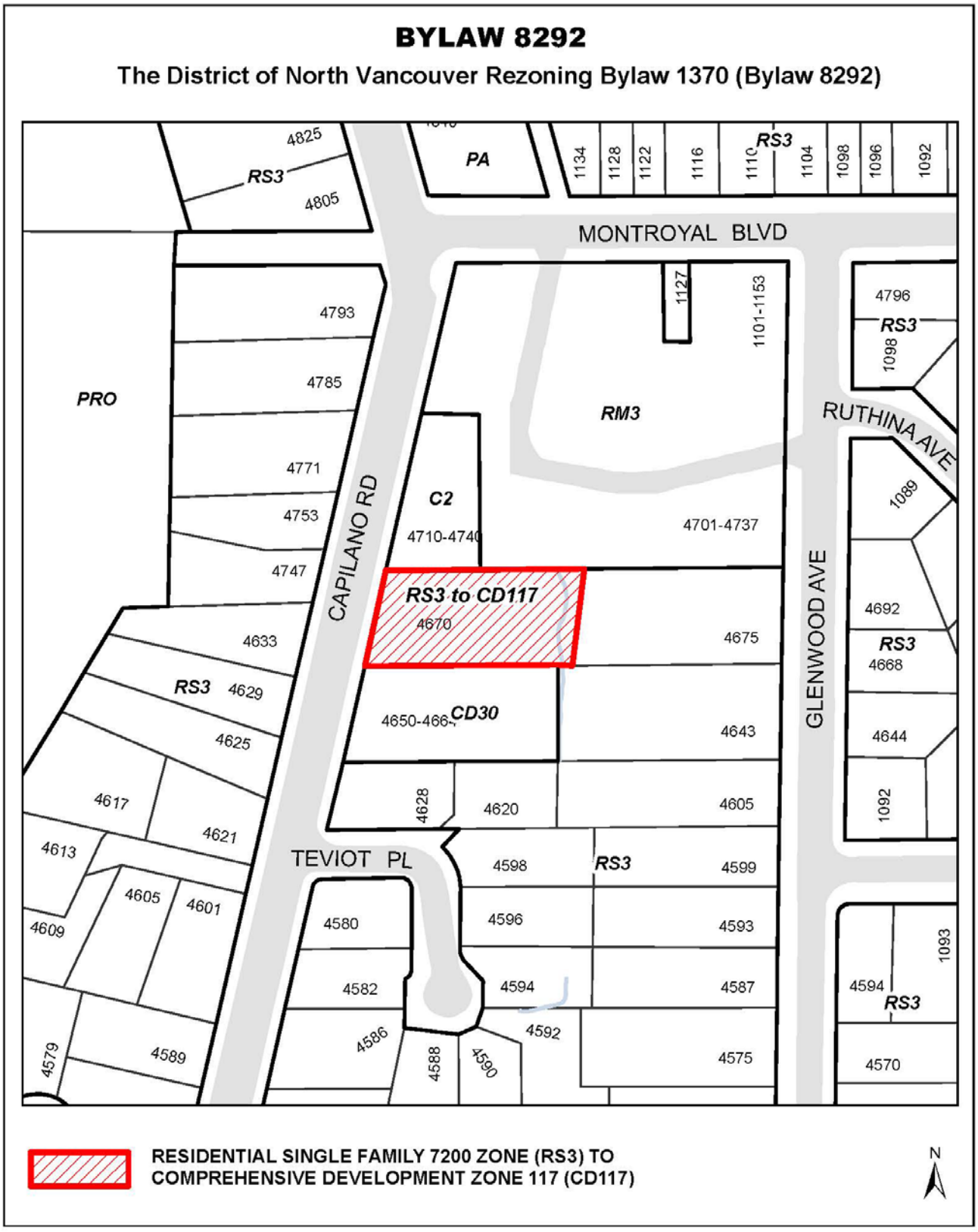
Mayor

Municipal Clerk

Certified a true copy

Municipal Clerk

Schedule A to Bylaw 8292



The Corporation of the District of North Vancouver

Bylaw 8293

A bylaw to enter into a Housing Agreement
(4670 Capilano Road)

The Council for The Corporation of the District of North Vancouver enacts as follows:

1. Citation

This bylaw may be cited as "Housing Agreement Bylaw 8293, 2017 (4670 Capilano Road)".

2. Authorization to Enter into Agreement

2.1 The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Wedgewood Capilano Homes Ltd. (Inc. No. BC1043762) substantially in the form attached to this Bylaw as Schedule "A" with respect to the following lands:

(a) PID 009-699-953 Lot A of Lot 3 Block D District Lot 595 Plan 9296

3. Execution of Documents

The Mayor and Municipal Clerk are authorized to execute any documents required to give effect to the Housing Agreement.

READ a first time April 16th, 2018

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk

Certified a true copy

Municipal Clerk

Schedule "A" to Bylaw 8293

SECTION 219 COVENANT – HOUSING AGREEMENT

THIS AGREEMENT is dated for reference the ____ day of _____, 20____

BETWEEN:

WEDGEWOOD CAPILANO HOMES LTD. (Inc. No. BC1043762) a company incorporated under the laws of the Province of British Columbia having an office at 450 East 21st Street, North Vancouver, BC V7L 3C2

(the "Developer")

AND:

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER, a municipality incorporated under the *Local Government Act*, RSBC 2015, c.1 and having its office at 355 West Queens Road, North Vancouver, BC V7N 4N5

(the "District")

WHEREAS:

1. The Developer is the registered owner of the Lands (as hereinafter defined);

2. The Developer wishes to obtain development permissions with respect to the Lands and wishes to create a condominium development which will contain residential strata units on the Lands;

3. Section 483 of the *Local Government Act* authorises the District, by bylaw, to enter into a housing agreement to provide for the prevention of rental restrictions on housing, and provides for the contents of the agreement; and

4. Section 219 of the *Land Title Act* (British Columbia) permits the registration in favour of the District of a covenant of a negative or positive nature relating to the use of land or a building thereon, or providing that land is to be built on in accordance with the covenant, or providing that land is not to be built on except in accordance with the covenant, or providing that land is not to be subdivided except in accordance with the covenant;

NOW THEREFORE in consideration of the mutual promises contained in it, and in consideration of the payment of $1.00 by the District to the Developer (the receipt and sufficiency of which are hereby acknowledged by the Developer), the parties covenant and agree with each other as follows, as a housing agreement under Section 483 of the *Local Government Act*, as a contract and a deed under seal between the parties, and as a covenant under Section 219 of the *Land Title Act*, and the Developer hereby further covenants and agrees that neither the Lands nor any building constructed thereon shall be used or built on except in accordance with this Agreement:

Article 1 DEFINITIONS

1.01 Definitions

In this agreement:

(a) *"Development Permit"* means development permit No. _____ issued by the District;

(b) *"Lands"* means land described in Item 2 of the *Land Title Act* Form C to which this agreement is attached;

(c) "*Owner*" means the Developer and any other person or persons registered in the Lower Mainland Land Title Office as owner of the Lands from time to time, or of any parcel into which the Lands are consolidated or subdivided, whether in that person's own right or in a representative capacity or otherwise;

(d) "*Proposed Development*" means the proposed development containing not more than 8 units to be constructed on the Lands in accordance with the Development Permit;

(e) *"Short Term Rentals"* means any rental of a Unit for any period less than 30 days;

(f) *"Strata Corporation"* means the strata corporation formed upon the deposit of a plan to strata subdivide the Proposed Development pursuant to the *Strata Property Act*;

(g) *"Unit"* means a residential dwelling strata unit in the Proposed Development; and

(h) *"Unit Owner"* means the registered owner of a Dwelling Unit in the Proposed Development.

Article 2 TERM

This Agreement will commence upon adoption by District Council of Bylaw 8293 and remain in effect until terminated by the District as set out in this Agreement.

Article 3 RENTAL ACCOMODATION

3.01 Rental Disclosure Statement

No Unit in the Proposed Development may be occupied unless the Owner has:

(i) before the first Unit is offered for sale, or conveyed to a purchaser without being offered for sale, filed with the Superintendent of Real Estate a rental disclosure statement in the prescribed form (the "Rental Disclosure Statement") designating all of the Units as rental strata lots and imposing at least a 99 year rental period in relation to all of the Units pursuant to the *Strata Property Act* (or any successor or replacement legislation), except in relation to Short Term Rentals and, for greater certainty, stipulating specifically that the 99 year rental restriction does not apply to a Strata Corporation bylaw prohibiting or restricting Short Term Rentals; and

(j) given a copy of the Rental Disclosure Statement to each prospective purchaser of any Unit before the prospective purchaser enters into an agreement to purchase in respect of the Unit. For the purposes of this paragraph 3.01(b), the Owner is deemed to have given a copy of the Rental Disclosure Statement to each prospective purchaser of any Unit in the building if the Owner has included the Rental Disclosure Statement as an exhibit to the disclosure statement for the Proposed Development prepared by the Owner pursuant to the *Real Estate Development Marketing Act*.

3.02 Rental Accommodation

The Units constructed on the Lands from time to time may always be used to provide rental accommodation as the Owner or a Unit Owner may choose from time to time, except that this section 3.02 does not apply to Short Term Rentals which may be restricted by the Strata Corporation to the full extent permitted by law.

3.03 Binding on Strata Corporation

This agreement shall be binding upon all Strata Corporations created by the subdivision of the Lands or any part thereof (including the Units) pursuant to the *Strata Property Act,* and upon all Unit Owners.

3.04 Strata Bylaw Invalid

Any Strata Corporation bylaw which prevents, restricts or abridges the right to use any of the Units as rental accommodations (other than Short Term Rentals) shall have no force or effect.

3.05 No Bylaw

The Strata Corporation shall not pass any bylaws preventing, restricting or abridging the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation (other than Short Term Rentals).

3.06 Vote

No Unit Owner, nor any tenant or mortgagee thereof, shall vote for any Strata Corporation bylaw purporting to prevent, restrict or abridge the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation (other than Short Term Rentals).

3.07 Notice

The Owner will provide notice of this Agreement to any person or persons intending to purchase a Unit prior to any such person entering into an agreement of purchase and sale, agreement for sale, or option or similar right to purchase as part of the disclosure statement for any part of the Proposed Development prepared by the Owner pursuant to the *Real Estate Development Marketing Act*.

Article 4 DEFAULT AND REMEDIES

4.01 Notice of Default

The District may, acting reasonably, give to the Owner written notice to cure a default under this Agreement within 30 days of delivery of the notice. The notice must specify the nature of the default. The Owner must act with diligence to correct the default within the time specified.

4.02 Costs

The Owner will pay to the District upon demand all the District's costs of exercising its rights or remedies under this Agreement, on a full indemnity basis.

4.03 Damages an Inadequate Remedy

The Owner acknowledges and agrees that in the case of a breach of this Agreement which is not fully remediable by the mere payment of money and promptly so remedied, the harm sustained by the District and to the public interest will be irreparable and not susceptible of adequate monetary compensation.

4.04 Equitable Remedies

Each party to this Agreement, in addition to its rights under this Agreement or at law, will be entitled to all equitable remedies including specific performance, injunction and declaratory relief, or any of them, to enforce its rights under this Agreement.

4.05 No Penalty or Forfeiture

The Owner acknowledges and agrees that it is entering into this Agreement to benefit the public interest in providing rental accommodation, and that the District's rights and remedies under this Agreement are necessary to ensure that this purpose is carried out, and the District's rights and remedies under this Agreement are fair and reasonable and ought not to be construed as a penalty or forfeiture.

4.06 Cumulative Remedies

No reference to nor exercise of any specific right or remedy under this Agreement or at law or at equity by any party will prejudice, limit or preclude that party from exercising any other right or remedy. No right or remedy will be exclusive or dependent upon any other right to remedy, but any party, from time to time, may exercise any one or more of such rights or remedies independently, successively, or in combination. The Owner acknowledges that specific performance, injunctive relief (mandatory or otherwise) or other equitable relief may be the only adequate remedy for a default by the Owner under this Agreement.

Article 5 LIABILITY

5.01 Indemnity

Except if arising directly from the negligence of the District or its employees, agents or contractors, the Owner will indemnify and save harmless each of the District and its board members, officers, directors, employees, agents, and elected or appointed officials,, and their heirs, executors, administrators, personal representatives, successors and assigns, from and against all claims, demands, actions, loss, damage, costs and liabilities that all or any of them will or may be liable for or suffer or incur or be put to any act or omission by the Owner or its officers, directors, employees, agents, contractors, or other persons for whom the Owner is at law responsible, or by reason of or arising out of the Owner's ownership, operation, management or financing of the Proposed Development or any part thereof.

5.02 Release

The Owner hereby releases and forever discharges the District, its elected officials, board members, officers, directors, employees and agents, and its and their heirs, executors, administrators, personal representatives, successors and assigns from and against all claims, demands, damages, actions or causes of action by reason of or arising out of advice or direction respecting the ownership, operation or management of the Proposed Development or any part thereof which has been or hereafter may be given to the Owner by all or any of them.

5.03 Survival

The covenants of the Owner set out in Sections 5.01 and 5.02 will survive termination of this Agreement and continue to apply to any breach of the Agreement or claim arising under this Agreement during the ownership by the Owner of the Lands or any Unit therein, as applicable.

Article 6 GENERAL PROVISIONS

6.01 District's Power Unaffected

Nothing in this Agreement:

(a) affects or limits any discretion, rights, powers, duties or obligations of the District under any enactment or at common law, including in relation to the use or subdivision of land;

(b) affects or limits any enactment relating to the use of the Lands or any condition contained in any approval including any development permit concerning the development of the Lands; or

(c) relieves the Owner from complying with any enactment, including the District's bylaws in relation to the use of the Lands.

6.02 Agreement for Benefit of District Only

The Owner and District agree that:

(a) this Agreement is entered into only for the benefit of the District:

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any occupant of any Unit or any future owner, occupier or user of any part of the Proposed Development, including any Unit, or the interests of any third party, and the District has no obligation to anyone to enforce the terms of this Agreement; and

(c) The District may at any time terminate this Agreement, in whole or in part, and execute a release and discharge of this Agreement in respect of the Proposed Development or any Unit therein, without liability to anyone for doing so.

6.03 Agreement Runs With the Lands

This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Unit after the date of this Agreement.

6.04 Release

The covenants and agreements on the part of the Owner and any Unit Owner and herein set forth in this Agreement have been made by the Owner and any Unit Owner as contractual obligations as well as being made pursuant to Section 483 of the *Local Government Act* (British Columbia) and as such will be binding on the Owner and any Unit Owner, except that neither the Owner nor any Unit Owner shall be liable for any default in the performance or observance of this Agreement occurring after such party ceases to own the Lands or a Unit as the case may be.

6.05 Priority of This Agreement

The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Unit in the Proposed Development, including any amendments to this Agreement as may be required by the Land Title Office or the District to effect such registration.

6.06 Agreement to Have Effect as Deed

The District and the Owner each intend by execution and delivery of this Agreement to create both a contract and a deed under seal.

6.07 Waiver

An alleged waiver by a party of any breach by another party of its obligations under this Agreement will be effective only if it is an express waiver of the breach in writing. No waiver of a breach of this Agreement is deemed or construed to be a consent or waiver of any other breach of this Agreement.

6.08 Time

Time is of the essence in this Agreement. If any party waives this requirement, that party may reinstate it by delivering notice to another party.

6.09 Validity of Provisions

If a Court of competent jurisdiction finds that any part of this Agreement is invalid, illegal, or unenforceable, that part is to be considered to have been severed from the rest of this Agreement and the rest of this Agreement remains in force unaffected by that holding or by the severance of that part.

6.10 Extent of Obligations and Costs

Every obligation of a party which is set out in this Agreement will extend throughout the Term and, to the extent that any obligation ought to have been observed or performed prior to or upon the expiry or earlier termination of the Term, such obligation will survive the expiry or earlier termination of the Term until it has been observed or performed.

6.11 Notices

All notices, demands, or requests of any kind, which a party may be required or permitted to serve on another in connection with this Agreement, must be in writing and may be served on the other parties by registered mail or by personal service, to the following address for each party:

If to the District:

District Municipal Hall
355 West Queens Road
North Vancouver, BC V7N 4N5

Attention: Planning Department

If to the Owner:

If to the Unit Owner:

The address of the registered owner which appears on title to the Unit at the time of notice.

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may

designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

6.12 Further Assurances

Upon request by the District, the Owner will promptly do such acts and execute such documents as may be reasonably necessary, in the opinion of the District, to give effect to this Agreement.

6.13 Enuring Effect

This Agreement will enure to the benefit of and be binding upon each of the parties and their successors and permitted assigns.

Article 7 INTERPRETATION

7.01 References

Gender specific terms include both genders and include corporations. Words in the singular include the plural, and words in the plural include the singular.

7.02 Construction

The division of this Agreement into sections and the use of headings are for convenience of reference only and are not intended to govern, limit or aid in the construction of any provision. In all cases, the language in this Agreement is to be construed simply according to its fair meaning, and not strictly for or against either party.

7.03 No Limitation

The word "including" when following any general statement or term is not to be construed to limit the general statement or term to the specific items which immediately follow the general statement or term similar items whether or not words such as "without limitation" or "but not limited to" are used, but rather the general statement or term is to be construed to refer to all other items that could reasonably fall within the broadest possible scope of the general statement or term.

7.04 Terms Mandatory

The words "must" and "will" and "shall" are to be construed as imperative.

7.05 Statutes

Any reference in this Agreement to any statute or bylaw includes any subsequent amendment, re-enactment, or replacement of that statute or bylaw.

7.06 Entire Agreement

(a) This is the entire agreement between the District and the Owner concerning its subject, and there are no warranties, representations, conditions or collateral agreements relating to this Agreement, except as included in this Agreement.

(b) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8293.

7.07 Governing Law

This Agreement is to be governed by and construed and enforced in accordance with the laws of British Columbia.

As evidence of their agreement to be bound by the terms of this instrument, the parties hereto have executed the *Land Title Act* Form C that is attached hereto and forms part of this Agreement.

GRANT OF PRIORITY

WHEREAS _____ (the "**Chargeholder**") is the holder of the following charge which is registered in the Land Title Office:

(a) _____(the "**Charge**");

AND WHEREAS the Chargeholder agrees to allow the Section 219 Covenant herein to have priority over the Charge;

THIS PRIORITY AGREEMENT is evidence that in consideration of the sum of $1.00 paid by THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER (the "**District**") to the Chargeholder, the receipt and sufficiency of which are hereby acknowledged, the Chargeholder covenants and agrees to subordinate and postpone all its rights, title and interest in and to the lands described in the Form C to which this Agreement is attached (the "**Lands**") with the intent and with the effect that the interests of the District rank ahead of the Charge as though the Section 219 Covenant herein had been executed, delivered and registered against title to the Lands before registration of the Charge.

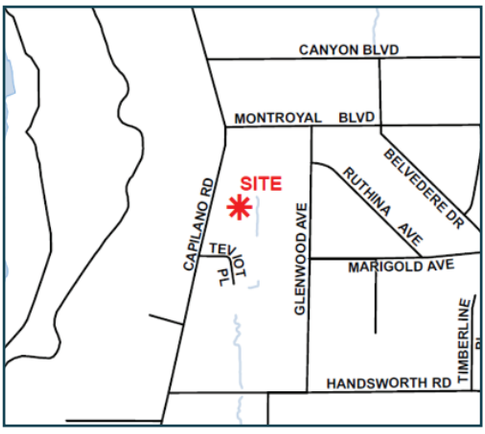
As evidence of its Agreement to be bound by the above terms, as a contract and as a deed executed and delivered under seal, the Chargeholder has executed the Form C to which this Agreement is attached and which forms part of this Agreement.

PUBLIC HEARING
4670 Capilano Road
EIGHT-UNIT TOWNHOUSE PROJECT

What: A Public Hearing for Bylaw 8292, a proposed amendment to the Zoning Bylaw, to permit the development of an eight-unit townhouse project.

When: 7 pm, Tuesday, May 29, 2018

Where: Council Chambers, District of North Vancouver Municipal Hall, 355 West Queens Road, North Vancouver, BC



**Provided by applicant for illustrative purposes only. The actual development, if approved, may differ.*

What changes?

Bylaw 8292 proposes to amend the District's Zoning Bylaw by creating a new Comprehensive Development Zone 117 (CD117) and rezone the subject site from Single-Family Residential 7200 Zone (RS3) to CD117. The CD117 Zone addresses use and accessory uses, density, amenities, setbacks, site and building coverage, building height, landscaping and parking.

When can I speak?

We welcome your input Tuesday, May 29, 2018, at 7 pm. You can speak in person by signing up at the hearing, or you can provide a written submission to the Municipal Clerk at input@dnv.org or by mail to Municipal Clerk, District of North Vancouver, 355 West Queens Road, North Vancouver, BC, V7N 4N5, before the conclusion of the hearing. *Please note that Council may not receive further submissions from the public concerning this application after the conclusion of the public hearing.*

Need more info?

Relevant background material and copies of the bylaws are available for review at the Municipal Clerk's Office or online at **dnv.org/public_hearing** from May 15 to May 29. Office hours are Monday to Friday 8 am to 4:30 pm, except statutory holidays.

DISTRICT OF NORTH VANCOUVER

Questions?
Darren Veres, Development Planner
604-990-2487 or veresd@dnv.org

DISTRICT OF NORTH VANCOUVER
REGULAR MEETING OF COUNCIL

Minutes of the Regular Meeting of the Council for the District of North Vancouver held at 6:58 p.m. on Monday, April 16, 2018 in the Council Chambers of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

Present: Mayor R. Walton
Councillor R. Bassam
Councillor M. Bond
Councillor J. Hanson
Councillor R. Hicks
Councillor D. MacKay-Dunn
Councillor L. Muri

Staff: Mr. D. Stuart, Chief Administrative Officer
Ms. C. Grant, General Manager – Corporate Services
Mr. D. Milburn, General Manager – Planning, Properties & Permits
Mr. A. Wardell, Acting General Manager – Finance & Technology
Mr. J. Gordon, Manager – Administrative Services
Mr. S. Ono, Manager – Engineering Services
Ms. J. Paton, Manager – Development Planning
Ms. S. Rogers, Manager – Parks
Ms. M. Welman, Manager – Strategic Communications & Community Relations
Mr. S. Carney, Section Manager - Transportation
Ms. A. Reiher, Confidential Council Clerk
Ms. C. Peters, Development Planner
Mr. F. Donnelly, Research Analyst
Ms. H. Jones, Traffic Technician – Development Engineering

1. ADOPTION OF THE AGENDA

1.1. April 16, 2018 Regular Meeting Agenda

MOVED by Councillor MURI
SECONDED by Councillor BASSAM
THAT the agenda for the April 16, 2018 Regular Meeting of Council for the District of North Vancouver is adopted as circulated.

CARRIED

2. PUBLIC INPUT

2.1. Ms. Kathy Mclellan, 1300 Block Sowden Street:

- Spoke in support of item 9.9; and,
- Commented on high costs and limited options for single family homes.

2.2. Mr. Peter Mathews, 1200 Block Emery Place:

- Expressed concern about increased traffic with respect to item 9.9;
- Suggested that transit services could be improved; and,
- Commented on the issuance of building permits.

2.3. Mr. Eric Miura, 1300 Block Kilmer Road:

- Spoke in support of item 9.9; and,
- Commented favourably regarding community engagement.

2.4. Mr. Terry Wagner, 1200 Block Emery Place:

- Spoke in opposition to item 9.9;
- Commented on the diversity of the neighbourhood; and,
- Expressed concern regarding the displacement of Emery Place residents.

2.5. Ms. Ashley Bond, 200 Block West 5th Street:

- With respect to item 9.9, spoke as a long time resident of North Vancouver; and,
- Expressed support for the increase of rental homes.

2.6. Mr. Graham Tutti, 2100 Block Front Street:

- With respect to item 9.9, spoke to the lure of mountain biking within the District; and,
- Opined that many would like to live in proximity to the sport.

2.7. Ms. Kelly Bond, 1200 Block Emery Place:

- Spoke in opposition to item 9.9;
- Submitted a petition for affordable housing; and,
- Requested that the Provincial and Federal governments be contacted to pursue further options for housing.

2.8. Ms. Rebecca Bond, 1200 Block Emery Place:

- With respect to item 9.9, commented on the diversity of the North Shore;
- Spoke in opposition to the development of Emery Place; and,
- Expressed discontent to the displacement of children from their homes.

2.9. Mr. Don Peters, 600 Block West Queens Road:

- With respect to item 9.9, spoke as Chair of the Community Housing Association Committee;
- Spoke in favour of the proposed development of Emery Place; and,
- Commented regarding the compensation packages for those being displaced.

2.10. Mr. Jonathan Mentzos, 100 Block Forrester Street:

- With respect to item 9.9, spoke as a resident and business owner within the District;
- Commented on the long commutes to work within the North Shore; and,
- Expressed that the housing market is unattainable for many home buyers.

3. PROCLAMATIONS

Nil

4. RECOGNITIONS

Nil

5. DELEGATIONS

Nil

6. ADOPTION OF MINUTES

Nil

7. RELEASE OF CLOSED MEETING DECISIONS

Nil

8. COUNCIL WORKSHOP REPORT

Nil

9. REPORTS FROM COUNCIL OR STAFF

With the consent of Council, Mayor Walton varied the agenda as follows:

9.9 Bylaws 8304, 8305, and 8306: Rezoning and Housing Agreement Bylaws for a Residential Development at 1200-1259 Emery Place
File No. 08.3060.20/039.17

Public Input:
Ms. Gillian Konst, 2200 Block Viewlynn Drive:

- Spoke in opposition to the development of Emery Place;
- Expressed concern about the affordability of rental rates proposed by the developer; and,
- Requested that council pursue other options.

Mr. Luciano Zago, 2600 Block Granville Street:

- Spoke as the Senior Vice President, Mosaic;
- Advised that Mosaic has met with a variety of associations in order to hear their concerns;
- Commented on the increased rental supply; and,
- Reported on the forty-seven households in need of relocation.

MOVED by Councillor BASSAM
SECONDED by Councillor HICKS
THAT "District of North Vancouver Rezoning Bylaw 1373 (Bylaw 8304)" is given FIRST Reading;

AND THAT "Housing Agreement Bylaw 8305, 2017 (1200 Emery Place - No Rental Limit (Except Short-term Rentals))", is given FIRST Reading;

AND THAT "Housing Agreement Bylaw 8306, 2017 (1200 Emery Place - Market and Affordable Rental)" is given FIRST Reading;

AND THAT "District of North Vancouver Rezoning Bylaw 1373 (Bylaw 8304)" is referred to a Public Hearing.

CARRIED
Opposed: Councillors HANSON, MACKAY-DUNN and MURI

Council recessed at 8:18 p.m. and reconvened at 8:23 p.m.

9.1. 2018 Centennial Bursary Trust Fund
File No.

MOVED by Councillor HICKS
SECONDED by Councillor BOND
THAT bursaries be awarded to seven students from the District of North Vancouver in the amount of $760 per bursary.

CARRIED
Absent for Vote: Councillor MACKAY-DUNN

9.2. Bylaw 8319: Amendment to "Use of Voting Recorders at Elections Bylaw"
File No. 01.0115.30/002.000

Councillor MACKAY–DUNN returned to the meeting at 8:27 p.m.

MOVED by Councillor BOND
SECONDED by Councillor MACKAY-DUNN
THAT "Use of Voting Recorders at Elections Bylaw 6877, 1996, Amendment Bylaw 8319, 2018 (Amendment 2)" is given FIRST, SECOND and THIRD Readings.

CARRIED

9.3. Bylaws 8320 and 8321: New Drinking Water Conservation Bylaw
File No. 01.0115.30/002.000

MOVED by Councillor HICKS
SECONDED by Councillor BOND
THAT "Drinking Water Conservation Bylaw 8320, 2018" is given FIRST, SECOND and THIRD Readings;

AND THAT "District of North Vancouver Fees and Charges Bylaw 6481, 1992, Amendment Bylaw 8321, 2018 (Amendment 57)" is given FIRST, SECOND and THIRD Readings.

CARRIED

9.4. North Vancouver Reunification Public Awareness and Engagement
File No. 01.0470.20/001.001

MOVED by Councillor HICKS
SECONDED by Councillor MACKAY-DUNN
THAT staff be directed to determine public support for examining the costs and benefits of reunification by:

- Placing advertising in the North Shore News containing an open letter to the public from Mayor and Council regarding reunification of the District and the City of North Vancouver; and,

- Conducting a random-sample, demographically and statistically representative public opinion survey of District and City of North Vancouver residents regarding attitudes about identity, joint service delivery and reunification.

CARRIED

9.5. Bylaws 8292 and 8293: Rezoning and Housing Agreement for an Eight-Unit Townhouse Project at 4670 Capilano Road
File No. 08.3060.20/041.17

Public Input:
Mr. James Fox, 400 Block East 21st Street:
- Spoke as the applicant of the proposed project; and,
- Provided historical information regarding the proposal.

MOVED by Councillor HICKS
SECONDED by Councillor BASSAM
THAT "District of North Vancouver Rezoning Bylaw 1370 (Bylaw 8292)" is given FIRST Reading;

AND THAT "Housing Agreement Bylaw 8293, 2017 (4670 Capilano Road)" is given FIRST Reading;

AND THAT "District of North Vancouver Rezoning Bylaw 1370 (Bylaw 8292)" is referred to a Public Hearing.

CARRIED

9.6. Development Permit 47.16: 1633 Capilano Road (The Grouse Inn)
File No. 3060-20-47.16

MOVED by Councillor HICKS
SECONDED by Councillor BOND
THAT Development Permit 47.16, to allow for the proposed construction at 1633 Capilano Road, is ISSUED.

CARRIED

9.7. Bylaws 8322 and 8323: District of North Vancouver Parks – Deep Cove and Lynn Canyon Traffic and Parking Management Strategy for Summer 2018
File No. 16.8620.30/000.003

MOVED by Councillor MURI
SECONDED by Councillor MACKAY-DUNN
THAT the proposed Deep Cove and Lynn Canyon Traffic and Parking Management Strategy for summer 2018 be endorsed;

AND THAT "District of North Vancouver Street and Traffic Bylaw 7125, 2004, Amendment Bylaw 8322, 2018 (Amendment 15)" is given FIRST, SECOND and THIRD Readings;

AND THAT "Bylaw Notice Enforcement Bylaw 7458, 2004, Amendment Bylaw 8323, 2018 (Amendment 37)" is given FIRST, SECOND and THIRD Readings.

CARRIED

9.8. Results of the April 4, 2018, Public Meeting and Alternative Approval Process for Park Dedication Removal Bylaw 8303, 2018
File No. 01.0115.30/002.000

Public Input:
Mr. Bruce Crowe, 1600 Block Arborlynn Drive:
- Expressed concern regarding the Alternate Approval Process (AAP);
- Opined that use of the AAP has not been fully explained and does not benefit the community; and,
- Queried if a referendum may be used in future.

MOVED by Councillor MURI
SECONDED by Councillor MACKAY-DUNN
THAT the April 9, 2018 report of the General Manager – Planning, Properties and Permits entitled Results of the April 4, 2018, Public Meeting and Alternative Approval Process for Park Dedication Removal Bylaw 8303, 2018 be received for information.

Councillor MURI left the meeting at this point in the proceedings.

CARRIED
Absent for Vote: Councillor MURI

Councillor MURI returned to the meeting at 9:53 p.m.

10. REPORTS

10.1. Mayor

Nil

10.2. Chief Administrative Officer

Nil

10.3. Councillors

Nil

10.4. Metro Vancouver Committee Appointees

10.4.1. Aboriginal Relations Committee – Councillor Hanson

Nil

10.4.2. Housing Committee – Councillor MacKay-Dunn

Nil

10.4.3. Regional Parks Committee – Councillor Muri

Nil

10.4.4. Utilities Committee – Councillor Hicks

Councillor Hicks reported on Metro Vancouver's drinking water conservation plan and the region-wide guide for its enforcement. He also advised regarding the water supply forecast and water consumption updates for summer 2018.

10.4.5. Zero Waste Committee – Councillor Bassam

Councillor Bassam reported on his recent attendance at the Metro Vancouver Zero Waste Committee where the committee toured the Surrey Biofuel Facility.

10.4.6. Mayors Council – TransLink – Mayor Walton

Nil

11. ANY OTHER BUSINESS

Nil

12. ADJOURNMENT

MOVED by Councillor HANSON
SECONDED by Councillor MURI
THAT the April 16, 2018 Regular Meeting of Council for the District of North Vancouver is adjourned.

CARRIED
(9:53 p.m.)

Mayor

Municipal Clerk

C.2 UPPER CAPILANO LOCAL PLAN

Upper Capilano is a mature, suburban community. Much of the existing development took place during the post war building boom between 1945 and 1960 and there has been comparatively little change since.

Some of the qualities that are special about Upper Capilano are its spectacular natural backdrop of forest and mountain; the quiet, low density, suburban character so close to downtown Vancouver; the convenience and small town atmosphere of the Village; and the safe and secure neighbourhoods.

The overall philosophy of the plan is that good maintenance of existing infrastructure and services is more important then obtaining new ones. The plan focuses on maintaining the qualities that make Upper Capilano a highly desirable community to live in and addressing those few areas where change would result in improvement. The Plan Map indicates the designated uses for each property. The objectives, policies and implementation statements will remain in effect for a period of ten years, 1999 - 2008, or until the plan is reviewed and amended by Council.

PLAN GOALS

i. Maintain and enhance the quality of the natural environment.
ii. Promote a healthy, safe and active community.
iii. Recognize and strengthen Edgemont Village as the heart of the community.
iv. Maintain the overall character of the existing single family residential neighbourhoods while accommodating in a sensitive manner a greater choice of housing types.
v. Develop a comprehensive and balanced heritage conservation program to ensure that the significant and representative heritage resources of the Upper Capilano area are conserved.

ENVIRONMENT

Natural environment is an important element in a plan for Upper Capilano as it provides the attractive backdrop views and treed character (both natural forest and urban landscaping) of the community. The creeks provide wildlife corridors (animals, fish and birds) between the mountains and Burrard Inlet. These corridors require maintenance and where possible, improvement. Natural environmental hazards exist in the community, e.g., creek flooding, debris torrents, landslides and erosion of steep slopes, which can be minimized in extent and in impact on development with appropriate human actions.

Objective 1.1 To ensure land uses respond to environmental qualities and hazards.

Policy 1.1.1 Creek ravines and steep slopes to be retained in a forested state to limit potential for floods and erosion and to protect wildlife habitat.

Implementation 1.1.1.1 Retain existing DPA designations on areas so designated in the District OCP.

Implementation 1.1.1.2 Extend in the District OCP, the areas designated as DPAs for
- protection of the natural environment
- protection of development from hazardous conditions

New areas to be designated as DPAs are shown on Detail Maps 1132, 1132a and 1133 and include all steep slopes, embankments and watercourses on both public and private property.

Implementation 1.1.1.3 Municipality to stringently enforce DPA and the Environmental Protection and Preservation (EPP) Bylaw regulations.

Implementation 1.1.1.4 Set a high priority on routine maintenance of watercourses/culverts to prevent flooding.

Policy 1.1.2 Encourage and educate residents to consider the environmental consequences of their land use actions.

Implementation 1.1.2.1 Where properties are designated as DPAs, and/or as areas protected through the EPP Bylaw all property owners should be notified annually of:

- the appropriate designation
- the limitation (if any) this designation places on property uses
- the conditions under which these uses can take place and the process for approvals
- penalties for contravention of the regulations

Implementation 1.1.2.2 Investigate the possibility of adding these DPA designations to certificates of title.

Implementation 1.1.2.3 Publicize creek names and publish a map of watersheds within Upper Capilano.

Implementation 1.1.2.4 Endorse the Storm Drain Program and encourage local groups to undertake the marking of storm drains.

Implementation 1.1.2.5 Promote partnerships with community groups to undertake community environmental projects such as fish enhancement, creek cleanup, and street tree planting. This assistance could be in the form of publicity, liaison with senior government programs, funding, equipment and/or staff assistance all within existing budgeted programs.

Implementation 1.1.2.6 Minimize fertilizers, pesticides and herbicides from sports fields and residences entering creeks especially MacKay Creek.

Policy 1.1.3 Support other jurisdictions in their efforts to enhance environmental qualities and protect the community from hazardous development.

Implementation 1.1.3.1 Endorse GVRD's green zone proposals in Upper Capilano including Capilano River Regional Park, the watershed and the area beyond the Hydro right-of-way; and encourage GVRD to acquire the remaining residentially zoned land in the Capilano River corridor north of the highway overpass to complete the Regional Park.

Implementation 1.1.3.2 Ensure the safe transportation of water treatment chemicals to the GVWD water treatment site at Cleveland Dam.

Objective 1.2 To establish a balance between environmental preservation and community use.

Policy 1.2.1 Watercourses shall be treated as environmental assets as well as public park wherever feasible.

Implementation 1.2.1.1 For MacKay Creek and its tributaries, maintaining its ability to support fish shall take precedence over public recreational use i.e. banks should retain natural vegetation and tree cover and bike use should be discouraged. Minimal paths upgrading and definition is needed to prevent the creek banks from erosion.

Implementation 1.2.1.2 Improvements on MacKay Creek at Cliffridge/Montroyal should increase riparian vegetation and discourage pedestrians and bike access to the streambed.

Implementation 1.2.1.3 Public park activities along watercourses should emphasize passive uses such as trails which require minimal clearing and disturbance.

Policy 1.2.2 Integrate green space in any redevelopment scheme.

Implementation 1.2.2.1 DPA guidelines for designated DP areas for commercial and multi-family development will include a requirement for green space.

Implementation 1.2.2.2 Green space around the perimeter of redevelopment sites will:

- incorporate public facilities e.g., benches
- tie into any adjacent public spaces
- follow a similar landscaping theme to adjacent sites where appropriate.

PARKS

Parks provide recreational opportunities for residents. They provide focal points for community activity and encourage the sense of community. Parks also contribute to the spacious, green, treed character of the community. The community preference is for improved maintenance and upgrading of existing parks rather than to incur major expenditures for new ones.

Objective 2.1 To maintain and upgrade existing park facilities.

Policy 2.1.1 Add new parks space where the opportunity arises.

Implementation 2.1.1.1 All applicants for subdivision of more than three lots are required to pay to the municipality 5% of the market value of the land proposed for subdivision, in lieu of a dedication of 5% of the property, for park purposes pursuant to the Municipal Act Section 992(2). This requirement will be waived only where the dedication of land for park purposes would implement a policy stated in this section of this official community plan.

Policy 2.1.2 Improve the path and trail system.

Implementation 2.1.2.1 Identify and define existing pedestrian and bike linkages in the community including the Trans-Canada Trail showing major paths in parks and their connections to streets by producing a map. This should also indicate which paths have benches, and which are accessible for people using wheelchairs and baby strollers.

Implementation 2.1.2.2 Add subtle signage at pathway/street connections at pathway intersections to indicate trail names and destinations.

Implementation 2.1.2.3 The locations where connections need to be improved and budgeted for in the next Five Year Capital Budget are the Eldon - upper Sunset Boulevard path[1]; the Dudley (Sunnycrest) access to MacKay Creek Park; the completion of the Mosquito Creek trail connection to the Baden Powell trail and the opening of the mid-block pathway from Lorraine Avenue to Sunset Boulevard. Furthermore, the feasibility of opening up the Emerald-Sunset path connecting Wellington-Hillcrest at Sunset should be investigated within a ten-year time frame. Standards for construction should include consideration for wheelchair accessibility (see also Implementation 5.4.1.2.).

Implementation 2.1.2.4 Unopened road and lane allowances are not to be consolidated with adjacent lots for subdivision or other purposes. Applications for permits to occupy unopened road and lane allowances will be considered for approval by Council only if they are not contrary to the public interest.

[1] This was approved by Council on June 8, 1998.

Implementation 2.1.2.5 Encroachment onto unopened road and lane allowances will be monitored annually and reported to Council with recommendations for appropriate action where the encroachments conflict with the public interest.

Policy 2.1.3 Ensure all existing areas developed and maintained for park purposes have a legal basis.

Implementation 2.1.3.1 To ensure that the following parks, creek areas and street ends are retained for parks usage they are to be rezoned to a "Parks, Recreation and Open Space" zone (current zoning in brackets) and have attached a Parks Reservation Bylaw:

- Sarita Park (RS3)
- MacKay Creek and tributaries between Malaspina - Ranger and around Montroyal Elementary School (RS3)
- Murdo Frazer Park off W. 26th Street (RS4 & PA) and the BC Hydro substation (I3).
- Dudley Park (RS3)
- Murdo Frazer trail access from Crescentview (RS3)
- Street ends at Laing Drive to Capilano (RM2 & RSMF)
- Street ends at Woods to Capilano (RM2) and Lyndene (RSMF)
- Lot 21, north end of Fairmont Road (RS3)
- street ends off Ridgewood at Monton and Bluebonnet (RS3)
- street end Emerald and Sunset (RS3)
- street end Handsworth Road at Canyon Heights School (RS3)
- street end Ayr at Ridgewood (RS3)
- all pathway allowances whether opened or unopened.

Objective 2.2 To provide for the community's present and future park needs.

Policy 2.2.1 Recognize the changing demographic structure and the changing trends in recreation demand and provision.

Implementation 2.2.1.1 Give priorities in future expenditures to facilities/uses supporting activities by all ages e.g. walking trails and benches.

Implementation 2.2.1.2 Give priority to small scale park improvements e.g. playgrounds, and basketball hoops.

Implementation 2.2.1.3 For those having special needs, integrate recreation opportunities with existing/proposed parks and recreation facilities.

Policy 2.2.2 Establish for each park its major role and future direction for park improvements (if any).

Implementation 2.2.2.1 See accompanying table.

Policy 2.2.3 Ensure existing facilities can be used by the increasingly diverse age groups and recreational interests.

Implementation 2.2.3.1 Publicize the memorial bench policy for Upper Capilano parks.

Implementation 2.2.3.2 Maintenance budgets for existing landscaping and trails should be given a high priority.

Table 2.2.2.1

PARK	EXISTING ROLE	FUTURE DIRECTION
Murdo Frazer	Predominantly natural area and trails with some community uses (pitch and putt and tennis courts)	Develop master plan and investigate options for more benches, limited expansion of pitch and putt and adding more connecting trails
Mosquito Creek	Creekside natural area with well developed trails	Add more benches
MacKay Creek	Creekside natural area with fish enhancement projects and rough trails	Purchase private property to provide a continuous trail link through park. Limit trail development to protect environmentally sensitive areas
Eldon	Active use park providing sports fields and tennis courts	Minor upgrade of basketball area; add benches; raise tennis practice wall; improve field drainage
Glenwood	Local use tot lot and tennis court	As is
Capilano	Limited use open space & picnic tables	Add signage for Park name, safety fences along side steep cliffs and improve the visibility of the park by tree thinning & pruning.
Fairmont	Local use playground	As is
Cleveland	Active use major park with sportsfield and tennis courts	As is
Grousewoods	Local use tennis and playground	As is
Sarita	Local use play equipment and pathways	As is
Malaspina	Undeveloped forest with informal trails	Add connections to the Baden Powell trail
Alpine	Local use playground	As is
Dudley (off Newmarket)	Viewpoint	Some pruning to re-establish views

Implementation 2.2.3.3 For public safety add lighting to parking lots and pathways to improve security where appropriate.

Implementation 2.2.3.4 Add more benches in Murdo Frazer and Mosquito Creek parks and at bus stops.

Policy 2.2.4 Ensure that maximum use of school sites is made to assist in remedying the lack of local park facilities.

Implementation 2.2.4.1 Work with School District 44 on maintenance and use agreements.

Implementation 2.2.4.2 Develop and implement, with School District 44, a plan for upgraded and extended recreational uses on the Canyon Heights School ground.

Implementation 2.2.4.3 Include the Handsworth Road end in an integrated plan for Canyon Heights School grounds including its current pedestrian access role..

Objective 2.3 To use parks and environmental features in defining the sense of community.

Policy 2.3.1 Publicize local community identity.

Implementation 2.3.1.1 To name pathways and new park areas after local features such as school/community facilities' names, creeks and major streets.

Policy 2.3.2 Enhance streetscapes by adding ornamental plantings and street trees.

Implementation 2.3.2.1 Add and name ornamental plantings at/close to major intersections when the opportunity arises, e.g., as part of any redevelopment.

Implementation 2.3.2.2 Publicize the District's Street Tree Master Plan and encourage community groups to undertake such street beautification.

Implementation 2.3.2.3 Encourage high standards of streetscape maintenance by presenting awards to outstanding efforts by individual residents and groups of residents.

Implementation 2.3.2.4 Promote efforts by community groups wishing to upgrade/maintain those small-scale elements of the parks system not currently budgeted for.

Implementation 2.3.2.5 Ensure that safety and accessibility are not compromised in improving streetscapes.

COMMUNITY FACILITIES & SERVICES

Community Services include social, health, educational, leisure and religious services. Even though the provision of most of these services is not a municipal responsibility, the community plan must take into account the space and location requirements for them as well as for the actual provision of the municipally funded services. The municipality also can play a role in working with community agencies and organizations to plan and co-ordinate the overall delivery of social services to the community.

Objective 3.1 To provide a full range of services in Upper Capilano to meet the needs of the community's residents.

Policy 3.1.1 Support the retention of existing services and the provision of new services in Upper Capilano.

Implementation 3.1.1.1 Encourage developers to provide space for a range of commercial, cultural and social services in Upper Capilano.

Implementation 3.1.1.2 Support the retention of health care services and clinics in Edgemont Village.

Objective 3.2 To provide public recreation, leisure and social opportunities in a cost-effective manner through the optimal use of existing facilities.

Policy 3.2.1 Properly maintain existing facilities.

Implementation 3.2.1.1 Allocate sufficient municipal funds for the maintenance of existing public facilities.

Implementation 3.2.1.2 Contribute to the maintenance of facilities and fields falling within Joint Use Agreements.

Policy 3.2.2 Optimize community use of existing public facilities.

Implementation 3.2.2.1 Continue to develop joint use agreements between the District of North Vancouver and School District 44 to allow for use of school facilities by the community, including after school hours.

Implementation 3.2.2.2 Provide adequate resources to support community use of public facilities, including schools.

Implementation 3.2.2.3 Encourage the designation of Handsworth Secondary School as a community school and pilot the use of Handsworth as a community centre within the context of the Joint Use Agreement.

Implementation 3.2.2.4 Encourage the School Board to utilize adaptable design principles when expanding existing schools, so as to accommodate community use.

Implementation 3.2.2.5 Explore ways of funding a community school coordinator to facilitate the community use of schools.

Implementation 3.2.2.6 Explore opportunities to open up fields, gymnasiums, washrooms, teachers' lounges, computer labs and home economics rooms for community use (for sports events, meetings , adult education courses, etc.).

Implementation 3.2.2.7 Work with the North Vancouver Recreation Commission, the Parks Department, School District 44 and organizations in Upper Capilano to provide recreation programs in existing public assembly facilities.

Implementation 3.2.2.8 Design new public buildings and renovate existing community buildings to accommodate multiple uses and changing uses over time.

Implementation 3.2.2.9 Recognizing the library's increasing importance as a meeting space, review its internal design to determine the potential for enlarging the meeting room.

Policy 3.2.3 Support the community use of privately owned facilities.

Implementation 3.2.3.1 Support the development of additional community uses within existing privately owned recreation, social and religious facilities.

Implementation 3.2.3.2 Require new multi-family developments to include amenities such as a multi-purpose meeting room, where appropriate, for the use of the residents of the development.

Objective 3.3 To encourage the provision of social programs and activities through all the life stages.

Policy 3.3.1 Support the development of programs for youth, seniors and specialized user groups.

Implementation 3.3.1.1 Continue to provide funding for outreach youth services, seniors' service organizations, and for specialized user groups.

Implementation 3.3.1.2 Ensure there is broad and inclusive consultation with relevant user groups when developing new programs or facilities.

Implementation 3.3.1.3 Consult with youth and service providers to explore the possibility of locating a freestanding Youth Centre at William Griffin Recreation Centre.

Objective 3.4 To ensure full access to all public facilities and services to all residents in the community.

Policy 3.4.1 Consult with the N.S. Advisory Committee on Disability Issues and other relevant user groups, when developing new facilities and services to ensure they are accessible to all residents.

Implementation 3.4.1.1 Consult with the North Shore Advisory Committee on Disability Issues and other relevant organizations when reviewing plans for public and commercial facilities, and multi-family housing.

Implementation 3.4.1.2 Evaluate plans for accessibility from the perspective of all disability groups.

Implementation 3.4.1.3 Apply accessibility guidelines for public and commercial facilities that exceed the current building code (using existing guidelines available or adapting these guidelines, in consultation with the North Shore Advisory Committee on Disability Issues and other relevant groups). These guidelines will address all disabilities.

Implementation 3.4.1.4 Review municipal signage to ensure it is clear and readable in accordance with accessible literature guidelines and allows for the inclusion of tactile signage where practical.

Implementation 3.4.1.5 Continue to consult with the public and community organizations when considering major changes to community facilities and services.

Implementation 3.4.1.6 Work with the N.S. Advisory Committee on Disability Issues, the N.S. Disability Resource Centre, the North Vancouver Recreation Commission and other relevant organizations to improve access to recreation and leisure opportunities for people with disabilities.

Policy 3.4.2 Use a range of fully accessible communication strategies to reach and involve all residents.

Implementation 3.4.2.1 Publicize events, programs and services in creative ways to people with a wide range of backgrounds and abilities and apply accessible literature standards and methods.

Implementation 3.4.2.2. Encourage the installation of assisted listening systems in public meeting places, including the Capilano Library meeting room.

Objective 3.5 To create informal opportunities for residents to meet and socialize.

Policy 3.5.1 To provide public places for informal gathering.

Implementation 3.5.1.1 The Community Planning Department will look for opportunities to provide public gathering places throughout Upper Capilano, including mini-parks or plazas, with an emphasis on Edgemont Village.

Implementation 3.5.1.2 The Community Planning Department will investigate opportunities for obtaining community amenities in Edgemont Village through the redevelopment design process, through Development Cost Charges and any future community amenity contributions. Community residents will be consulted regarding priorities, with multi-use of amenity spaces promoted wherever possible.

Implementation 3.5.1.3 Provide opportunities for socialization in outdoor community amenity areas in Edgemont village through the installation of benches, appropriate landscaping, etc.

Policy 3.5.2 Encourage the use of local parks for community events.

Implementation 3.5.2.1 The Parks Department & Recreation Commission will work with organizations in Upper Capilano to organize community days, open air festivals and other community events in the local parks.

Objective 3.6 To maintain an adequate supply of land for public assembly uses, such as schools and places of worship.

Policy 3.6.1 Existing institutional land uses, including schools and churches should be retained.

Implementation 3.6.1.1 Rezoning of Public Assembly zoned sites for other purposes will not be permitted.

Objective 3.7 To promote cultural activities and public art.

Policy 3.7.1 Look for opportunities to promote art & culture in Upper Capilano.

Implementation 3.7.1.1 Encourage the display of works from North Vancouver artists in the Capilano Library and other public buildings.

Implementation 3.7.1.2 Encourage the display of artwork from school students, both in public areas and through special school events that are open to the community.

Implementation 3.7.1.3 Examine the opportunities to obtain public art such as sculpture and artistic treatments of architectural features through the development process or donations.

Implementation 3.7.1.4 Explore opportunities for private sector and/or municipal funding for a public art component within the capital budget of any major re-development of existing publicly owned community buildings or in the construction of any additional public facilities.

Implementation 3.7.1.5 Develop a formal process for selection of public art, such as a review panel made up of local residents and art professionals.

Objective 3.8 To encourage provision of childcare at an adequate level.

Policy 3.8.1 Support the provision of highly needed childcare services in Upper Capilano.

Implementation 3.8.1.1 The District will look for opportunities to provide an additional preschool in the Grousewoods area, and additional out of school care in the Canyon Heights and Montroyal areas. The District will encourage out-of-school programs to be provided on school sites by revising zoning regulations as necessary.

Objective 3.9 To support a municipal role in providing access to communications technology such as the Internet.

Policy 3.9.1 Look for opportunities to improve access to communications technology.

Implementation 3.9.1.1 Provide the installation of fiber optics in existing public facilities and encourage it in new commercial and residential developments.

Implementation 3.9.1.2 Continue to support development of communications technology in North Vancouver schools.

Objective 3.10 To ensure that any new or redeveloped community buildings respect the character and density of the surrounding community.

Policy 3.10.1 Critical issues in the development or redevelopment of community buildings will be the density of surrounding uses, handling of traffic and parking, retention of existing views with regard to new heights of buildings, and exterior design materials and finishes.

Implementation 3.10.1.1 Follow the guidelines in the District OCP Schedule B Section 4.0 in reviewing applications for community buildings.

HOUSING AND NEIGHBOURHOODS

While maintaining the overall single family nature of Upper Capilano, housing policy responds to some anticipated changes in the specific housing needs of the community. The Plan designates the sites and conditions under which change can occur over the next 10 years. This provides the community at large with a significant degree of certainty as to the minimal likelihood of change.

Objective 4.1 To minimize overall change in character in existing low-density residential neighbourhoods.

Policy 4.1.1 No changes in zoning in the plan area except where specified in the plan.

Implementation 4.1.1.1 Rezone from RS3 to PRO the following areas:

- MacKay Creek channels between Sonora-Cliffridge and Sonora -Sarita
- Sarita Park and adjacent GVWD water tank area
- Lot 21, north end of Fairmont Road

Implementation 4.1.1.2 Rezone from RS4 to PRO areas within Murdo Frazer Park.

Implementation 4.1.1.3 Rezone from RS3 to PA the lot on the west side of Cleveland School currently used for school purposes.

Implementation 4.1.1.4 See **Objective 4.2** for other areas where rezoning may be permitted.

Policy 4.1.2 Adopt area specific (neighbourhood) zoning to ensure that any new single family housing is compatible with the housing character in the area regarding height, setbacks, garage locations, and other siting factors.

Implementation 4.1.2.1 Develop a zoning timetable for neighbourhoods which do not yet have neighbourhood zoning giving priority to the remaining areas of Highlands.

Implementation 4.1.2.2 Develop for the remaining areas of Highlands, neighbourhood zoning regulations restricting both new houses and additions to existing houses to the typical heights and massing of single family buildings in this neighbourhood.

Implementation 4.1.2.3 Change existing regulations for size, shape and siting of single-family houses in low-density multi-family zones to match regulations in adjacent single family areas.

Implementation 4.1.2.4 Amend the Zoning Bylaw regulations for the Grousewoods multi-family zones primarily occupied by single family style housing to regulate additions to existing units.

Policy 4.1.3 New development is permitted where it is already legally possible within the existing zoning and subdivision regulations and only then when it is in keeping with the character of surrounding housing.

Implementation 4.1.3.1 Consolidation of existing lots for the purpose of subdivision to a larger number of lots may be considered to be contrary to the public interest when the new lots would be out of character with the surrounding neighbourhood and may not be permitted.

Implementation 4.1.3.2 Rezoning from RS3 to a higher density RS zone to achieve a larger number of lots will not be permitted.

Implementation 4.1.3.3 In processing applications for subdivision the existing practices of requiring the submission, public review and the registration of house plans against title (Land Title Act, Section 219) will be continued.

Implementation 4.1.3.4 Where neighbourhood zoning is not yet in place, subdivision applications requiring the discretionary authority of the approving officer will be approved only if they are in keeping with the character of the surrounding community.

Policy 4.1.4 The Plan recognizes that secondary suites will provide some additional housing units throughout the community. These will respond to the community's needs for:

- income and support opportunities to enable senior residents to remain in a single family home for a longer time period.
- lower cost/smaller scale accommodation for young singles, couples and single parent families.

Implementation 4.1.4.1 The recently approved DNV secondary suite provisions regarding owner occupancy, parking and taxation are applicable to the Upper Capilano community.

Objective 4.2 To accommodate some limited options for multi-family housing.

Policy 4.2.1 The Plan makes provision for approximately 170 units (net) of new multi-family housing to be built between 1999 and 2008 or until the plan is reviewed and amended by Council.

Implementation 4.2.1.1 The attached table lists the sites designated to accommodate a total of approximately 170 net new multi-family units between 1999 and 2008 or until the plan is reviewed and amended by Council. The table also lists the appropriate density or density ranges and any site considerations specific to each site.

Implementation 4.2.1.2 New multi-family areas designated in this plan will only be rezoned for such purposes in conjunction with a development permit application.

Implementation 4.2.1.3 All multi-family areas are designated as Development Permit Areas and guidelines will be prepared to ensure that redevelopment respects the character of adjacent lower density residences minimizing impacts of overviewing and traffic flow, and from adjacent commercial sites, noise, lighting, and parking. The guidelines will also include adaptable design guidelines addressing all disabilities as well as specific provision for seniors' needs and other special needs where applicable.

Implementation 4.2.1.4 Sites specifically designed for "seniors" housing and seeking a reduction in the standard parking requirement must include an age covenant requiring one resident per household to be over age 55.

Policy 4.2.2 Accommodate some affordable and special needs housing for:

- seniors needing supportive living arrangements (congregate care)
- non-market units for low income seniors; and
- accessible units for people with disabilities.

Implementation 4.2.2.1 Encourage developers of market housing to include units for affordable and special needs groups by allowing a bonus of up to 10% of the number of units permitted under the Zoning Bylaw when at least an equal percentage of affordable or special needs housing units are included.

Implementation 4.2.2.2 Explore alternative forms of seniors' housing that bridge the gap between independent living and long term care (e.g. Abbeyfield houses) on suitable sites should they become available. Such housing should be designed to blend into the existing neighbourhood character.

Implementation 4.2.2.3 Sites including bonus provisions will be designated as a "site for affordable and special needs housing" under the provisions of the Municipal Act Section 904.1.

Implementation 4.2.2.4 Bonus arrangements will be enforced through a housing agreement between the developer and Council (under the provisions of the Municipal Act Section 905) to ensure that the benefit to the community is protected.

Objective 4.3 To retain and enhance Upper Capilano's heritage.

Policy 4.3.1 Acknowledge the Heritage Inventories (1900-1929, 1930-1965) as the basis for Upper Capilano's Heritage Management Plan.

Implementation 4.3.1.1 Support updating the heritage inventory every 5 years to keep it current and relevant for Upper Capilano.

Implementation 4.3.1.2 Expand the heritage inventories to include significant monuments, structures and archaeological resources.

Implementation 4.3.1.3 Complete the work of the Heritage Landscape Inventory, evaluate significance of resources in Phase 1, set a strategy for preservation for Upper Capilano.

TABLE 4.2.1.1 - UPPER CAPILANO REDEVELOPMENT SITES (Including amendments in Bylaws 7223, 7241, & 7322)

Address	Existing	Proposed		Unit Type	Considerations
		Zone Range[1]	Unit Numbers[2]		
Site 1A 3201 Edgemont	1 house on 1 lot	CD	20	Low Rise apts. (average unit size a maximum of 900 sq.ft.). Minimum of 50% units to be 1 bedroom	• Complementary design on the Connaught Cres. frontage required for Sites 1 & 1A • Seniors' orientation & age covenant required • Acknowledge site relationships with slope & church • No commercial use
Site 1 3115 Crescentview	1 house on 2 lots	RL3-RL2	25	Low Rise apts. (a maximum unit size of 900 sq.ft.)	• Complementary design on the Connaught Crescent frontage required for Sites 1 & 1A. • Seniors orientation and age covenant preferred • Acknowledge site relationships with slope • Minor commercial use OK • Height an issue on SW lot line • Predominantly 1 bedroom units
Site 2 1055-1071 Ridgewood 3230 Connaught 3260 Edgemont	2 duplexes & 2 houses (6 units) on 4 lots Supermarket Medical clinic	Comprehensive Development Zone	75	Mixture of apts. (1-2BR), small townhouses, and stacked townhouses	• Ridgewood properties to be consolidated with SuperValu property • Preferred scheme is one comprehensive development, but clinic site could be redeveloped separately
Site 3 3065 Capilano Road 3105 Capilano Road 3115-3175 Capilano Crescent	1 house on 3 lots 1 house on 1 lot & 4 houses on 4 lots	RM3	50	Townhouses Or townhouse and apartment mix	• Access to Capilano Crescent only • Site consolidation necessary to design appropriate access to Capilano Cres. • Adjacent to multi-family • Empty nester orientation preferred over seniors orientation • Site limited by steep bank. Density to be calculated on area above top of bank ONLY. • Impact of redevelopment on single family lots to the north needs to be addressed during the rezoning process.
Site 4 3759-85 Edgemont Blvd.	8 units in 4 buildings	RM2	15[3]	Townhouses	• Building transition, siting, heights and landscaping critical considerations especially along west site line (adjacent single family)
Site 5 3431 Norcross	1 house on large lot	RM2	7	Townhouses	• Abuts RM2 on 2 sides • Could be subdivided into 3 lots • Frontage appearance should take single family across the street into account
Site 6 4650 & 4670 Capilano Road	2 houses on 2 large lots	RM3	17	Townhouses or townhouse and apartment mix	• Site consolidation preferred for single access to Capilano Road • Abuts commercial and RM3 townhouses • Design considerations critical on south and east where site abuts single family
Total (gross)			209 gross		
Total (net), i.e., deducting existing housing to be demolished	25 units		184 net		• Additional units possible if rebuilding on another commercial site occurs and includes apartments on upper floor

[1] Note: Comprehensive Development zones will be used in the rezoning of the six sites to meet the intent of use, density and design guidelines in the Local Plan.
[2] Note: all site unit totals need to be confirmed by detailed site survey.
[3] Note: Actual construction is 14 units.

Implementation 4.3.3.3 Produce walking tour guide of Capilano Highlands (significant "modern" homes by Thom, Erickson, Hollingsworth, Lewis Construction, modernist churches, "garden city" vision for Edgemont Village).

Implementation 4.3.3.4 Support and expand role of heritage in public events (North Shore Heritage weekend, Edgemont Village festival, etc.).

Implementation 4.3.3.5 Consider events/programs at Upper Capilano's schools related to the heritage of the area.

TRANSPORTATION AND UTILITIES

A road network has two principal functions: moving people and goods and the provision of access and other services (water, sewer, hydro etc.) to properties. A good street system balances the efficiency of vehicle routing with the protection of neighbourhood liveability and environmental integrity.

Although the configuration of the road network in Upper Capilano is mostly dictated by the physical terrain and historic development pattern it is generally adequate for present traffic needs, but improvements are required for non vehicular circulation.

All areas within Upper Capilano are fully serviced with power, gas, water, sewer and storm drainage etc. and capacity is adequate for anticipated future demands. All properties are below the 320-metre (1,050 foot) contour servicing limit for provision of water.

Objective 5.1 To maintain a safe and efficient vehicle circulation network.

Policy 5.1.1 Periodic reviews of the District's network of open roads and their designations in Upper Capilano will be undertaken to ensure its continuing validity.

Implementation 5.1.1.1 The Traffic Safety Committee will be requested to recommend appropriate traffic calming or speed monitoring and control options for Highland Boulevard including a school speed zone at Canyon Heights School.

Implementation 5.1.1.2 To facilitate more efficient traffic flow in Edgemont Village, a one-way circulation system through the lanes and Connaught Crescent will be implemented.

Policy 5.1.2 Public ownership of unopened road allowances will be retained to maintain future options for road or trail links.

Implementation 5.1.2.1 Unopened road allowances are considered part of the street classification system for purposes of the periodic review referred to in **Policy 5.1.1.**

Objective 5.2 To effectively segregate local and non-local traffic flows.

Policy 5.2.1 Local safety issues such as traffic calming, stop signs etc. should be addressed through the Neighbourhood Traffic Control Program.

Implementation 5.2.1.1 The Neighbourhood Traffic Control Program is initiated upon the request of residents of an area in question and is applicable only to local roads.

Implementation 5.2.1.2 The RCMP will consider conducting a "Speed Watch" operation if requested by neighbourhood residents.

Policy 5.2.2 The volume of through traffic on local roads is minimized by ensuring logical routes of collector and arterial roads are built.

Implementation 5.2.2.1 The Provincial Ministry of Highways will be requested to construct a frontage road along the Upper Levels Highway between Lloyd Avenue and Capilano Road when improvements to the Highway interchange are made.

Objective 5.3 To reduce dependency on the automobile through conveniently accessible public transit service.

Policy 5.3.1 Transit routes should serve North Shore destinations in addition to downtown and commuter destinations.

Implementation 5.3.1.1 Once the Greater Vancouver Transportation Authority is operational, they will be requested to consider the following transit priorities: an east-west route north of Highway 1 connecting Upper Capilano to Lynn Valley; express service along Highway 1 between Horseshoe Bay and Phibbs Exchange with stops at the major highway interchanges; a direct route between Edgemont Village and Lonsdale Quay; and, extension of the hours of service to downtown until 7:00 PM on the 246 route.

Policy 5.3.2 All homes should be located within walking distance of a bus stop.

Implementation 5.3.2.1 The GVTA will be requested to investigate the utilization of small, mini-buses for route service along collector roads.

Policy 5.3.3 Public transit should be barrier free.

Implementation 5.3.3.1 The GVTA will be requested to review the fare structure of zone rates to consider if transit demand to downtown is inadvertently discouraged.

Implementation 5.3.3.2 The GVTA will be requested to ensure that all bus service to Upper Capilano is wheelchair accessible and the Municipality will continue with its program of improving the accessibility of bus stops.

Implementation 5.3.3.3 An inventory will be undertaken to ensure all bus shelters are barrier free, adequately lit, served with sidewalks and pedestrian crossing and display transit schedule information.

Objective 5.4 To provide safe and convenient pedestrian linkages throughout the community inter-connecting all neighbourhoods and Edgemont Village.

Policy 5.4.1 Pedestrian routes should be direct, extensive and as fully accessible as possible.

Implementation 5.4.1.1 A systematic review of all unopened road and pathway allowances will be undertaken to determine the feasibility of installing or improving pedestrian pathways where key linkages to other parts of the pedestrian system would be provided.

Implementation 5.4.1.2 Where possible pedestrian pathways should be constructed to be wheelchair accessible including the provision of ramps and tactile indicators.

Implementation 5.4.1.3 In accordance with Pedestrian Access Guidelines and Standards, conduct an inventory of older sidewalks to identify and budget a program of provision of appropriately designed curb cuts.

Policy 5.4.2 Sidewalks should be provided on both sides of arterial streets and on at least one side of collector streets.

Implementation 5.4.2.1 A prioritized sequence of in-fill sidewalk provision will be phased and budgeted by the Engineering Department to meet service levels for arterial and collector streets.

Policy 5.4.3 Main access routes abutting schools and all bus stops should be serviced with sidewalks.

Implementation 5.4.3.1 A review will be undertaken of the inventory of sidewalks along bus routes and at schools with deficiencies being identified and included in the program of in-fill sidewalk provision noted above **(Implementation 5.4.2.1)**.

Policy 5.4.4 All new multi-family, commercial and public assembly developments are required to install sidewalks on abutting public streets.

Implementation 5.4.4.1 Sidewalk provision at the applicant's expense will be made a condition of approval at the development permit or rezoning stage as appropriate.

Objective 5.5 To encourage the use of bicycles for recreation and travel to and from work and school without compromising pedestrian safety.

Policy 5.5.1 Safe bicycle routes should be available to and from Edgemont Village, Lions Gate Bridge, Marine Drive and Lonsdale Avenue.

Implementation 5.5.1.1 The Bicycle Master Plan recommendations will be implemented as applicable to Upper Capilano.

Implementation 5.5.1.2 It is recommended that Capilano Road and Sunset Boulevard be designated as a bike route in the Bicycle Master Plan.

Implementation 5.5.1.3 It is recommended that a dedicated bike lane be provided on Capilano Road.

Policy 5.5.2 Bicycle racks should be widely available.

Implementation 5.5.2.1 Bike racks will be installed on each block of Edgemont Boulevard within the Village.

Implementation 5.5.2.2 The provision of bicycle racks is to be required as a condition of all commercial and multi-family development.

Implementation 5.5.2.3 BC Transit will be requested to experiment with the provision of bicycle racks on buses.

Objective 5.6 To maintain an efficient system of streets and utilities without environmental degradation or detraction from the streetscape.

Policy 5.6.1 Services and utility connections should be as unobtrusive as possible.

Implementation 5.6.1.1 Electrical and communications services to new development will be placed underground.

Implementation 5.6.1.2 Electrical transformers, connection boxes, gas meters and other similar items of utilities infrastructure shall be located and appropriately screened to minimize their visibility.

Implementation 5.6.1.3 Relocating hydro lines underground shall be considered prior to any installation of new sidewalks.

Implementation 5.6.1.4 Request BC Hydro to discontinue the use of orange coloured sodium vapour streetlights replacing them with pedestrian-friendly white coloured lights.

Policy 5.6.2 Regular inspection and maintenance of municipal infrastructure will be undertaken.

Implementation 5.6.2.1 Catch basins and major culverts will be regularly monitored for debris accumulation.

Implementation 5.6.2.2 A review of pavement condition will be undertaken and a prioritized program of street repair drawn up accordingly.

EDGEMONT VILLAGE

Feedback from Upper Capilano residents clearly indicates they wish to preserve the small town character and charm of the Village. Since modern commercial buildings tend to be substantially larger and bulkier than the highly valued eclectic mixture of one and two storey buildings existing in the Village today, care must to be taken to ensure new developments are sympathetic in character with existing structures. The surrounding low density residential neighbourhood contributes significantly to the overall ambiance of the Village. There is strong support for maintaining the present boundary of the commercial core as it is and for paying special attention to building heights and massing when adjacent to single family residences or when significant view corridors would be affected.

Objective 6.1 To retain the compact physical form of Edgemont Village.

Policy 6.1.1 No expansion of the existing commercial boundaries of the Village will be undertaken during the term of the plan.

Implementation 6.1.1.1 The supply and demand for commercial land will be monitored periodically.

Policy 6.1.2 Use project design and site planning to emphasize the entry points at Highland Boulevard, West Queens Road and Ridgewood Avenue.

Implementation 6.1.2.1 The Edgemont Village Development Permit Area establishes a design concept to co-ordinate the siting of buildings, landscaping, entrance signage, open space and public amenities.

Objective 6.2 To encourage the continuation of a practical variety of commercial shops and services.

Policy 6.2.1 Support a healthy business climate conducive to small, independent merchants.

Implementation 6.2.1.1 A review of the permitted commercial uses in the Village will be undertaken in consultation with the business community and local residents to determine if changes are warranted.

Implementation 6.2.1.2 Consolidation of properties will only be permitted if it is consistent with **Policy 6.2.1.**

Policy 6.2.2 Support the retention of medical/dental services and a supermarket within the Village.

Implementation 6.2.2.1 A comprehensive development zone for the Ridgewood/Edgemont entrance property will include provision for medical/dental offices (8,000 – 12,000 square feet) and a supermarket (10,000 – 15,000 square feet).

Objective 6.3 To accommodate some housing in mixed use developments in a creative and sensitive way.

Policy 6.3.1 Encourage new developments in Edgemont Village to include apartments built over top of commercial space.

Implementation 6.3.1.1 Evaluation of mixed use projects will include consideration of: compatibility with adjacent residential neighbourhood, inclusion of a mix of unit sizes, suitability for seniors and empty nesters, and accommodation of home based business and live/work arrangements.

Implementation 6.3.1.2 At the development permit stage, provision of public open space such as small courtyards or rooftop gardens and other comparable amenities will be provided.

Objective 6.4 To identify and protect key view corridors.

Policy 6.4.1 Mountain views should be preserved through appropriate siting of buildings and by stepping back the second and third storeys.

Implementation 6.4.1.1 The Zoning Bylaw is to be amended to incorporate the height envelope guidelines specified in Figure 2 of the development permit area design guidelines.

Implementation 6.4.1.2 Second and third storeys, where permitted, should be stepped back from the first storey to maintain views and avoid shadowing at the street.

Implementation 6.4.1.3 Building site coverage may be varied at the development permit stage to provide additional on-site public open space or to preserve view corridors through height reductions.

Objective 6.5 To foster an interesting pedestrian environment and maintain a human scale in the relationship of buildings to the street.

Policy 6.5.1 The height of new buildings is generally limited to two storeys with exceptions for up to three storeys as noted in Figure 2 of the development permit area design guidelines.

Implementation 6.5.1.1 Building height is regulated by the Zoning Bylaw and development permit area guidelines.

Policy 6.5.2 Public initiatives and private development should be co-ordinated to better achieve an attractive and interesting streetscape.

Implementation 6.5.2.1 A municipal beautification strategy will be developed and budgeted according to the plan guidelines as part of a co-ordinated program of public improvements, private landscaping and amenity provision requirements.

Implementation 6.5.2.2 Design guidelines include small courtyards, seating areas, attractive street lighting, and a co-ordinated paving scheme. Weather protection includes overhangs, canopies, awnings or colonnades. Other amenities such as street trees, street furniture, public art, planters, flower baskets, benches and other amenities may also be provided.

Implementation 6.5.2.3 Commercial buildings must generally be sited at or near the front property line with parking provided at the rear. Buildings must retain small storefronts, or the appearance of small storefronts, with display windows and recessed shop entrances.

Implementation 6.5.2.4 Front entrances to commercial buildings must be fully accessible for persons with disabilities.

Objective 6.6 To encourage an eclectic but co-ordinated mix of building styles.

Policy 6.6.1 Building design guidelines do not include a specific architectural theme but building design should be complementary to the adjacent buildings.

Implementation 6.6.1.1 Building form, textures, materials, colour scheme and landscaping should reflect continuity with newer neighbouring development. Traditional looking building materials such as wood, brick and stone are encouraged for exterior use.

Implementation 6.6.1.2 Roofs should be sloped on multi-storey buildings with upper storeys stepped back and built into the roofline.

LAND USE DESIGNATIONS

These are the definitions for the designations shown on the Plan Map. **This legend and the map must be used in conjunction with the relevant text to determine the exact potential for any site.**

RESIDENTIAL: Areas presently developed or to be developed for residential housing at various densities.

- Detached Residential — Areas intended predominantly for detached single family dwellings at densities of 30 units or less per hectare (12 units or less per acre).

- **Ground Oriented Residential** — Areas intended predominantly for attached housing units with grade level access at densities of 45 units or less per hectare (18 units or less per acre).
- **Low Rise Residential** — Areas intended predominantly for low-rise apartments at densities of 140 units or less per hectare (55 units or less per acre).

INSTITUTIONAL: Existing sites for schools, churches, theatres, recreation centres and public buildings.

COMMERCIAL: Existing and proposed sites suitable for a range of local and community retail, office, service and residential uses.

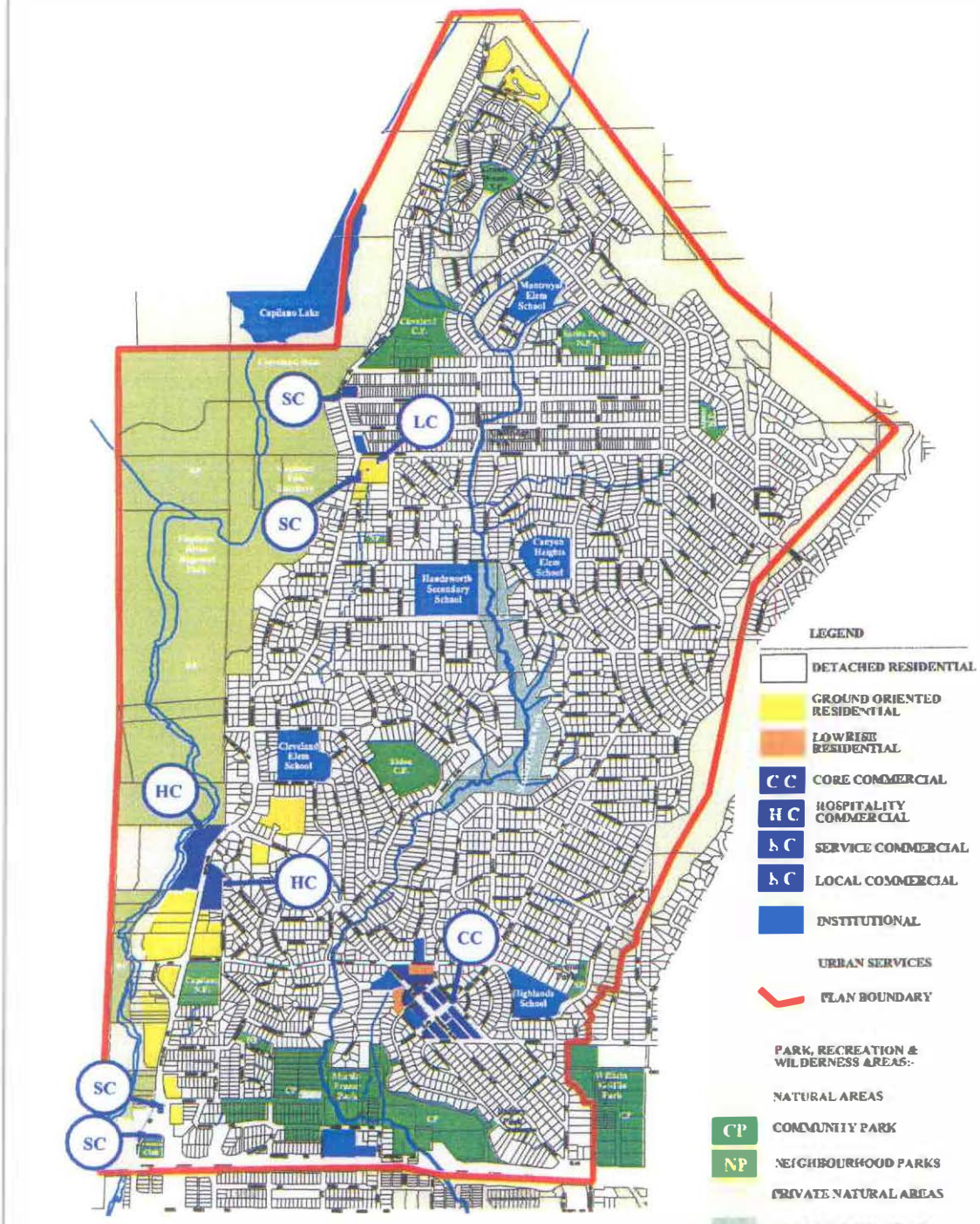
- **Hospitality Commercial** — Areas intended predominantly for tourist, entertainment and related uses.
- **Service Commercial** — Automobile oriented areas predominantly for retail, office and service uses.
- **Core Commercial** — Pedestrian oriented areas intended predominantly for retail shops and services at street level with residential units above.
- **Local Commercial** — Areas intended predominantly for small scale, commercial uses serving the adjacent neighbourhood.

URBAN SERVICES: Areas designated principally for public works, cemeteries, utilities, transportation and communications.

CONSERVATION AREAS: Areas designated principally for the protection of fish and wildlife habitat, and, environmentally sensitive areas.

PARKS, RECREATION AND WILDERNESS AREAS: Areas designated principally for the preservation and enjoyment of the natural environment, outdoor recreational use, and regional water supply.

- **Natural area** — Areas intended predominantly for creek and trail corridors, greenways and landscaped areas.
- **Private natural area** — Private landholdings in natural areas.
- **Regional Park** — Areas owned by the GVRD and intended predominantly for the use and enjoyment of the natural environment, wilderness areas and unorganized outdoor activities.
- **Community Park** — Public areas improved & maintained predominantly for athletic fields, outdoor recreation and other active recreational pursuits.
- **Neighbourhood Park** — Public areas improved and maintained predominantly for tot lots, playgrounds, seating areas and unorganized activities.



UPPER CAPILANO LOCAL PLAN MAP

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4.3.3 Upper Capilano Local Planning Area

4.3.3.1 Edgemont Village Development Permit Area

The Edgemont Village Development Permit Area (D.P.A.) is established for the purpose of regulating the form and character of commercial and multi-family building within the commercial core of Edgemont Village as defined by Figure 1 "Edgemont Village Development Permit Area". Special development guidelines unique to Edgemont Village apply over and beyond the zoning regulations to better achieve the intent and objectives of the Upper Capilano Local Plan.

The intent of the guidelines is to preserve the small town character and charm of the Edgemont Village by ensuring that any new development is sympathetic in form and character to the existing commercial core. The Village is a functional retail centre made up of small, independent shops and any new development should reflect this. Diversity is important, therefore building design generally should be in keeping with the eclectic mixture of one or two storey 1950's era buildings. Rather than dominating the environment, buildings should blend into the surrounding single family neighbourhood and take advantage of the scenic, mountain backdrop.

4.3.3.1.1 Objectives

i) To encourage a practical variety of commercial shops and services;
ii) To retain a compact physical form;
iii) To maintain a human scale in the relationship of buildings to the street;
iv) To accommodate some housing in mixed use developments in a creative and sensitive way;
v) To identify and protect key view corridors; and
vi) To foster an interesting pedestrian environment and maintain a human scale in the relationship of buildings to the street .

4.3.3.1.2 Guidelines

Building Design and Character

i) Building facades should be articulated with doorways, display windows or other recesses and features with sufficient frequency to suggest the appearance of small, independent shops.
ii) Building facades should form a continuous streetwall at or near the front property line unless it is to provide for a pedestrian passageway through to the lane.
iii) Traditional building materials such as wood, brick or stone should be used on building exteriors.
iv) Building design, materials and colour scheme should be complementary to that of the adjacent buildings.

Building Heights and Siting

v) Buildings should not exceed the maximum height indicated in Figure 2, "Maximum Building Height."
vi) Second and third storeys of building should be stepped back from the first floor to maintain a pedestrian scale, prevent shadowing on the street and to preserve significant mountain views.
vii) Building coverage may be varied to provide public amenities like pedestrian arcades, colonnades or decorative building features in which case at least half of the increase in site coverage should be devoted to the public amenity.

Streetscape and Public Amenities

viii) Public open space should be provided at intersections on Edgemont Boulevard and West Queens Road as indicated in Figure 2.
ix) At least 15% of the parcel should be landscaped or devoted to public amenities such as street trees, outdoor seating, courtyards or public art.
x) All building must incorporate awnings, canopies or overhangs to provide continuous weather protection along the street, over doorways and other pedestrian areas.
xi) The type, design and colour scheme of signs, awnings, and canopies may vary from building to building but must be complementary to one another.
xii) Freestanding signs are not permitted.

Lanes

xiii) All services and utilities should be underground, and refuse containers and storage areas should be well screened or hidden from view.
xiv) All paving, including parking and pedestrian areas, should be co-ordinated to achieve a unified pavement scheme throughout the lanes and appropriate intersections.
xv) Parking and garbage pick-up areas at the rear of buildings should be co-ordinated with the adjacent properties to achieve more efficient layouts.
xvi) Parking areas should be landscaped around their perimeter.
xvii) Underground public parking should be well lit.

4.3.3.2 Guidelines Affecting Site 3, Upper Capilano
3065 Capilano Road to 3175 Capilano Crescent

i) Site Access: vehicular access is limited to Capilano Crescent.

ii) The Southern Intersection of Capilano Crescent and Capilano Road: this intersection should be improved to eliminate the potential for left hand turns into and out of the intersection. South bound traffic will continue to be permitted to exit from Capilano Crescent onto Capilano Road, provided that the design can be done in a manner that is safe and minimises conflict with vehicles travelling south on Capilano Road.

iii) Screening Along Capilano Road and Capilano Crescent: tree preservation and buffer strip planting along the street frontages should be maximised.

iv) Screening Along the Southern Property Line: tree preservation and buffer landscaping along the southern property line should be maximised, and a 3 storey height limit (including roof structure) next to the property line is required.

v) Screening Along the Northern Property Line: tree preservation and buffer landscaping along the northern property line should be maximised, and a two storey height limit (including roof structure) next to the northern property line is required.

vi) Screening Along the River Canyon: in accordance with the Streamside Protection Regulations of the Fish Protection Act, tree retention must be maximised within the Fisheries' setback area, and restorative planting must be provided where buildings are removed.

vii) Construction must be in accordance with the District of North Vancouver's adaptable housing guidelines.

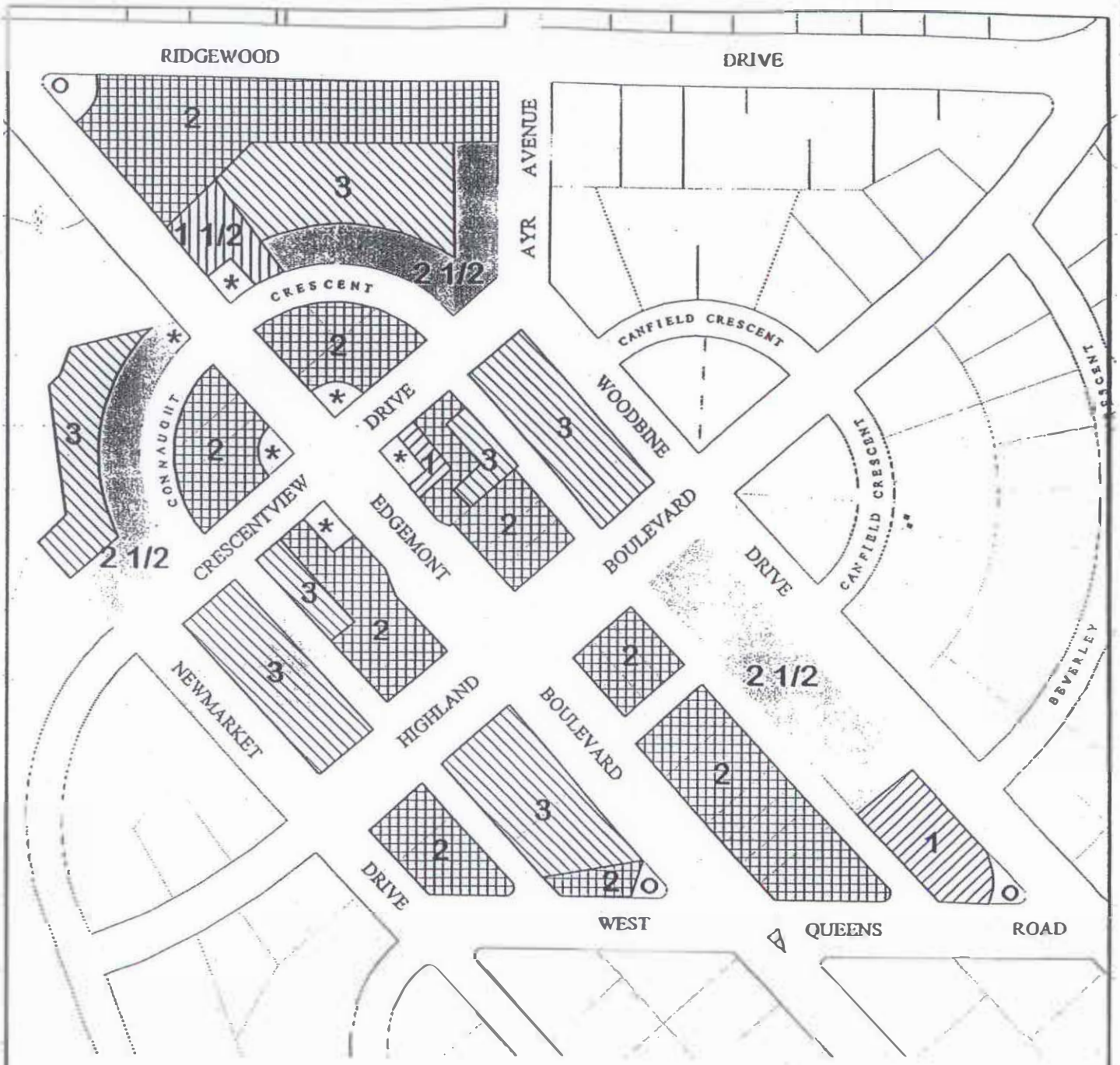

Figure 2 - MAXIMUM BUILDING HEIGHT

LEGEND :

1 storey	2 with partial 3rd storey
1 with partial 2nd storey	3 storey
2 storey	Mini parks
	public open space

Note:
Building coverage is normally limited to 50 % of site area except where varied in the text of the plan.

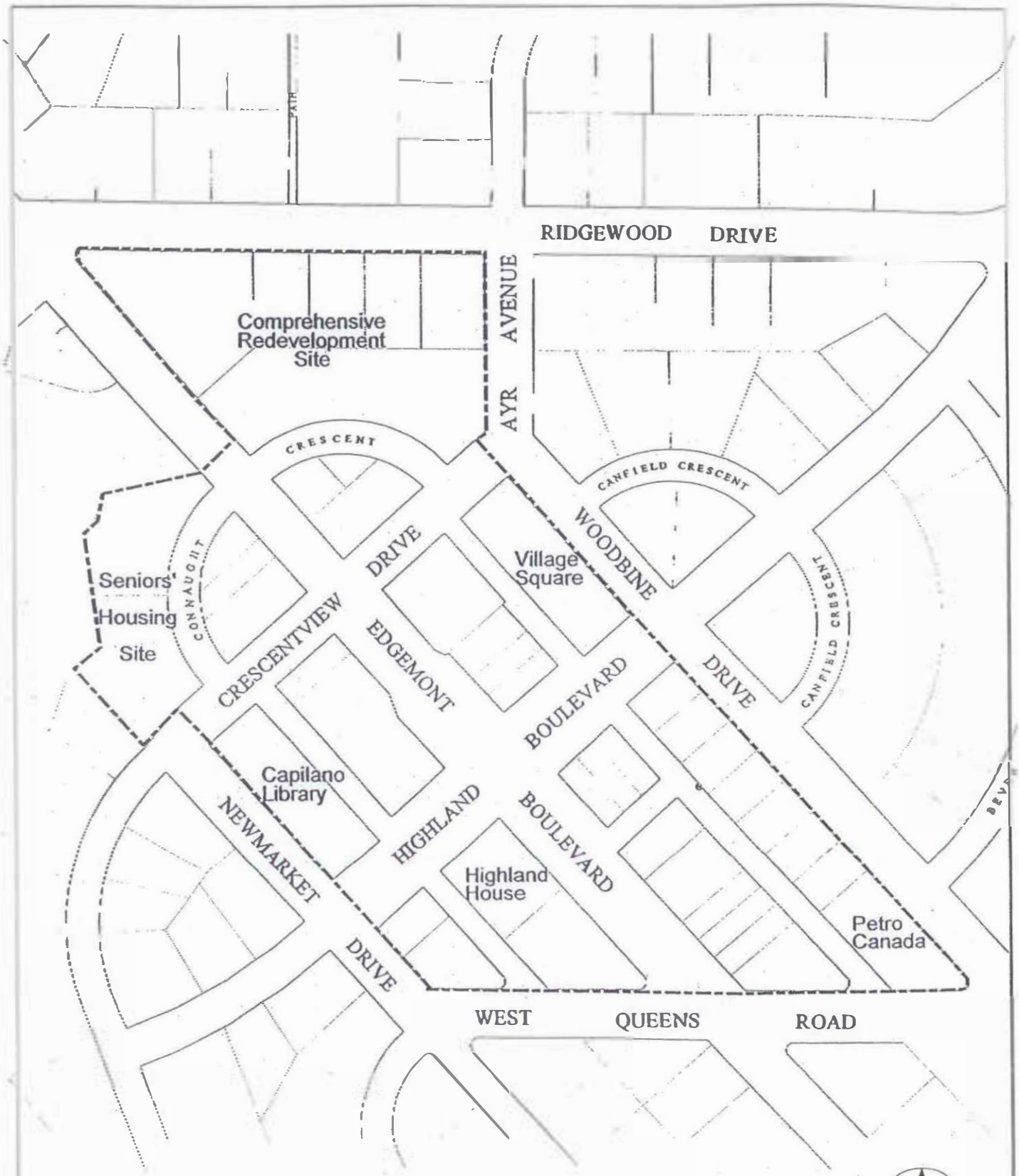

Figure 1

EDGEMONT VILLAGE DEVELOPMENT PERMIT AREA

C Guidelines for Ground-Oriented Housing

The built-form of ground-oriented multi-family *development* should be integrated with existing neighbourhoods.

1. Public Realm, Streetscape Elements and Neighbourhood Fit

Discussion:

The built-form of ground-oriented multi-family *development* should be integrated with existing neighbourhoods, while enhancing architectural variety. *Development* should reflect the streetscape character of the neighbourhood in which it is located, or in the case of larger *developments,* it should create its own successful streetscape character.

Ground-oriented housing should be designed so that it complements the neighbourhood character, with minimum impact on adjacent properties. *Development* will often occur incrementally as pre-existing lots on record are assembled and consolidated. Accordingly, the design must carefully consider both the existing and future relationships to surrounding properties.

Figure 81

C1.1: Height and Massing: The height and massing of buildings should be in keeping with a single family dwelling or townhouse height, which is typically less than 12 metres. Architectural treatments that reduce apparent building height such as the use of trim, colour accents, secondary roof elements, building recesses and stepped building forms are encouraged (see Figure 81).

C1.2: Roof Treatment: The gable orientation and roof pitch should be sympathetic to the design of neighbouring buildings and help to maximize the space and light between buildings (see Figure 81).

C1.3: Street Orientation: Units are encouraged to be oriented towards, and have a visual connection to the street (see Figure 82).

C1.4: Corner Lots: Buildings on corner lots should "wrap the corner" providing an opportunity to have units facing both streets (see Figures 83).

C1.5: Minimum Frontage: Generally, *development* parcels should have a minimum frontage of 20 metres.

C1.6: Setbacks: The front yard setback should relate to, or appropriately transition from, the established pattern in the area.

Figure 82

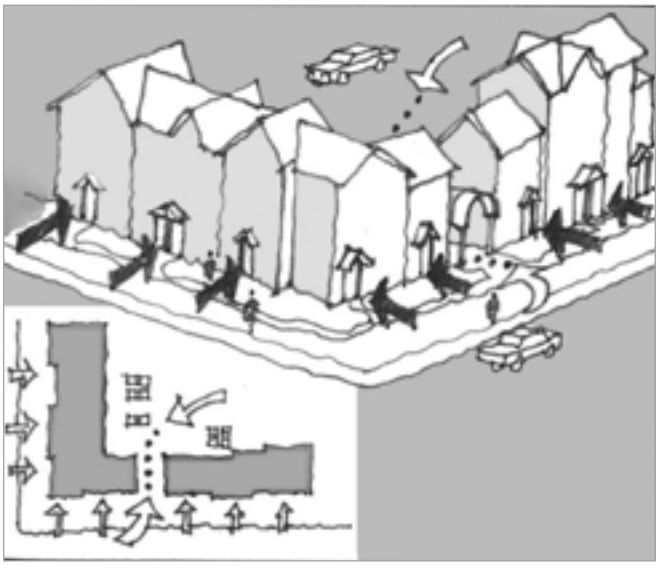

Figure 83

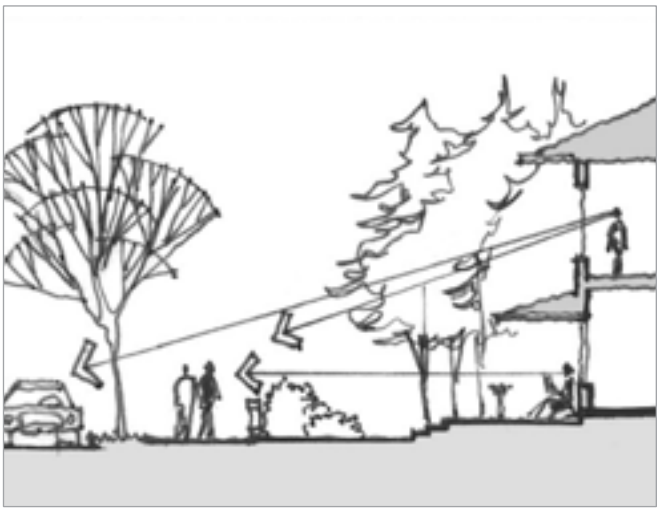

Figure 84

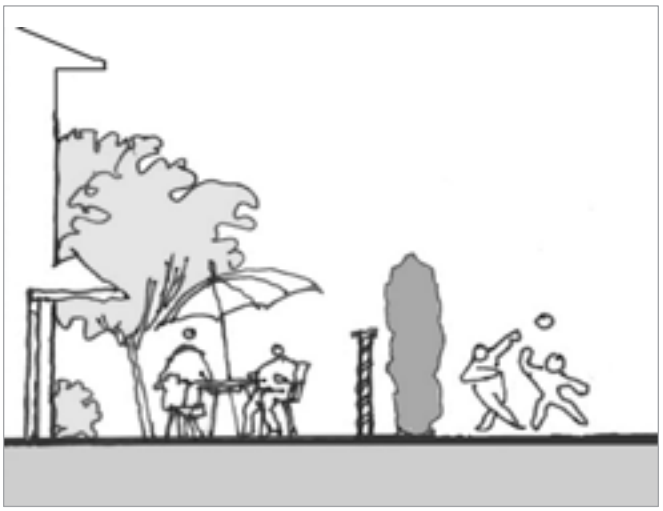

Figure 85

2. Site Planning and Landscaping

Discussion:

Good site planning and landscaping contribute to neighbourhood character and aesthetics, resident livability and environmental sustainability. In principle, site planning should strive to minimize building coverage, preserve natural features and minimize rainwater run-off. Mature trees shade and cool homes in the summer and absorb carbon dioxide and trap dust particles. Trees and other landscaping provide habitat, aid with energy conservation and absorb rain water, reducing stormwater run-off into creeks. Landscape plans should complement the building design and harmonize with the local setting and be prepared by a BC Registered Landscape Architect.

C2.1: Tree Retention: Healthy mature trees and natural features should be retained where possible.

C2.2: Sustainable Landscape Design: Sustainable landscape design should incorporate best practices for tree planting, rainwater management, accessibility and feature native and drought tolerant species. Sustainable landscape design should also be coordinated with building design, site servicing and utility placement.

C2.3: Street Interface: Landscaping and fencing should be kept low and open in the front yard to foster a strong relationship to the street and maintain visibility through to the front of the building (see Figure 84).

C2.4: Privacy: Incorporate planting and fencing to maximize privacy between dwelling units and neighbouring sites (see Figure 85).

C2.5: Shared Outdoor Space: Units should be clustered to create interesting shared outdoor spaces as well as usable and accessible private outdoor spaces. Encourage/integrate informal gathering, play and urban gardening opportunities (see Figure 86).

C2.6: Private Outdoor Space: At least 9 square metres of usable private outdoor space should be provided for all units (see Figure 87).

C2.7: Outward Facing Aspect: Units should be oriented such that windows from the principle living space of each unit are separated by a minimum of 9 metres from those of any other unit (see Figure 88)

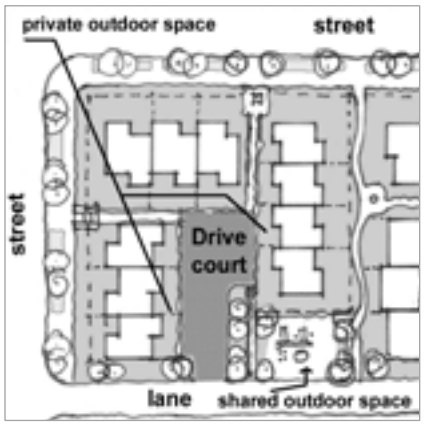

Figure 86

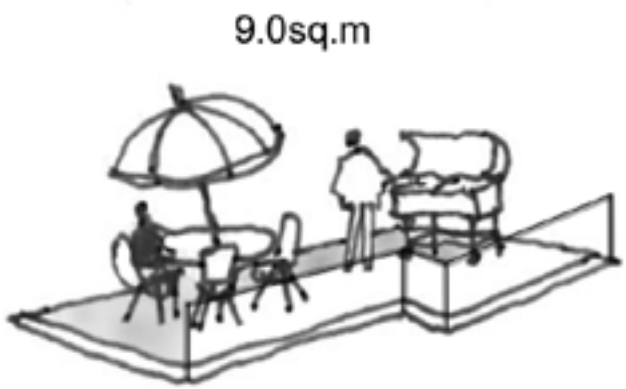

Figure 87

C2.8: Rear Yard Setbacks: Rear yard setbacks should be at least 6 metres, with some variation so that a visual wall is not created along the rear property line.

C2.9: Side Yard Setbacks: Side yard setbacks should be a minimum of 1.2 metres, and up to 3 metres when facing a side street or a single family home.

C2.10: Pedestrian Access: The main pedestrian access route should be from the street rather than the lane or parking area.

C2.11: Parking: Parking spaces should be located off a private driveway, and should not be visible from the street (see Figure 89) .

C2.12: Parking access: When parking is accessed from the front street the number of driveways should be kept to a minimum (see Figure 89).

C2.13: Shared Driveways: Where adjacent to another potential redevelopment site, the driveway should be designed so that it could in future be shared with the adjacent property (see Figure 89).

C2.14: Oil and Grit Separators: Oil and grit separators are required in all parking areas.

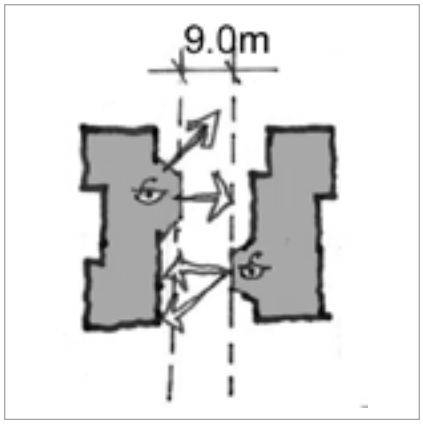

Figure 88

Figure 89

3. Architectural Character

Discussion:

The built form and character of new ground-oriented multi-family *development* should be consistent with and in harmony with the general rhythm, scale and height of the existing buildings in the neighbourhood. Ground-oriented housing is usually located in or adjacent to single family neighbourhoods. Building design therefore should generally have a single family character and incorporate west coast references while responding to local conditions such as topography, vegetation and heritage resources.

Consideration should be given to unit identity, roofscape, and other architectural elements, including fenestration, materials, and colour. Dormers and similar roof projections should read as subordinate or secondary architectural elements.

Ground-oriented housing should be designed in consideration of the needs of all residents regardless of their state of health, mobility or disabilities. Units should incorporate basic features that allow the units to be adapted to accommodate special needs without expensive retrofitting.

C3.1: Massing: The front façade of buildings should be broken up and portions stepped back to reduce the impression of bulk (see Figure 90).

C3.2: Variations in Design: Subtle design variations should be incorporated between neighbouring buildings to avoid a repetitive appearance.

C3.3: Cladding: Buildings should be clad primarily in natural materials although stucco accents may be used as a subordinate finish.

C3.4: Varied Rooflines: Varied roof lines with overhangs are encouraged.

C3.5: Roofing Materials: Laminated asphalt shingles or fire retardant treated cedar shakes are recommended as roofing materials. Tile roofing is discouraged.

Figure 90

C3.6: Noise Levels: Designs should demonstrate that the noise levels (A-weighted 24-hour equivalent LEQ sound level (the average sound level over the period of the measurement) in those portions of the dwelling listed below should not exceed the noise levels expressed in decibels set opposite such portions of the dwelling units. Examples include use of triple glazing, improved insulation etc.

PORTION OF DWELLING UNIT	NOISE LEVEL (DECIBELS)
bedrooms	35
living, dining, recreation rooms	40
kitchen, bathrooms, hallways	45

C3.7: Heating and Ventilation Systems: Ventilation, heating and cooling systems should be designed and insulated to minimize noise and located to be visually unobtrusive to neighbouring *developments.*

C3.8: Accessible Entrance: A level, no step entrance should be provided to each dwelling. If not possible, then platform areas should be provided at the top and bottom of ramps to facilitate the turning of wheelchairs, strollers and other mobility devices (see Figure 91).

C3.9: Weather Protection: A canopy should be provided over the front entrance.

C3.10: Front Door Width: The front door opening should be no less than 0.9 metre in width.

C3.11: Accessible Doorbell: The front doorbell should be no higher than 1 metre above the entry way

C3.12: Legible Address: The address should be indicated in easy-to-read, 10 centimetre or taller numbers, shown in a clearly contrasting colour.

Figure 91

4670 Capilano Road
Construction Traffic Management Plan

File No. 17221
August 2017
Revision 2

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Civil Engineers & Project Managers

1. PROJECT DETAILS

1.1. INTRODUCTION AND BACKGROUND

Wedgewood Capilano Homes Ltd. is proposing to redevelop the 4670 Capilano Road property in North Vancouver. The existing land includes a single lot residential house. The proposed development consists of 8 townhomes. The project will involve a minor redevelopment of the site including new curb, relocation of a swale in the rear and general servicing. The total site area is approximately 0.46 acres.

Creus Engineering Ltd. has been retained by Wedgewood Capilano Homes Ltd. to prepare a traffic management plan that addresses the offsite civil construction, onsite civil construction, and the stormwater management of the site. The traffic management plan will cover:

- Construction Overview: scope of construction, phasing
- Schedule: start of works and construction schedule
- Mobility Impact: impacts to road users including pedestrians, cyclists, transit and general traffic. Truck volumes and routing.
- Community Impact: impacts to area parking, construction parking.
- Work Zone Traffic Control: specific details of traffic control devices and plans.
- Communication Plan: how information is distributed to the general public, area residents, businesses and neighbors who are directly affected by construction activity.

The Traffic Management Plan covers the complete offsite civil construction. This is a preliminary plan and will be further developed closer to project start-up.

1.2. CONSTRUCTION OVERVIEW

Construction activity at 4670 Capilano Road is comprised of 4 different aspects. The scope of work includes site clearing, townhome construction (east building followed by west building), on-site civil works and offsite civil works (servicing and roadworks).

Phase 1: Site Clearing/Excavation

The site is going to be accessed from the existing driveway for clearing, grubbing, and excavation. The driveway is to be maintained for as long as possible to provide hardscape site access. There will be enough space provided on site for construction vehicles to turn around. It is expected that ±1200m³ of soils will be removed from the site during this phase.

Phase 2: Building Construction

This phase will begin with construction of the east building to allow for deliveries to be made from Capilano Road. Once the eastern building is completed the western building will be constructed with deliveries planned to be accessed from the parking lane fronting the site. There are to be no obstructions to the travel lane at any time (including all outrigging and worker movements). The bulk of building construction is wood frame. Concrete volumes are expected to be ±200m³.

Phase 3: Onsite Civil and Landscape Works

Onsite civil works are going to be occurring during each of the other phases as site conditions allow. The ditch realignment is expected to take place near the end of Phase 1 and prior to beginning Phase 2. Onsite servicing is expected to be completed during Phase 2 as the site progresses.

Phase 4: Offsite Civil and Landscape Works

Offsite servicing is currently the responsibility of the District of North Vancouver and is not covered in this report. Offsite surface works are expected to take place at the end of Phase 2. The sidewalk and paving works are to be completed after all of the servicing works and after the bulk of heavy deliveries to the site.

2. SCHEDULE

2.1. CONSTRUCTION SCHEDULE

A preliminary construction schedule has not yet been developed. The works are planned to commence 2018. See appendix A for the preliminary schedule for the project. The schedule will be revised as the development process continues.

2.2. HOURS OF WORK

The District of North Vancouver Noise Bylaw 7188 prohibits any noise or sound which disturbs or tends to disturb the quiet, peace, rest, enjoyment, comfort, or convenience of the neighborhood or of the persons in the vicinity; or exceeds the Sound Levels prescribed in the bylaw. For construction activity, the maximum Sound Level is 80dB or the maximum Daytime Average Sound Level is 65dB (at the point of reception). Hours of work are:

- Monday to Friday: 07:00 to 20:00
- Saturday: 09:00 to 17:00
- Sunday/Statutory Holidays: No work allowed

Night work is only possible with specific resolution of District of North Vancouver council. If night work is required, a written request to staff is required minimum 1 month in advance of the required night work. No night work is anticipated.

3. MOBILITY IMPACT

This section is intended to describe how the project will impact road users including pedestrians, cyclists, transit service, emergency vehicles, heavy vehicles (trucks) and general road traffic. For each phase of work, we have estimated construction truck volumes.

Capilano Road is classified as a major arterial route. 4670 Capilano is near the intersection of Montroyal Boulevard. There is a moderate amount of bicycle and pedestrian traffic.

3.1. TRUCK ROUTES

4670 Capilano Road is located off of Highway 1. The proximity of the site to the highway will minimize the time required on District of North Vancouver roads. All traffic to and from the site will use the following route:

- To get to the site, take exit 14 off Highway 1 to Capilano Road, followed by a right turn into the site (TCP controlled). From the site, a left turn onto Capilano Road (TCP controlled), followed by a left turn onto Highway 1 (signalized).

The proposed truck route is shown in Appendix B.

A highway use permit must be obtained by the developer and maintained for the duration of the works.

3.2. TRUCK VOLUMES

Based on the proposed construction schedule and scope of work, the heavy vehicle (truck) volumes have been estimated as follows:

Phase of Work	Typical Vehicles per Day	Maximum Vehicles per Hour
Phase 1: Clearing and Excavation	30 Trucks/day	6 Trucks/hour
Phase 2: Building Construction	15 Trucks/day	4 Trucks/hour
Phase 3: Onsite Civil and Landscaping	10 Trucks/day	3 Trucks/hour
Phase 4: Offsite Civil and Landscaping	10 Trucks/day	3 Trucks/hour

3.3. MITIGATION MEASURES

The proposed works have the potential to impact road users including pedestrians, cyclists, transit service, emergency vehicles, heavy vehicles (trucks) and general road traffic. The proposed construction activities have been reviewed against existing road users. In general, the following mitigation measures should be implemented to mitigate the potential impacts:

- The general public is to be protected from construction activities at all times by appropriate fencing, hoarding and communication.
- Existing pedestrian routes (sidewalks, trails) to remain clear and open at all times unless specifically noted in the TMP.
- Bike routes, once constructed, to remain clear and open at all times unless specifically noted in the TMP.
- There are to be no restrictions to emergency vehicles at any time. Emergency vehicles to be given priority access at all times. Emergency services (police, fire, ambulance) to be notified in advance of any construction activities with the potential to cause delays or detours (ie intersection construction, road paving).
- Truck marshaling is only available on site. No marshaling on District of North Vancouver (or City of North Vancouver) roads.
- A copy of the TMP including enter / exit procedures and truck routes is to be sent to the trucking contractor prior to starting construction.
- All heavy vehicle drivers will be given a copy of the site construction traffic procedures and truck routes. The flag person should have additional copies available on the site.
- Heavy vehicles are to be equipped with radios so that trucks can be delayed, diverted or cancelled as required by current site conditions. The general contractor will be responsible for communicating with the heavy vehicles.

- An important part of heavy vehicle management is the mitigation of silt, mud, dust, debris, and litter.
    - All trucks are to be covered while in transit.
    - The trucking contractor will ensure that adjacent streets and truck routes are kept clean and free of dust and debris on a daily basis.
    - The general contractor is also responsible for installing and maintaining a site sediment & erosion control system including mud and dust control and a wheel wash during trucking (if required). See drawing ESC for details of the site sediment control requirements.
- Provide enough on-site queue space to hold at least ½ an hour of truck traffic (for both inbound and outbound trucks).
- Construction traffic exiting the site (right turn) is to be operated by certified flag persons from 07:00 to 18:00

4. COMMUNITY IMPACT

This section is intended to describe how construction activities will impact parking and includes existing parking availability, estimated construction parking requirements and estimated construction parking availability.

4.1. EXISTING PARKING

The existing site consisted of a single-family home which will be removed. The site is private property and there is no public parking available. There is residential street parking available on both sides of Capilano Road.

4.2. CONSTRUCTION PARKING

Estimated construction parking requirements have been reviewed by Creus Engineering. During on-site works parking is to be provided on site. No construction parking is permitted on District roads. Any offsite parking required is to be secured by the developer prior to construction.

5. WORK ZONE TRAFFIC CONTROL DEVICES

This section is intended to describe the specific traffic control devices and plans required and include pavement markings, signage, delineation devices, traffic control persons, building zones, and site access points. All traffic control devices are to be installed and used in accordance with the BC Workers Compensation Board *Section 18*, the BC MOT *Traffic Control Manual for Work on Roadways* and the TAC *Canadian Manual of Uniform Traffic Control Devices*. All construction signage to be in place prior to any closures and removed or covered when lanes are re-opened. Contractor to plan for daily management of all traffic control devices including signs.

5.1. TRAFFIC CONTROL PLANS

Traffic plans for all phases of construction in this report are included in Appendix C. The contractor is responsible for obtaining all required permits.

5.2. MONITORING STRATEGY

Traffic conditions and noise levels may be monitored by the project traffic consultant to confirm satisfactory performance and if any modifications are required. Once the traffic management plans have been implemented, periodic site inspections will be performed to confirm performance. Refer to the CTMP and the District of North Vancouver Noise Regulation Bylaw (No. 7188) for details. If deemed necessary by the District of North Vancouver, PTZ (Pan-Tilt-Zoom) cameras may be required.

The developer will be responsible for monitoring the implemented traffic management plans. All construction related detour and information signs and traffic control devises are to be checked every three days. There shall also be an inspection every time there is a change to the signage and devices posted.

6. COMMUNICATIONS PLAN

A number of residents, businesses and through traffic (commuters) have the potential to be impacted by the proposed construction activities. The following Communications Plan has been prepared to provide notifications and updates to all affected parties as well as the general public. It also provides contacts for unforeseen issues, complaints, coordination and emergencies.

6.1. PUBLIC NOTIFICATION

For neighbors with the potential to be directly affected by the proposed construction, written notifications are to be delivered prior to the commencement of general construction and before certain specific works. Included in Appendix D is a map identifying all the neighboring residents and business to be notified of construction activities and a sample notification letter. Copies of all notifications will be cc'd to the District of North Vancouver.

6.2. CONTACT INFORMATION

Project Contacts

Main Contact Number:
Colin Jones, LDJ Contracting
604-418-9592

Owner / Developer:
Wedgewood Capilano Homes Ltd.
604-649-5658

General Contractor:
Colin Jones, LDJ Contracting
604-418-9592

Excavation Contractor
Bruce MacDonald, Macdonald Trucking
604-290-8085

Coast Mountain Bus Company:
Harjit Sidhu-Kambo, Transit Engineering Manager
(604) 953-3051

District of North Vancouver:
Scott Sigston, Planning, Permits and Properties
(604) 990-2434

North Shore Chamber of Commerce
102 – 124 West 1st St, North Vancouver, BC
604-987-4488

Police (RCMP):
147 East 14th St, North Vancouver, BC
604-985-1311

District of North Vancouver Fire Services:
1110 Lynn Valley Rd, North Vancouver, BC
604-980-7575

District Operations Centre:
1370 Crown St, North Vancouver, BC
604-990-3831

CREUS Engineering:
Fred Ciambrelli, Senior Project Engineer
604-987-9070

Emergency Contacts

RCMP: 911
Fire Department: 911
BC Ambulance: 911

7. REPORT SUBMISSION

Yours Sincerely,

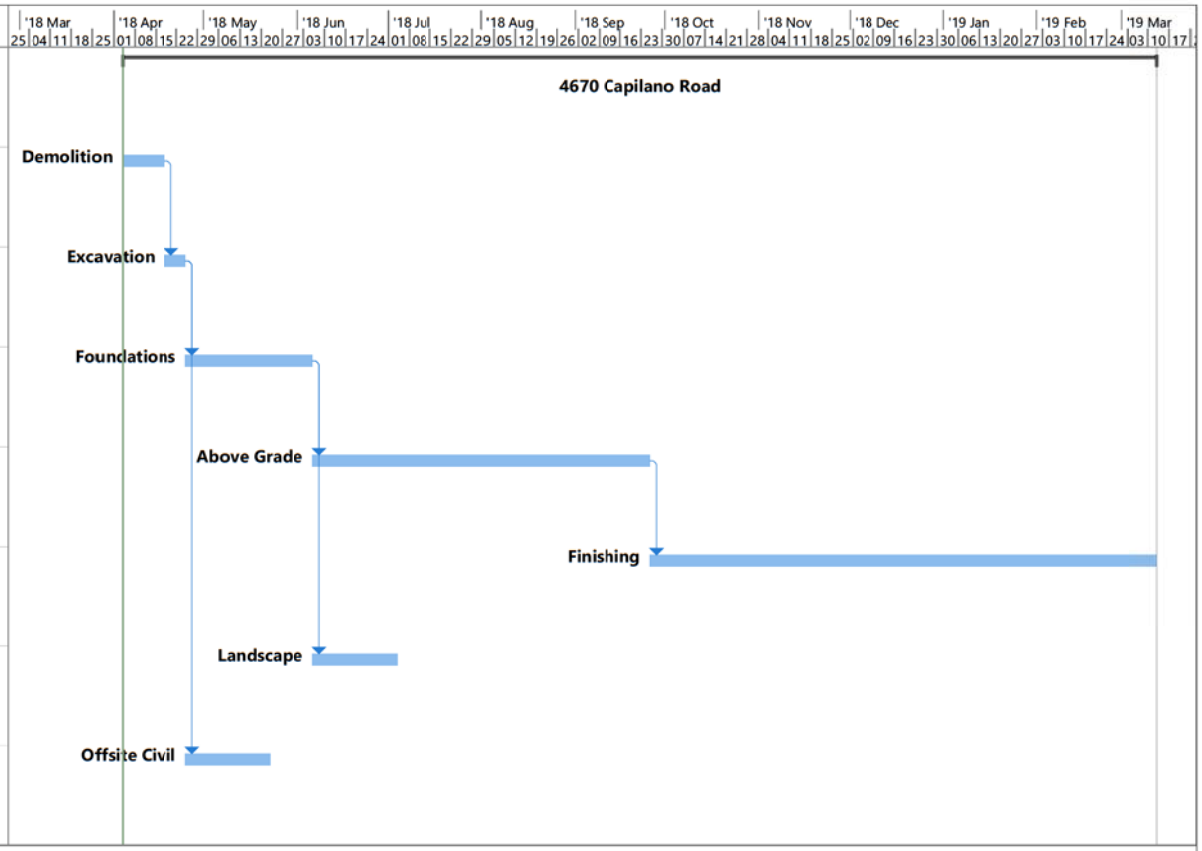
CREUS Engineering Ltd

Clayton Bailey, P.Eng.

Reviewed By: Fred Ciambrelli, P.Eng.

APPENDIX A: SCHEDULE

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		**4670 Capilano Road**	**245 days**	**Wed 18-04-04**	**Tue 19-03-12**	
2		Demolition	2 wks	Wed 18-04-04	Tue 18-04-17	
3		Excavation	1 wk	Wed 18-04-18	Tue 18-04-24	2
4		Foundations	6 wks	Wed 18-04-25	Tue 18-06-05	3
5		Above Grade	16 wks	Wed 18-06-06	Tue 18-09-25	4
6		Finishing	24 wks	Wed 18-09-26	Tue 19-03-12	5
7		Landscape	4 wks	Wed 18-06-06	Tue 18-07-03	4
8		Offsite Civil	4 wks	Wed 18-04-25	Tue 18-05-22	3

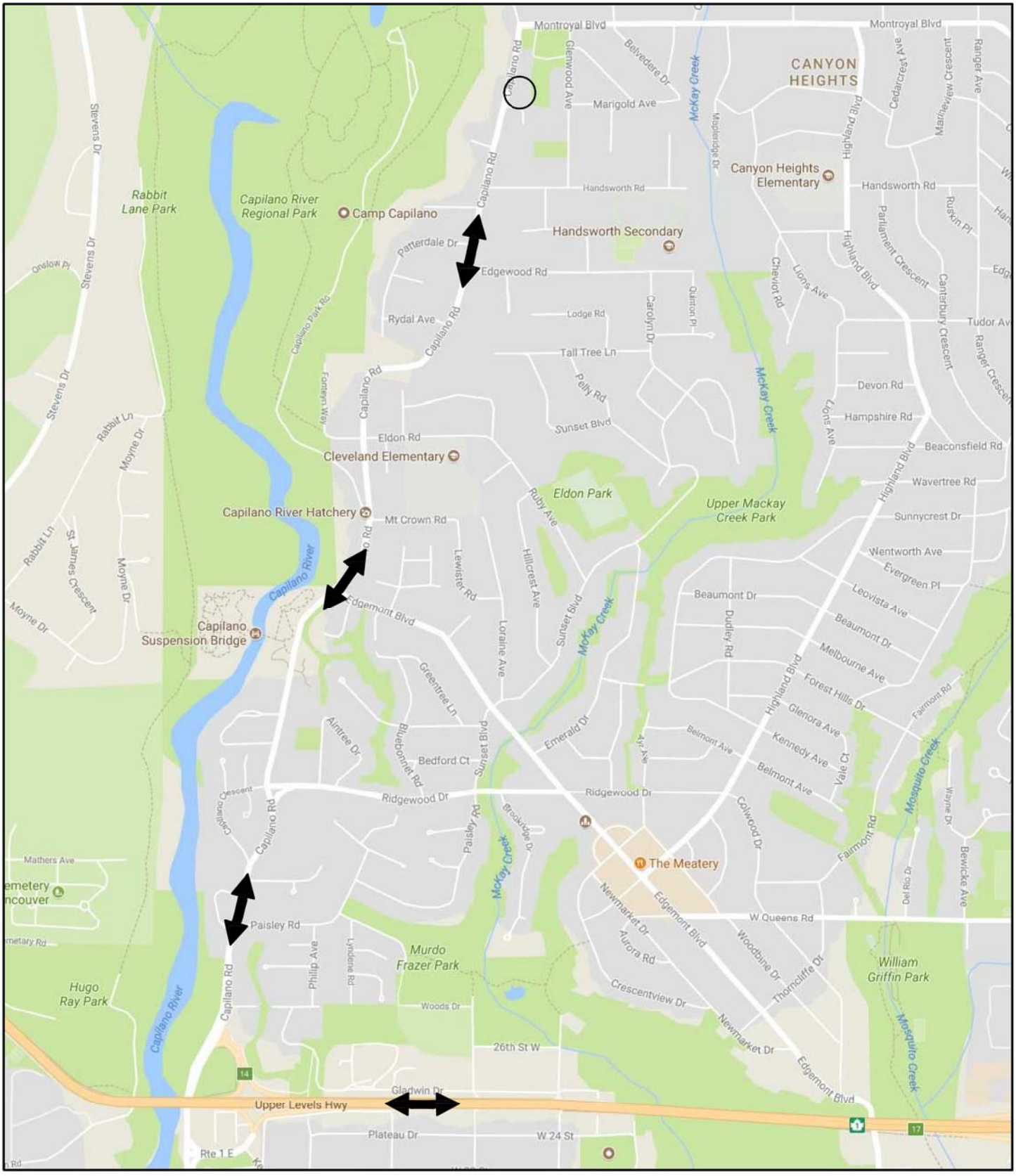


Project: 4670 Capilano Road - S
Date: Wed 18-04-04

Task	Project Summary	Manual Task	Start-only	Deadline			
Split	Inactive Task	Duration-only	Finish-only	Progress			
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress			
Summary	Inactive Summary	Manual Summary	External Milestone				

APPENDIX B: TRUCK ROUTES

CREUS Engineering Ltd



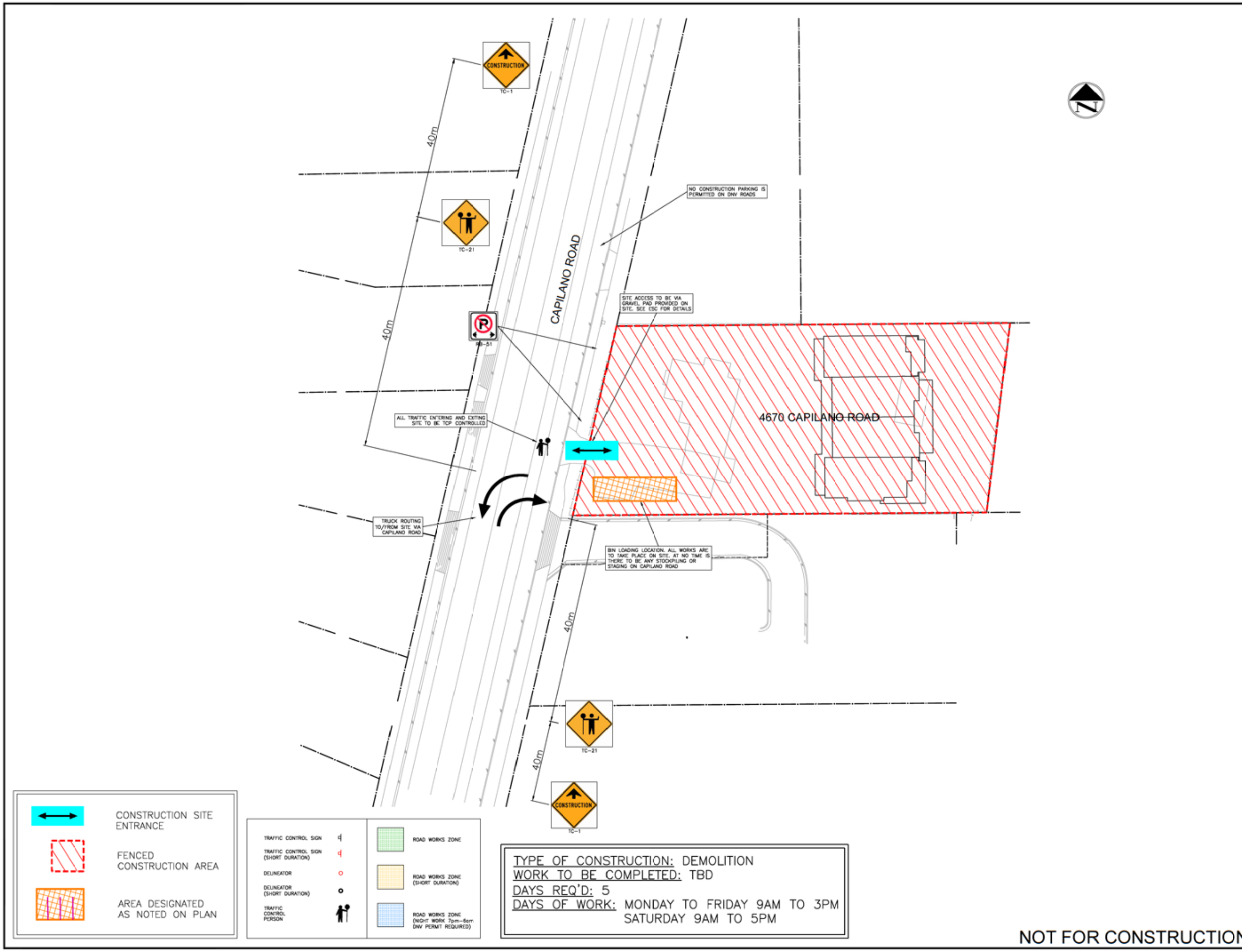
title

CAPILANO ROAD TRUCK ROUTE

scale NTS

drawing no. APP-C1

APPENDIX C: TRAFFIC CONTROL PLANS



NOT FOR CONSTRUCTION

CREUS Engineering
Civil Engineers & Project Managers

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

"I, FRED CIAMBRELLI, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING STANDARDS AND IN ACCORDANCE WITH: THE DISTRICT OF NORTH VANCOUVER DESIGN CRITERIA MANUAL DATED NOV 2009, THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD), VERSION 2000 AND THE DISTRICT OF NORTH VANCOUVER SUPPLEMENTARY MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (SUPPLEMENTARY SPECIFICATIONS AND SUPPLEMENTARY STANDARD DRAWINGS), ADOPTED BY THE DISTRICT OF NORTH VANCOUVER.

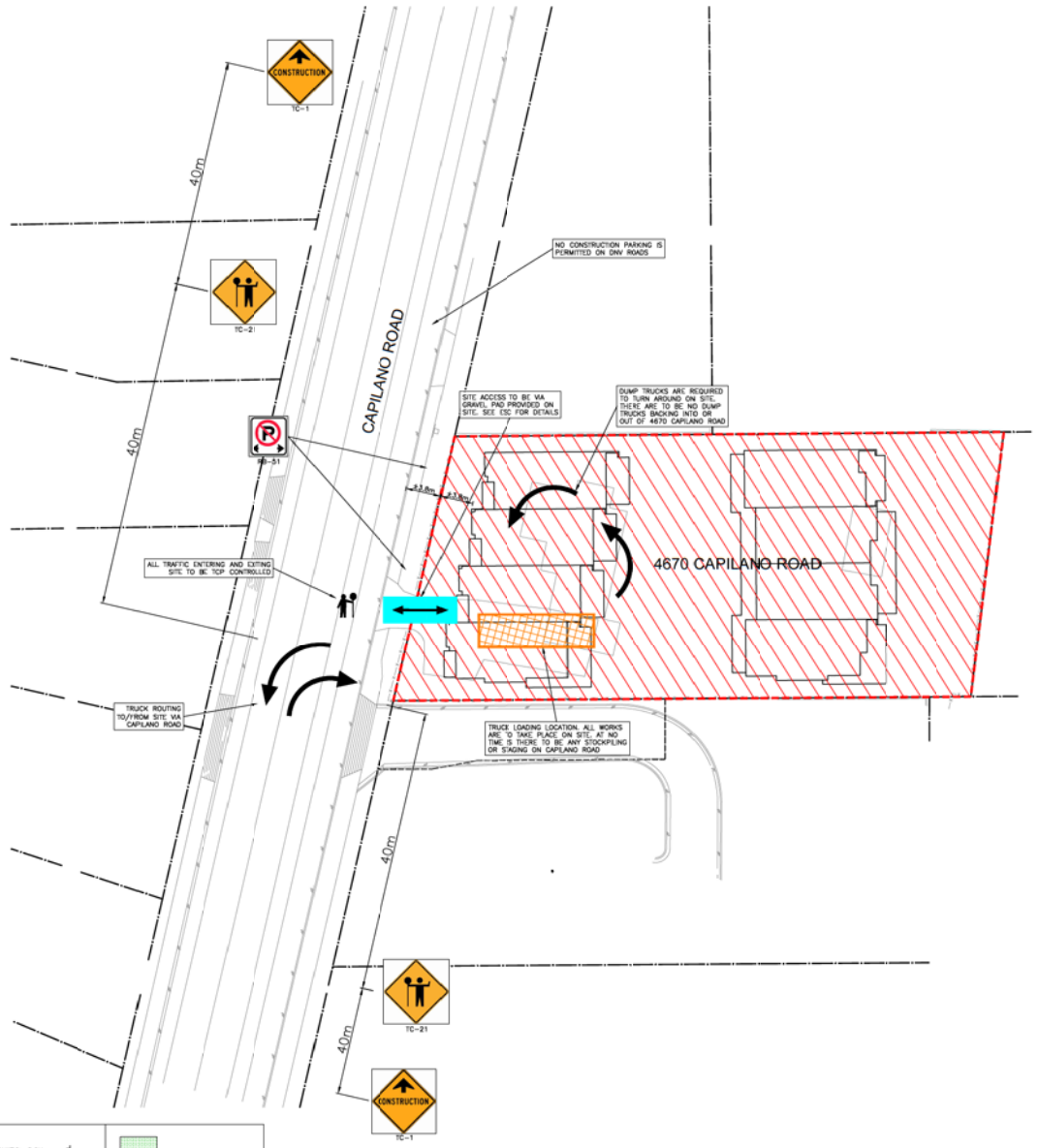
approved

client: WEDGEWOOD CAPILANO HOMES LTD.

project: 4670 CAPILANO ROAD, DIST NORTH VANCOUVER

title: TRAFFIC MANAGEMENT PLAN DEMOLITION

engineer of record: FMC | scales: hor 1:250, vert 1:V
designed by: CWB | DNV file no.:
drawn by: CWB | file no.: 17221
date: 2017-06-30 | drawing no.: TMP-DEMO



CONSTRUCTION SITE ENTRANCE

FENCED CONSTRUCTION AREA

AREA DESIGNATED AS NOTED ON PLAN

TRAFFIC CONTROL SIGN

TRAFFIC CONTROL SIGN (SHORT DURATION)

DELINEATOR

DELINEATOR (SHORT DURATION)

TRAFFIC CONTROL PERSON

ROAD WORKS ZONE

ROAD WORKS ZONE (SHORT DURATION)

ROAD WORKS ZONE (NIGHT WORK 7pm–6am DNV PERMIT REQUIRED)

TYPE OF CONSTRUCTION: EXCAVATION
WORK TO BE COMPLETED: TBD
DAYS REQ'D: 5
DAYS OF WORK: MONDAY TO FRIDAY 9AM TO 3PM
SATURDAY 9AM TO 5PM

NOT FOR CONSTRUCTION

CREUS Engineering

Civil Engineers & Project Managers

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SS)	CB/SS		
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

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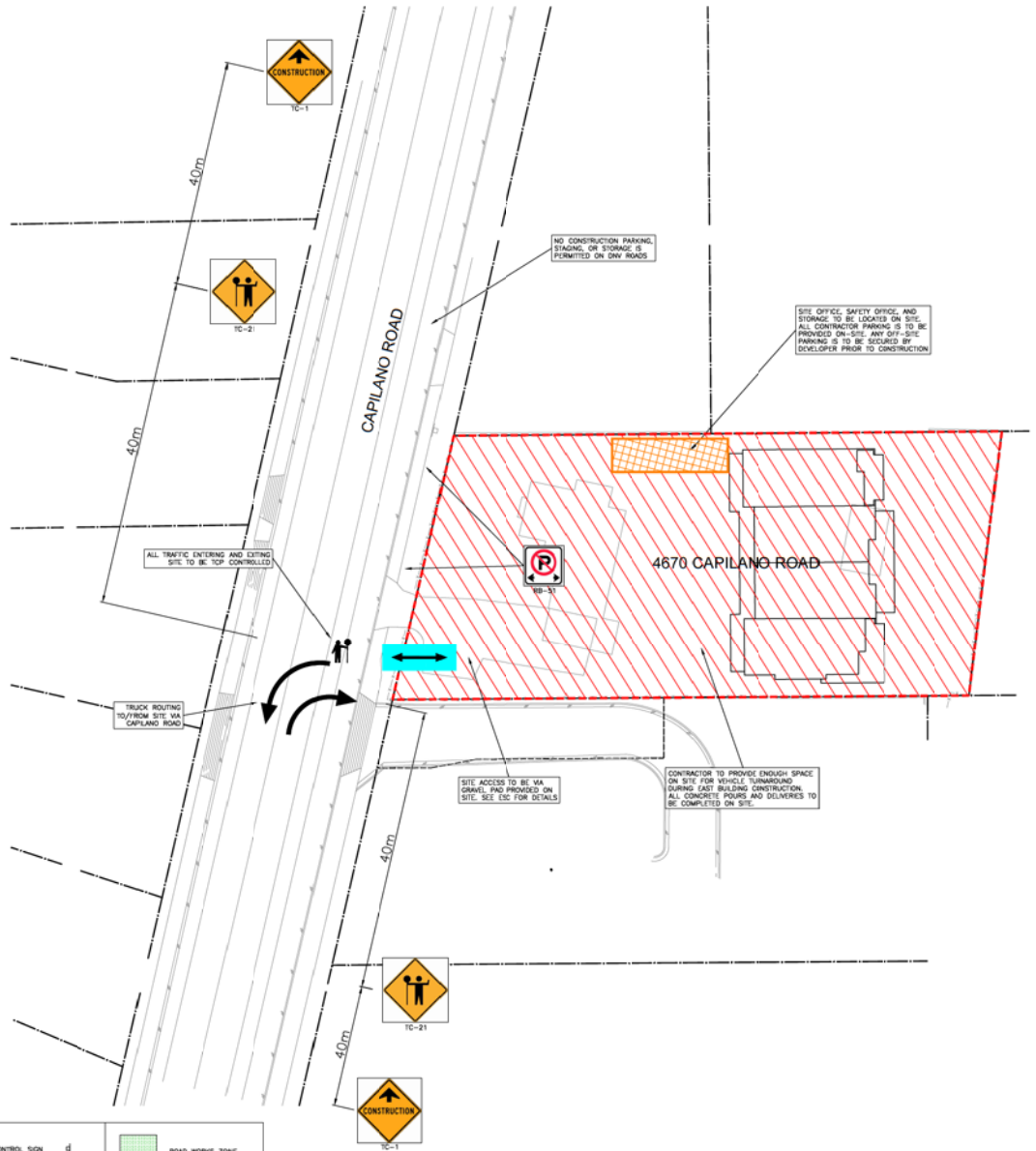
client
WEDGEWOOD CAPILANO HOMES LTD.

project
4670 CAPILANO ROAD
DIST NORTH VANCOUVER

title
TRAFFIC MANAGEMENT PLAN
EXCAVATION

no.	(yr/m/d)	revision	chk'd

engineer of record: FMC	scales: hor. 1:250 vert. 1:V
designed by: CWB	DNV file no.
drawn by: CWB	file no. 17221
date: 2017-06-30	drawing no. TMP-EXC



CONSTRUCTION SITE ENTRANCE

FENCED CONSTRUCTION AREA

AREA DESIGNATED AS NOTED ON PLAN

TRAFFIC CONTROL SIGN

TRAFFIC CONTROL SIGN (SHORT DURATION)

DELINEATOR

DELINEATOR (SHORT DURATION)

TRAFFIC CONTROL PERSON

ROAD WORKS ZONE

ROAD WORKS ZONE (SHORT DURATION)

ROAD WORKS ZONE (NIGHT WORK 7pm-6am DNV PERMIT REQUIRED)

TYPE OF CONSTRUCTION: EAST BUILDING CONSTRUCTION
WORK TO BE COMPLETED: TBD
DAYS OF WORK: MONDAY TO FRIDAY 9AM TO 3PM
SATURDAY 9AM TO 5PM

NOT FOR CONSTRUCTION

CREUS Engineering

Civil Engineers & Project Managers

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STORM)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

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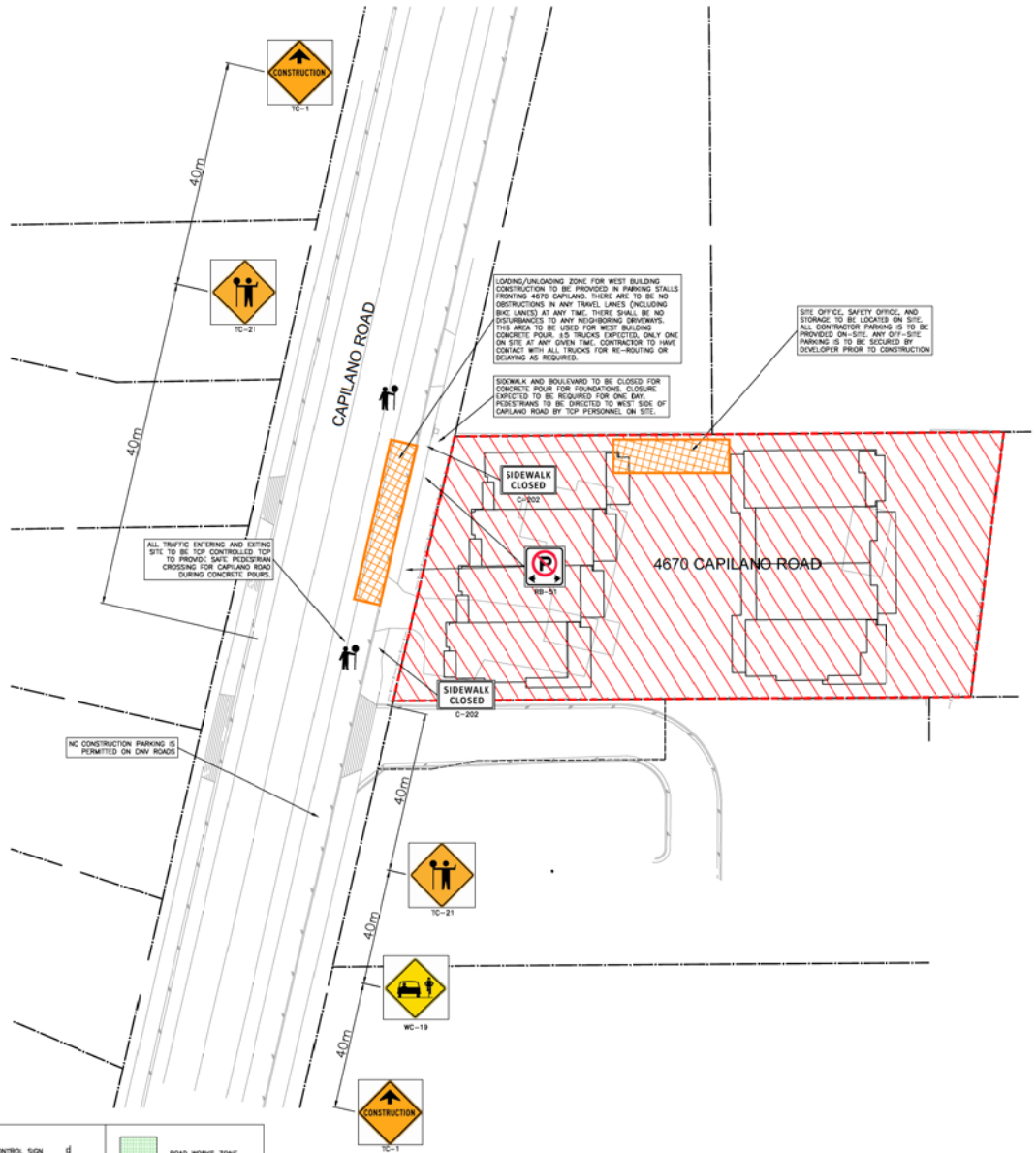
client
WEDGEWOOD CAPILANO HOMES LTD.

project
4670 CAPILANO ROAD
DIST NORTH VANCOUVER

title
TRAFFIC MANAGEMENT PLAN
EAST BUILDING

no.	(yr/m/d)	revision	chk'd

engineer of record: FMC	scales: hor: 1:250 vert: 1:V
designed by: CWB	DNV file no.
drawn by: CWB	file no. 17221
date: 2017-06-30	drawing no. TMP-E BLDG



CONSTRUCTION SITE ENTRANCE

FENCED CONSTRUCTION AREA

AREA DESIGNATED AS NOTED ON PLAN

TRAFFIC CONTROL SIGN

TRAFFIC CONTROL SIGN (SHORT DURATION)

DELINEATOR

DELINEATOR (SHORT DURATION)

TRAFFIC CONTROL PERSON

ROAD WORKS ZONE

ROAD WORKS ZONE (SHORT DURATION)

ROAD WORKS ZONE (NIGHT WORK 7pm-6am DNV PERMIT REQUIRED)

TYPE OF CONSTRUCTION: WEST BUILDING CONSTRUCTION
WORK TO BE COMPLETED: TBD
DAYS OF WORK: MONDAY TO FRIDAY 9AM TO 3PM
SATURDAY 9AM TO 5PM

NOT FOR CONSTRUCTION

CREUS Engineering

Civil Engineers & Project Managers

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SS)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

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client
WEDGEWOOD CAPILANO HOMES LTD.

project
4670 CAPILANO ROAD
DIST NORTH VANCOUVER

title
TRAFFIC MANAGEMENT PLAN
WEST BUILDING

no.	(yr/m/d)	revision	chk'd

engineer of record: FMC	scales: hor: 1:250 vert: 1:V
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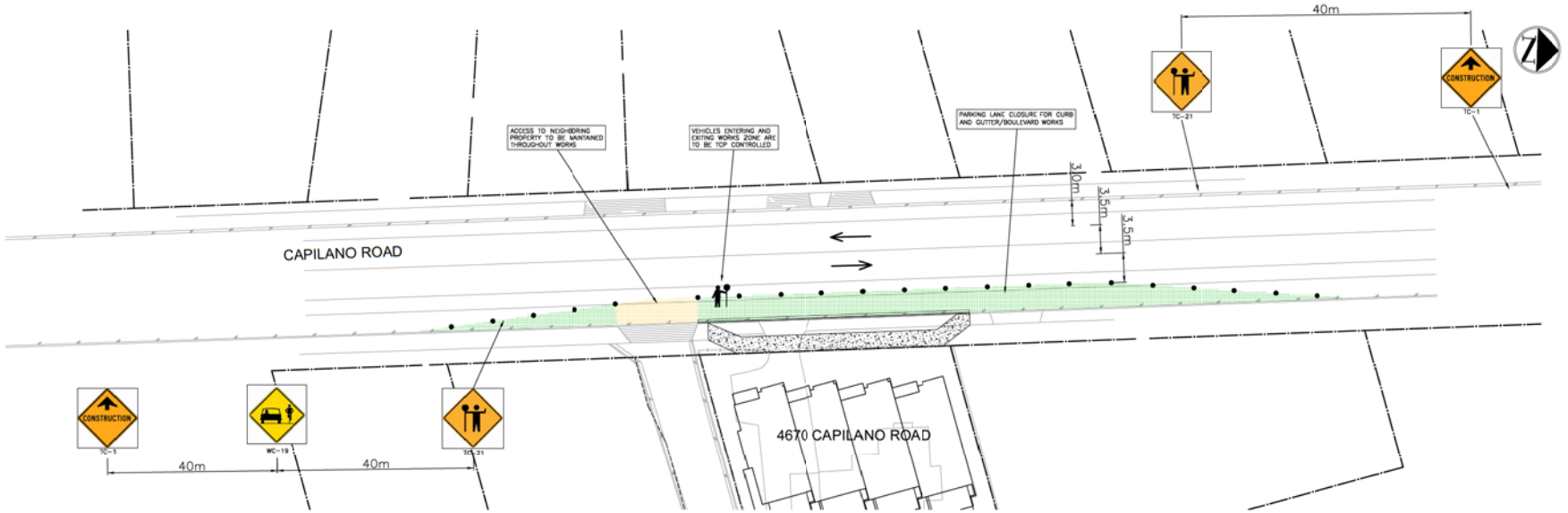
drawn by: CWB	file no. 17221
date: 2017-09-30	drawing no. TMP-W BLDG



CONSTRUCTION CONTACT INFO

CONTRACTOR:	604-418-9592
PROJECT ENGINEER:	604-987-9070
DISTRICT OF NORTH VANCOUVER	604-990-2311
AMBULANCE	911
FIRE	911
POLICE	911
BC HYDRO	1-888-769-3766
FORTIS BC	1-800-663-9911

SYMBOL LEGEND

TRAFFIC CONTROL SIGN

TRAFFIC CONTROL SIGN (SHORT DURATION)

DELINEATOR

DELINEATOR (SHORT DURATION)

TRAFFIC CONTROL PERSON

WORKS ZONE (7am-6pm)

WORKS ZONE (SHORT DURATION)

WORKS ZONE (NIGHT WORK 7pm-6am DNV PERMIT REQUIRED)

TYPE OF CONSTRUCTION: CURB AND GUTTER
WORK TO BE COMPLETED: TBD
DAYS REQ'D: 5
DAYS OF WORK: MONDAY TO FRIDAY 9AM TO 3PM
SATURDAY 9AM TO 5PM

NOT FOR CONSTRUCTION

CREUS Engineering
Civil Engineers & Project Managers
#410 EAST TOWER - 221 ESPLANADE WEST, NORTH VANCOUVER BC, V7M3J3
PH: 604-987-9070 WEBSITE: www.creus.ca

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

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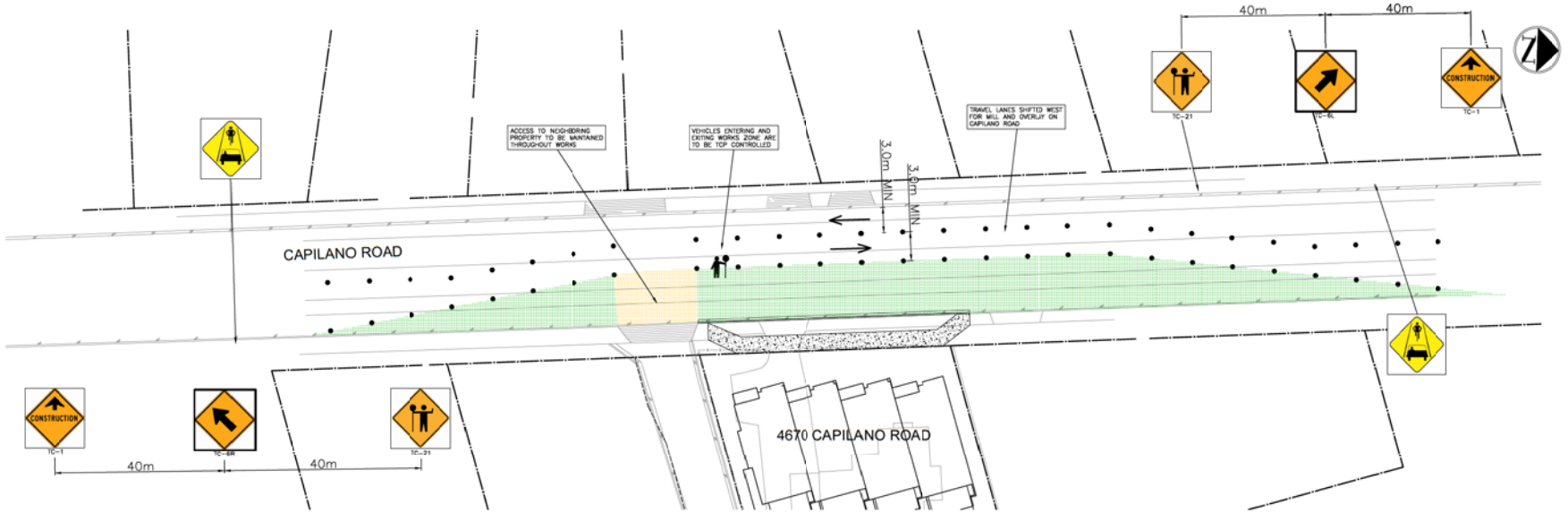
client
WEDGEWOOD CAPILANO HOMES LTD.

project
4670 CAPILANO ROAD
DIST NORTH VANCOUVER

title
TRAFFIC MANAGEMENT PLAN
OFFSITE CIVIL

no.	(y/m/d)	revision	chk'd

engineer of record: FMC	scales: hor: 1:250 vert: 1:V
designed by: CWB	DNV file no.
drawn by: CWB	file no. 17221
date: 2017-06-30	drawing no. TMP-C1



SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

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client
WEDGEWOOD CAPILANO HOMES LTD.

project
4670 CAPILANO ROAD
DIST NORTH VANCOUVER

title
TRAFFIC MANAGEMENT PLAN
OFFSITE CIVIL

no.	(y/m/d)	revision	chk'd

engineer of record	FMC
designed by	CWB
drawn by	CWB
date	2017-06-30
scales	hor. 1:250 vert. 1:V
DNV file no.	
file no.	17221
drawing no.	TMP-C2

CONSTRUCTION CONTACT INFO

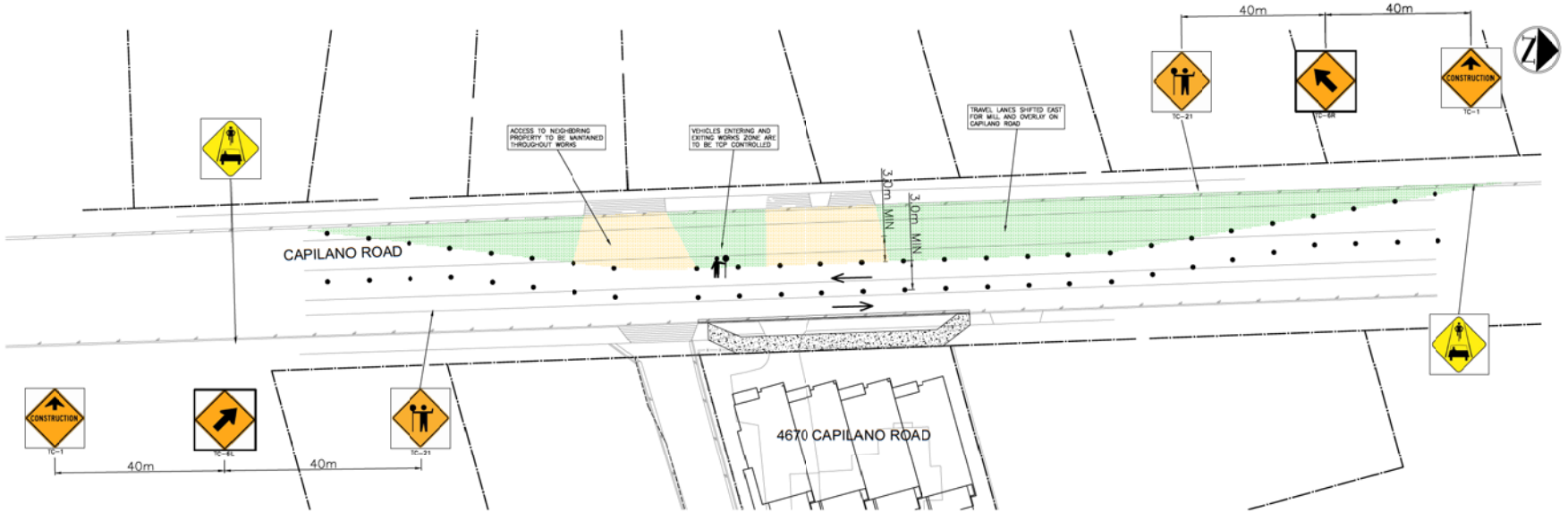
CONTRACTOR:	604-418-9592
PROJECT ENGINEER:	604-987-9070
DISTRICT OF NORTH VANCOUVER	604-990-2311
AMBULANCE	911
FIRE	911
POLICE	911
BC HYDRO	1-888-769-3766
FORTIS BC	1-800-663-9911

SYMBOL LEGEND

- TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL SIGN (SHORT DURATION)
- DELINEATOR
- DELINEATOR (SHORT DURATION)
- TRAFFIC CONTROL PERSON
- WORKS ZONE (7am-6pm)
- WORKS ZONE (SHORT DURATION)
- WORKS ZONE (NIGHT WORK 7pm-6am DNV PERMIT REQUIRED)

TYPE OF CONSTRUCTION: CURB AND GUTTER
WORK TO BE COMPLETED: TBD
DAYS REQ'D: 5
DAYS OF WORK: MONDAY TO FRIDAY 9AM TO 3PM
SATURDAY 9AM TO 5PM

NOT FOR CONSTRUCTION



CREUS Engineering

Civil Engineers & Project Managers

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

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client
WEDGEWOOD CAPILANO HOMES LTD.

project
4670 CAPILANO ROAD
DIST NORTH VANCOUVER

title
TRAFFIC MANAGEMENT PLAN
OFFSITE CIVIL

no.	(y/m/d)	revision	chk'd

engineer of record: FMC	scales: hor: 1:250 vert: 1:V
designed by: CWB	DNV file no.
drawn by: CWB	file no. 17221
date: 2017-06-30	drawing no. TMP-C3

CONSTRUCTION CONTACT INFO

CONTRACTOR:	604-418-9592
PROJECT ENGINEER:	604-987-9070
DISTRICT OF NORTH VANCOUVER	604-990-2311
AMBULANCE	911
FIRE	911
POLICE	911
BC HYDRO	1-888-769-3766
FORTIS BC	1-800-663-9911

SYMBOL LEGEND

TRAFFIC CONTROL SIGN

TRAFFIC CONTROL SIGN (SHORT DURATION)

DELINEATOR

DELINEATOR (SHORT DURATION)

TRAFFIC CONTROL PERSON

WORKS ZONE (7am-6pm)

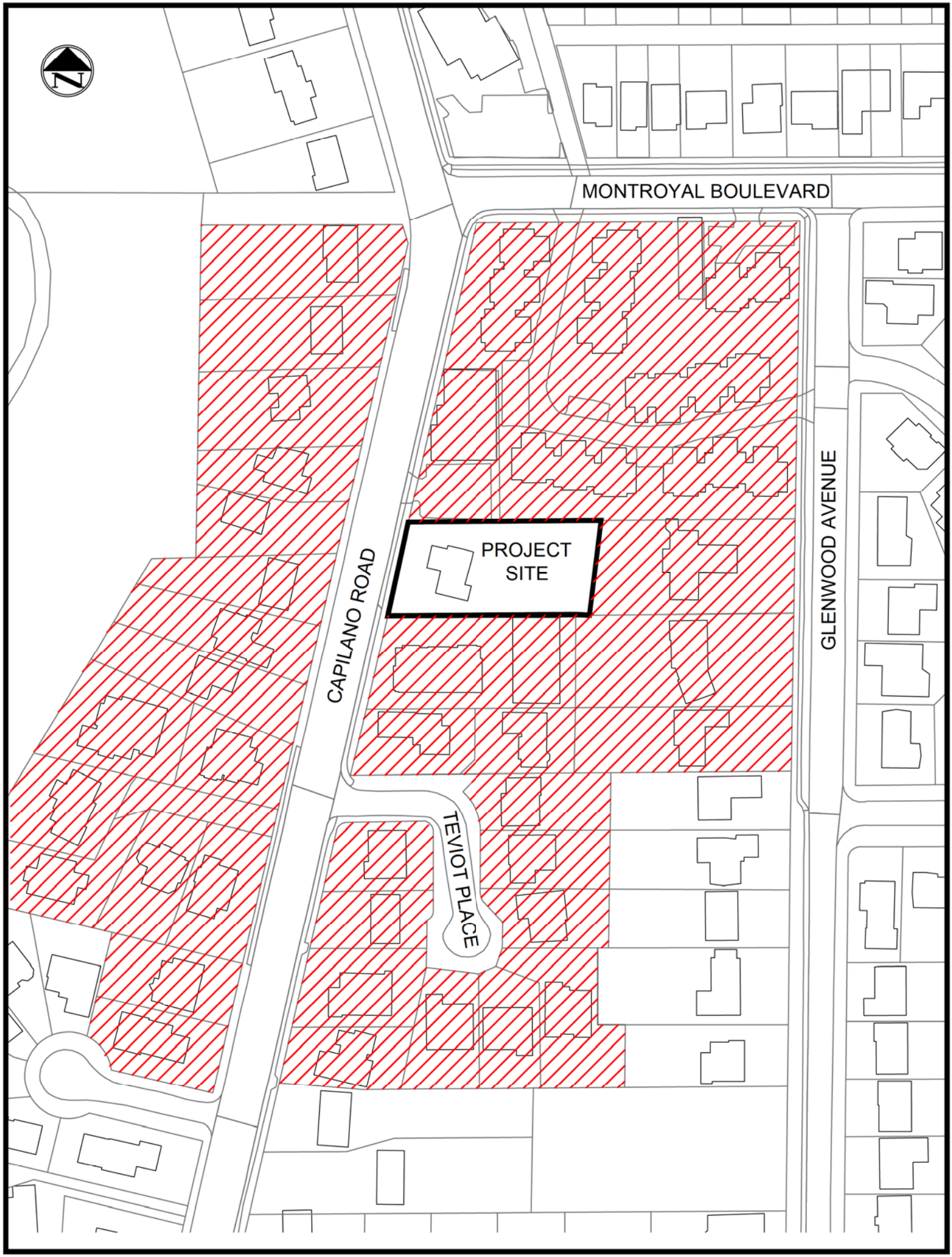
WORKS ZONE (SHORT DURATION)

WORKS ZONE (NIGHT WORK 7pm-6am DNV PERMIT REQUIRED)

TYPE OF CONSTRUCTION: CURB AND GUTTER
WORK TO BE COMPLETED: TBD
DAYS REQ'D: 5
DAYS OF WORK: MONDAY TO FRIDAY 9AM TO 3PM
SATURDAY 9AM TO 5PM

NOT FOR CONSTRUCTION

APPENDIX D: NOTIFICATIONS


N
MONTROYAL BOULEVARD
PROJECT SITE
CAPILANO ROAD
GLENWOOD AVENUE
TEVIOT PLACE

SAMPLE NOTICE TO RESIDENTS AND BUSINESS OPERATORS

Temporary Street Closure/Building Zone
Location
Time and Dates

Date

Dear Residents and Business Operators:

We are writing to notify you that …

This is necessary to install/repair the <underground utilities, road, sidewalk, landscaping, lighting etc.> adjacent to the <Address>.

The closure will be required during week day business hours from <> to <>.

During construction there will be traffic diversions, parking restrictions and lane closures. The actual work site will be kept as compact and tidy as reasonably possible. The workers will cooperate with the businesses to try and minimize the impact the work will have on day-to-day business operations.

We apologize for any inconvenience the work may cause and thank you for your understanding and cooperation. Please contact the undersigned at
<> or by e-mail at <> if you would like to discuss this matter in further detail.

Please also refer to project web site at < > for on-going construction updates.

Yours truly,

<Applicant>

cc: North Shore Chamber of Commerce
RCMP
District of North Vancouver Fire Services
District Operations Centre
District Hall – Transportation Department
Coast Mountain Bus Company

Schedule A

Project Summary Sheet:

Building site address	4670 CAPILANO ROAD	
# of storeys below grade	Ø	
# of storeys above grade	3	
Type of construction (i.e. concrete/woodframe)	WOODFRAME	
Total number of months to complete	12-14	
Contractor	LDJ CONTRACTING LTD.	
Project Manager	Name	COLIN JONES
	E-mail	COLIN@LDJCONTRACTING.COM
	Phone	604-418-9592
On-site contact	Name:	COLIN JONES
	Cell	604-418-9592
	E-mail	COLIN@LDJCONTRACTING.COM

Site Generated Traffic

Phase	Dates/ Duration in months		# of Trucks/ day	# of Workers	# of off-street parking stalls
Demolition	1/2		2	4	2
Excavation	1/4	m^3 removed: 500	6 (x5 LOADS)	4	2
Foundation/ Parkade	1 1/2	m^3 concrete: 150	2 AVG	6	2
Above Grade	4	m^3 concrete: Ø	1 AVG	6 AVG	4
Finishes	6		1 AVG	8 AVG	6
Landscape	1		3 AVG	4 AVG	2
Off-site Civil	1		3 AVG	6 AVG	3

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Revisions

Issued for Rezoning & Development Permit
August 9, 2017

Re-Issued for Rezoning & Development Permit
February 26, 2018

4670 Capilano
North Vancouver, BC

Client
Wedgewood
Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

February 26, 2018

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CONTENTS

DESIGN TEAM

Developer	**Wedgewood Ventures Limited**
Architects	**Raymond Letkeman Architects Inc.**
Landscape	**ETA Landscape Architecture**
Civil	**Creus Engineering Ltd.**

Client
Wedgewood
Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Index

February 26, 2018

A-0.01

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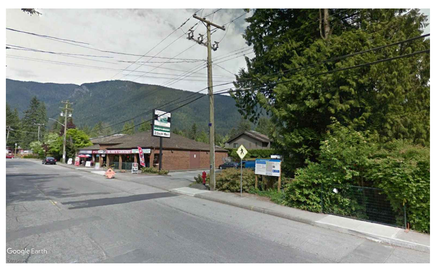
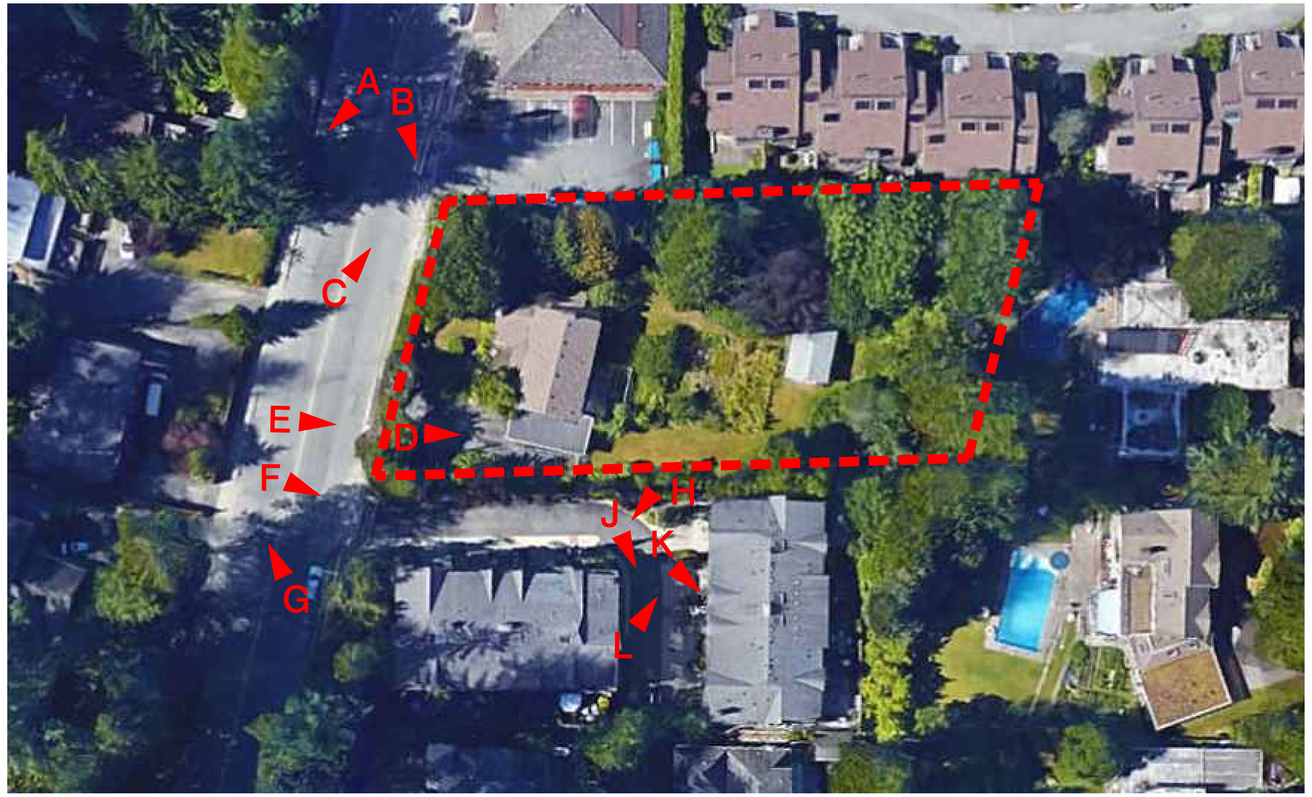
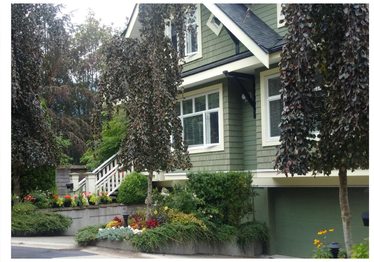
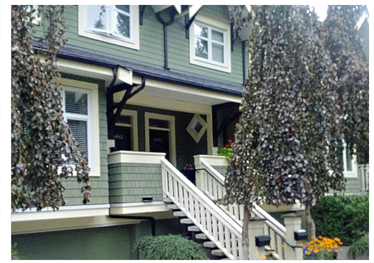
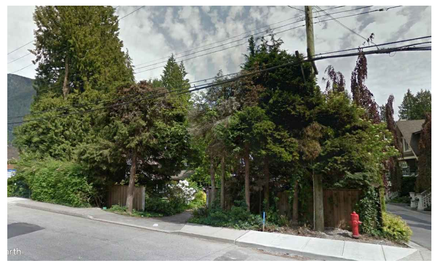










Client

Wedgewood
Ventures Ltd.

Project

4670 Capilano

4670 Capilano Road
North Vancouver, BC

Context Plan

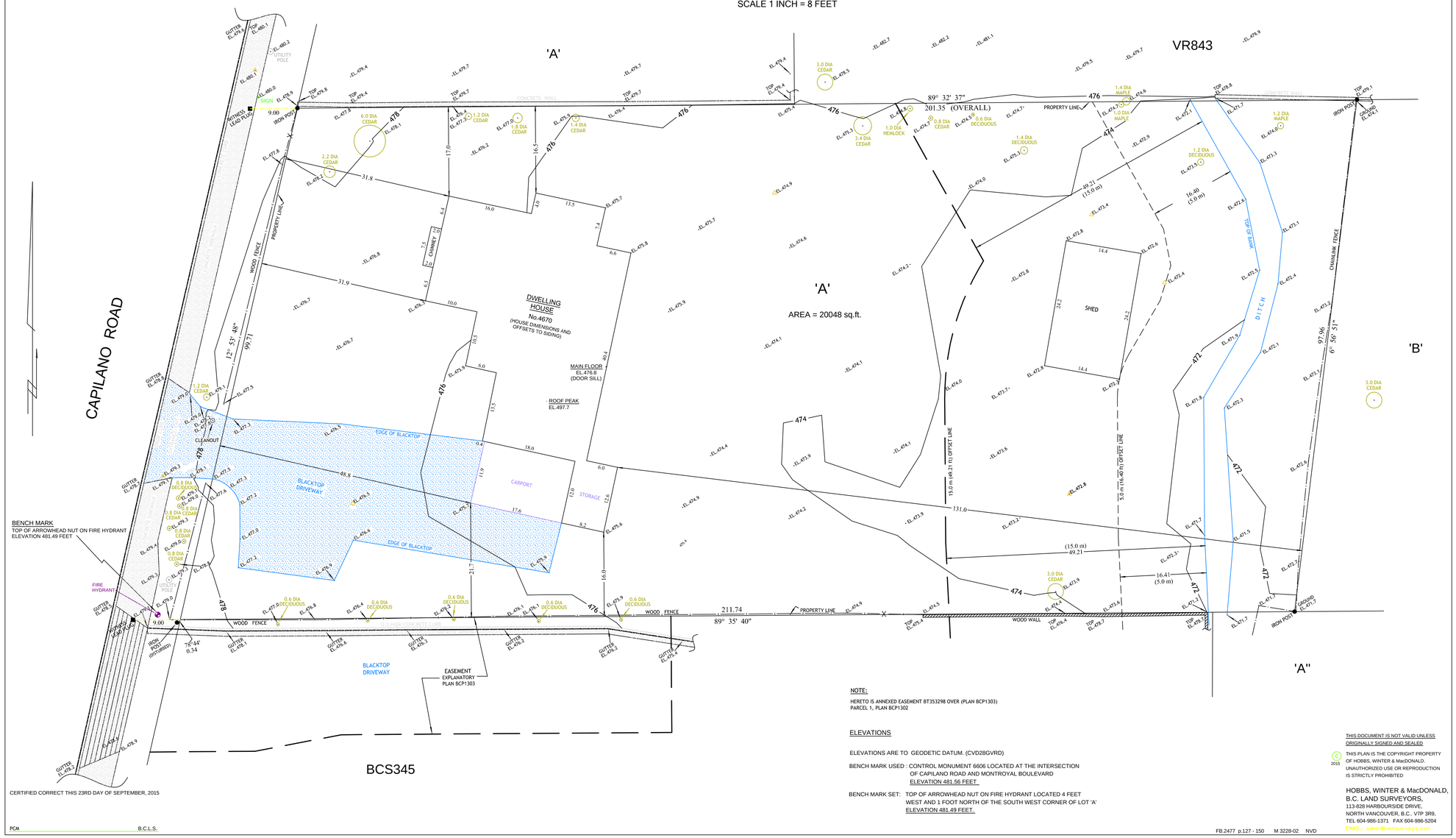
NTS
February 26, 2018

A-1.00

TOPOGRAPHIC SURVEY PLAN OF LOT 'A OF LOT 3, BLOCK 'D', DISTRICT LOT 595, PLAN 9296

P.I.D. 009-699-953

SCALE 1 INCH = 8 FEET



CERTIFIED CORRECT THIS 23RD DAY OF SEPTEMBER, 2015

PCM B.C.L.S.

NOTE:

HERETO IS ANNEXED EASEMENT BT353298 OVER (PLAN BCP1303)
PARCEL 1, PLAN BCP1302

ELEVATIONS

ELEVATIONS ARE TO GEODETIC DATUM. (CVD28GVRD)

BENCH MARK USED : CONTROL MONUMENT 6606 LOCATED AT THE INTERSECTION OF CAPILANO ROAD AND MONTROYAL BOULEVARD
ELEVATION 481.56 FEET

BENCH MARK SET: TOP OF ARROWHEAD NUT ON FIRE HYDRANT LOCATED 4 FEET WEST AND 1 FOOT NORTH OF THE SOUTH WEST CORNER OF LOT 'A'
ELEVATION 481.49 FEET.

FB.2477 p.127 - 150 M 3228-02 NVD

THIS DOCUMENT IS NOT VALID UNLESS ORIGINALLY SIGNED AND SEALED

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NORTH VANCOUVER, B.C., V7P 3R9,
TEL 604-986-1371 FAX 604-986-5204
EMAIL: admin@hwlandsurveys.com

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Project

4670 Capilano

4670 Capilano Road
North Vancouver, BC

Survey Plan

1" = 10'-0"
February 26, 2018

0 5 10 15 20 30 ft

A-1.01

Design Rationale

DEVELOPMENT PROCESS

The OCP has designated this site as Residential Level 3: Attached Residential for a residential development as proposed.

This application is for a Detailed Development submission that will entail a Rezoning and Development Permit Application.

Our response to the Preliminary Summary Letter received from the District, April 24, 2017, Schedule B “Guidelines for Multi-Family Housing” and Schedule C “Guidelines for Ground Oriented Housing, are also attached to this submission.

DEVELOPMENT CONCEPT

The proposed residential development will include 8 ground oriented townhomes constructed in two buildings.

The homes will range in size from 1,769 to 2,287 SF having 3 bedrooms plus a den on the main living floor level.

Each home will have their own double car garage and patio space at grade in addition to their second living level terrace.

To respect the site grades, these homes will have access from a central access road to form small neighbourhood cluster next to the adjacent existing townhome cluster.

Access to this site from Capilano Road will be via the existing shared driveway with the existing townhomes to the south.

SITE COMPOSITION

Street fronting homes on Capilano Road include individual entrances and front yards defined with entry markers providing direct access to the adjoining public sidewalk.

The easterly homes will have their individual access located from the shared commons area while their ground level terraces are located to the rear of each home.

Each townhome has a defined individual expression by the stepping of each home fronting Capilano Road and with exterior design elements, ie: projecting window bay forms, varied wall materials, roof forms etc.

DEVELOPMENT CHARACTER

The design expression for these homes follows a contemporary inspired architecture for this North Shore location.

Well defined exterior building articulation includes low-pitch roof profiles with overhanging eaves.

Expansive glazing is proposed to maximize solar access to the townhome interiors.

Hardi siding with a mix of lap siding and panel product, located at key visual locations, is proposed.

A west coast color palette with a darker colors has been selected to contrast with the trim accent color. This color palette will complement the color palette of the existing adjacent townhome development to the south.

The building architecture, while complementing the adjacent craftsman style townhomes, will recognize a more contemporary expression of architecture.

The existing trees next to the shared driveway will be retained.

STORM WATER STRATEGY

Stormwater management for the development at 4670 Capilano Road has been designed to infiltrate the MAR storm using a re-purposed ditch as an on-site bioswale. This limits the size of the required infiltration gallery and additional excavation volumes from its installation. All drive surfaces are to utilize permeable pavers as an additional method of stormwater infiltration. All disconnected hardscape areas will be graded to adjacent landscaping.

The project is also following best practices for erosion and sediment control during construction. The contractor will be required to install silt sacs on all nearby catchbasins, a sediment pond for any overland flow, and a vehicle access pad to prevent tracking of soils onto public roads.

The storm water strategy will exfiltrate 100% of the onsite storm runoff.

West building floor elevation has been established based on the efficiency of the site drainage as per civil engineer design.

LANDSCAPE DESIGN

The overall design strategy for this project provides a unifying landscape ground plane that is contemporary, sustainable, and expressive of the unique characteristics of the individual homes.

Homes fronting onto Capilano Road have individual entries with a varied landscape palate to create a sense of individuality. Hard landscape elements here and throughout the project will have a character sympathetic to the contemporary architectural character. The shared entry drive will be enhanced with additional trees and shrub plantings to create a sympathetic landscape character with the adjacent property to the south. The central auto court is unified by a single permeable paving material broken up by perpendicular bands to reduce the scale of the space. The east landscape area has been designed to balance private yard areas and a bio filtration landscape area consisting of native plantings.

Development Statistics

4670 Capilano Road, North Vancouver, BC

Site Area:			20,048 sf	1,862 sm
Permitted FSR:		0.80	16,038 sf	1,490 sm
Proposed FSR with exclusion:		0.80	15,951 sf	1,482 sm
Proposed FSR without exclusion:		0.86	17,285 sf	1,606 sm
Proposed building coverage:	**West Bldg.**	0.23	4,540 sf	422 sm
(Inclu. decks & bldg. overhang)	**East Bldg**	0.24	4,813 sf	447 sm
	Total	**0.47**	**9,353** sf	**869** sm

Townhome Summary:

Type	No. of units	Garage	Lower Flr.		Main Flr.	Upper Flr.	Unit Area	Total unit area
Unit A	2	438 sf	440 sf	(Exclu.)	887 sf	867 sf	1,754 sf	3,508 sf
Unit A1	1	449 sf	458 sf	(Exclu.)	918 sf	897 sf	1,815 sf	1,815 sf
Unit A2	1	441 sf	436 sf	(Exclu.)	895 sf	874 sf	1,769 sf	1,769 sf
Unit B	2	422 sf	474 sf		870 sf	850 sf	2,194 sf	4,388 sf
Unit B1	1	426 sf	477 sf		902 sf	881 sf	2,260 sf	2,260 sf
Unit B2	1	426 sf	477 sf		877 sf	857 sf	2,211 sf	2,211 sf
	8 units					**Total area with exclusion**		**15,951** sf
						Total area without exclusion		**17,285** sf

Existing Average Grade For The West Building :		
NW Corner	478.13 ft	
NE Corner	476.00 ft	
SE Corner	476.00 ft	
SW Corner	477.20 ft	
	1,907.33 ft	
Existing average grade for the west building	**476.83** ft	

Proposed Building Height:		
West Building	**33.42** ft	**El. 510.25'** (from the existing average grade El. 476.83')
East Building	**35.25** ft	**El. 508.18'** (from the lower floor El. 472.93')

Provided Parking:		
2 Cars per unit	16 cars	
Driveway parking	11 cars	
Total parking	**27 cars**	

Provided Visitor Parking: **1** car

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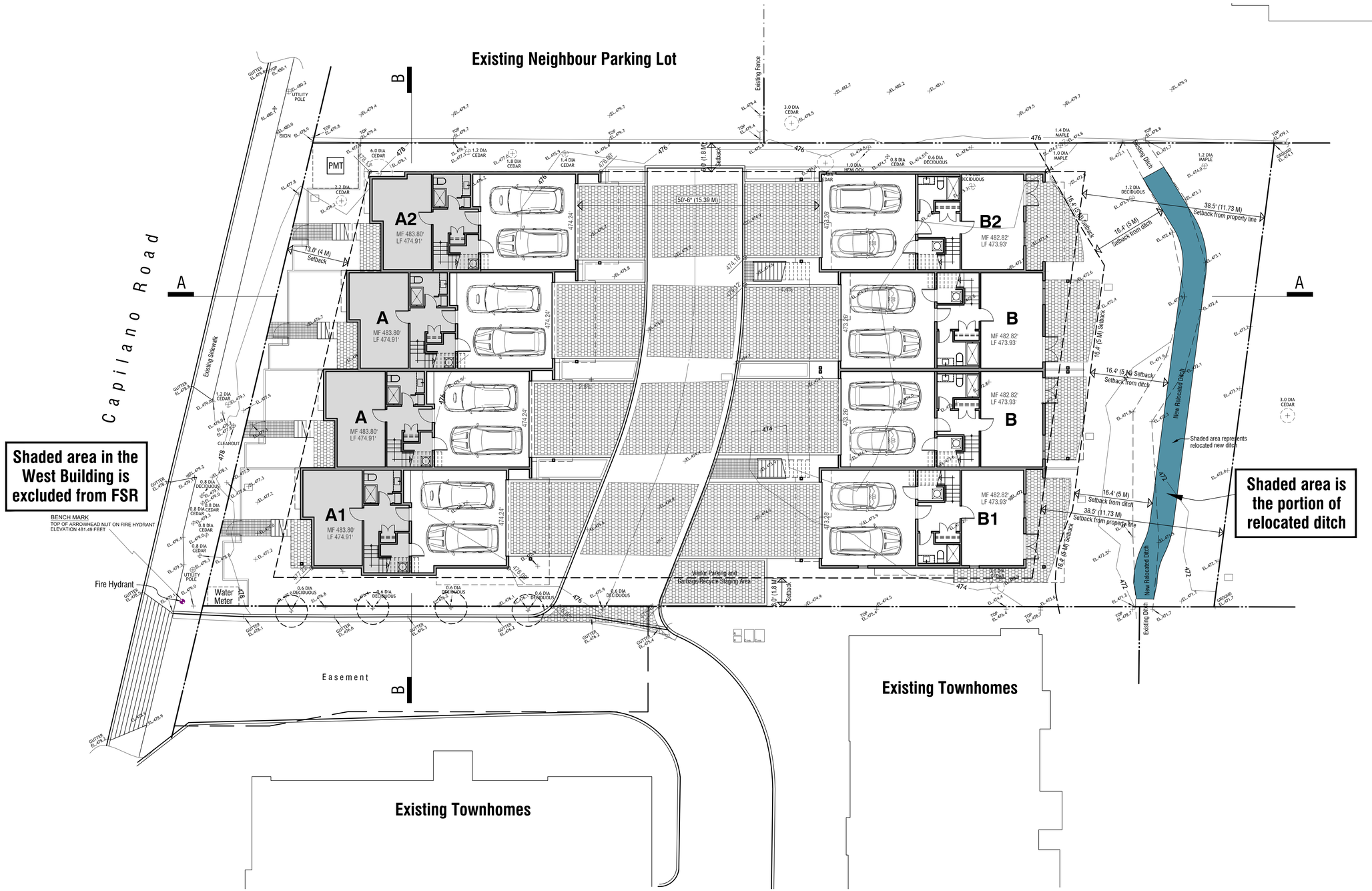
Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Design Rationale & Development Statistics

N.T.S.
February 26, 2018

A-1.02



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Client
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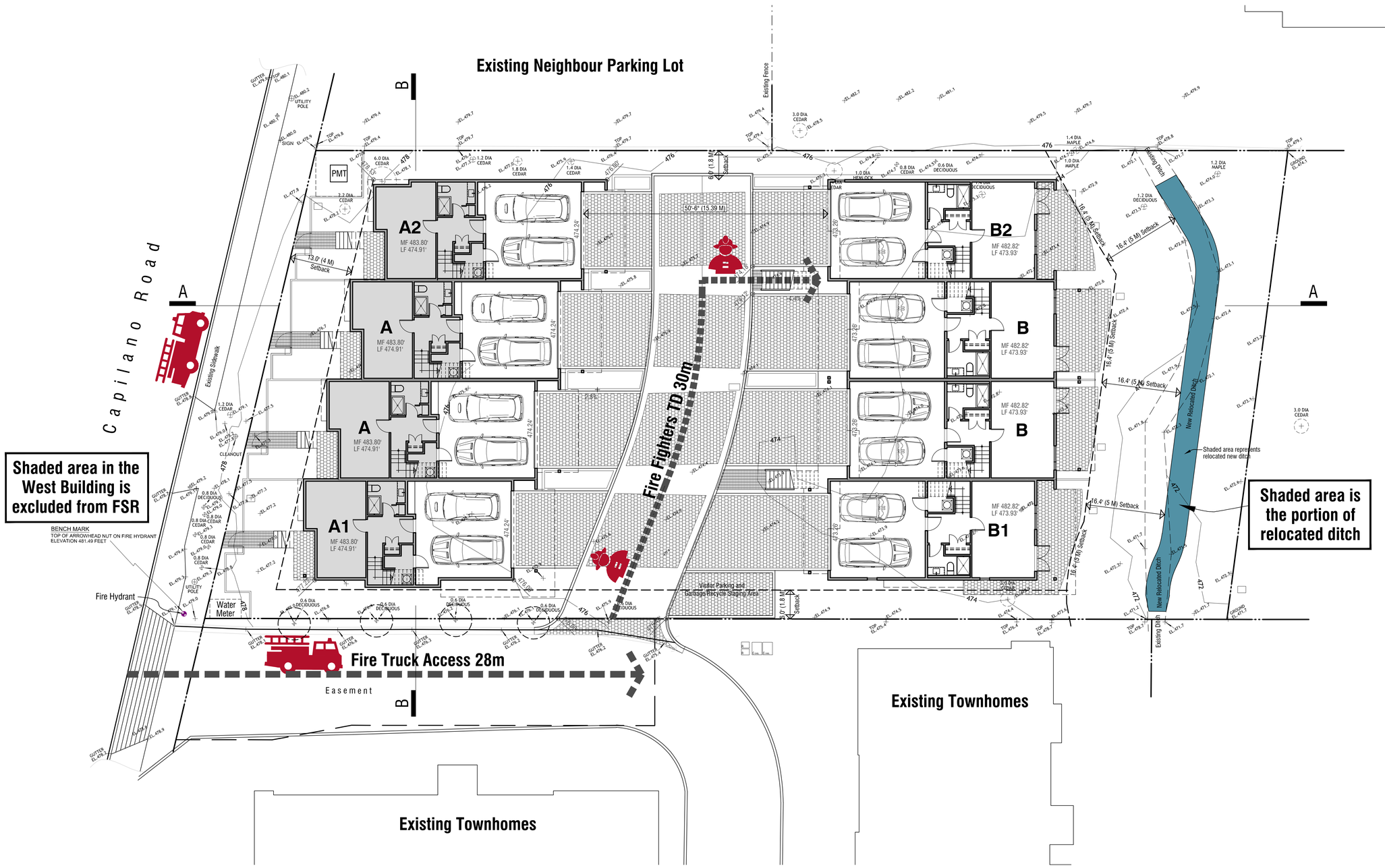
Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Site Plan

1" = 10'-0"
February 26, 2018

0 5 10 15 20 30 ft

A-1.03



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Client
Wedgewood Ventures Ltd.

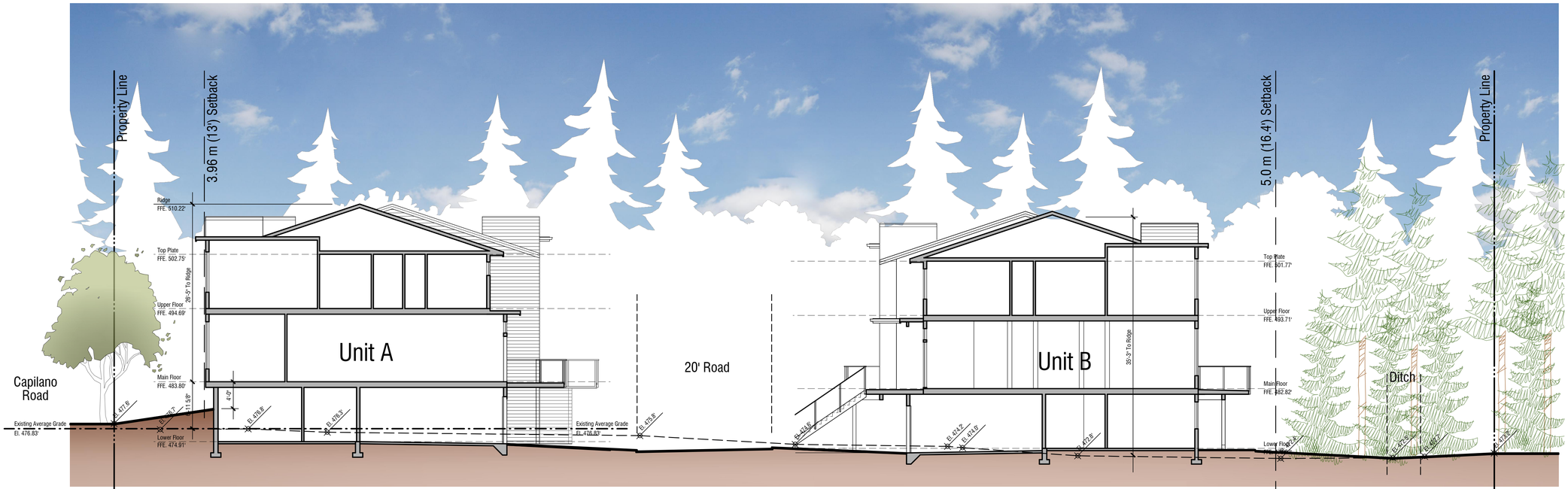
Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Fire Fighting Plan

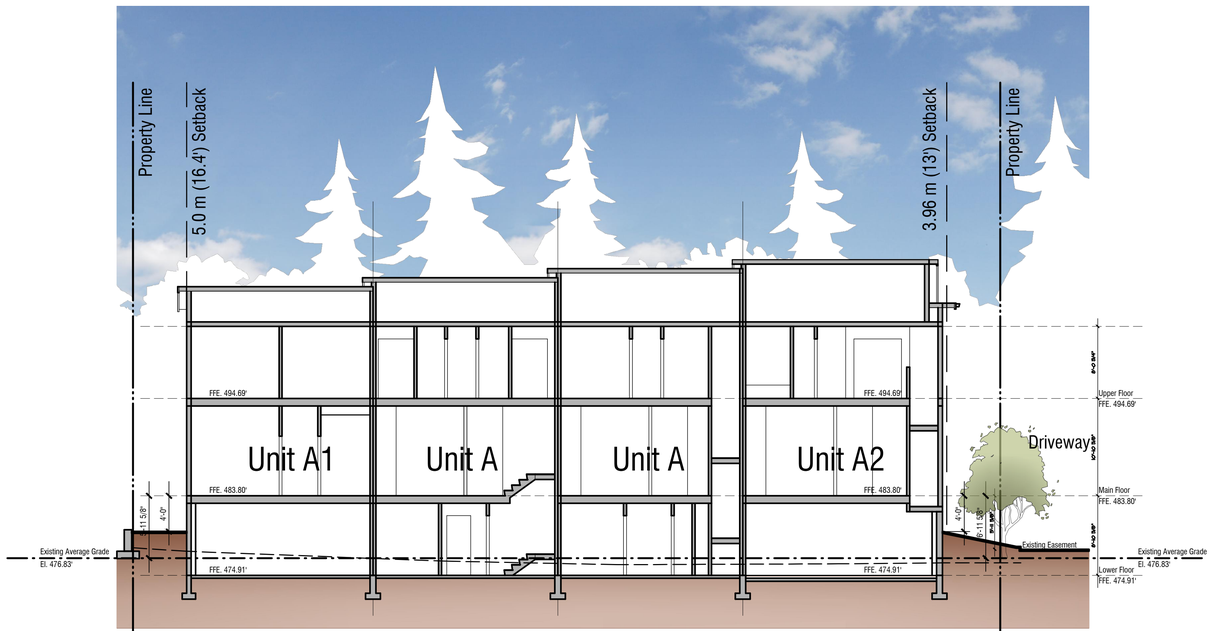
1" = 10'-0"
February 26, 2018

0 5 10 15 20 30 ft

A-1.04



Site Section A



Site Section B

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Project
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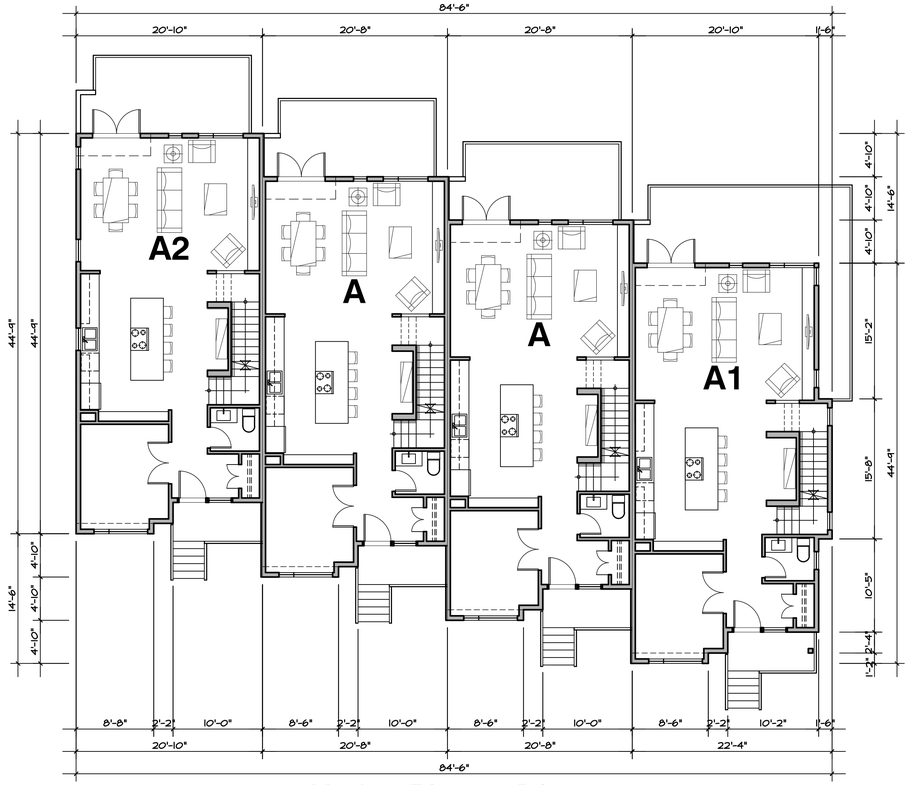
4670 Capilano Road
North Vancouver, BC

Site Section A-A & B-B

1/8" = 1'-0"
February 26, 2018

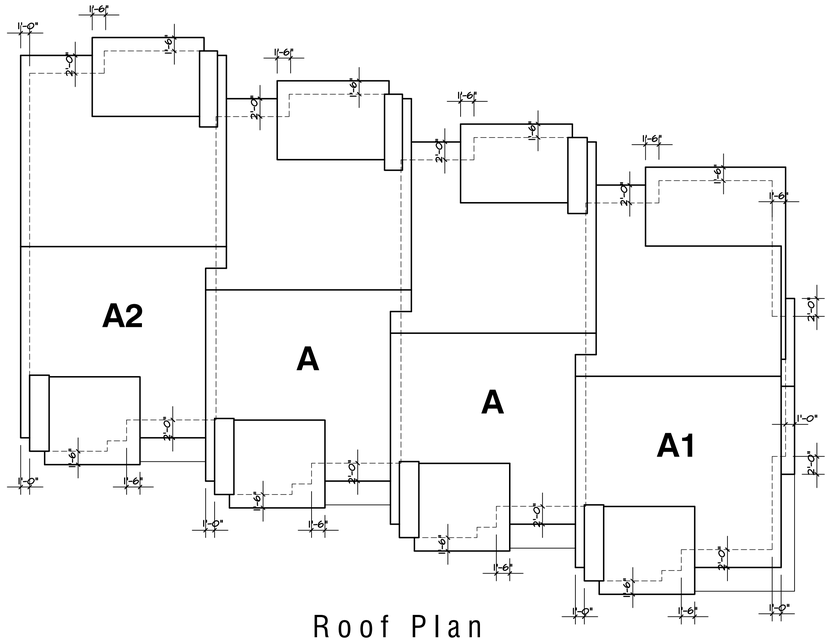
0 4 8 12 16 20 FT

A-1.05

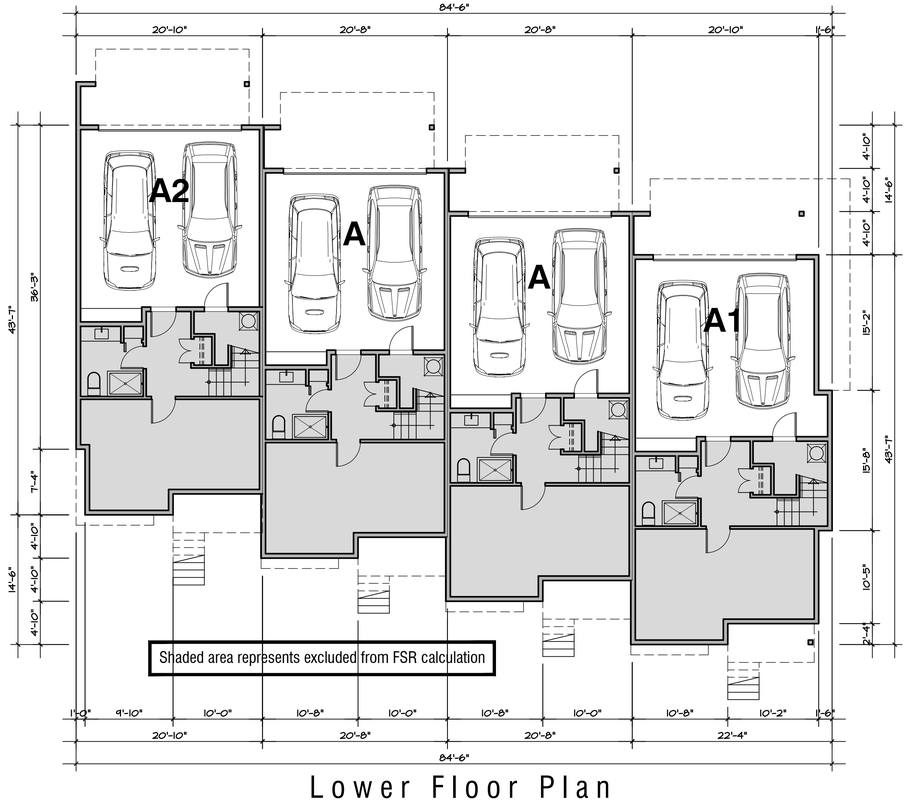


Main Floor Plan

Building Area 3,553 sf

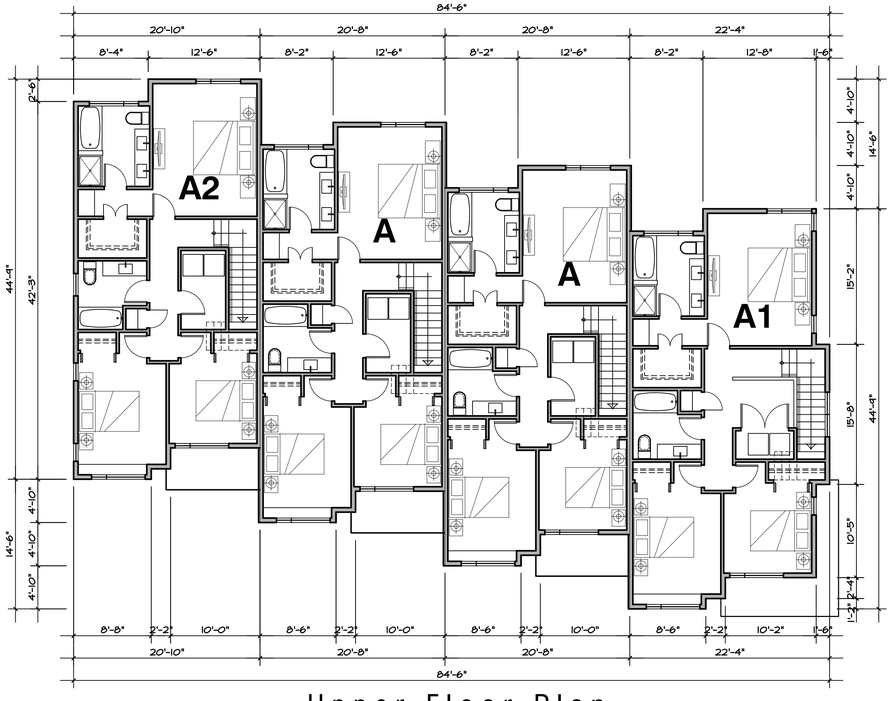


Roof Plan



Lower Floor Plan

Building Area 3,553 sf
Building Coverage 4,540 sf



Upper Floor Plan

Building Area 3,472 sf

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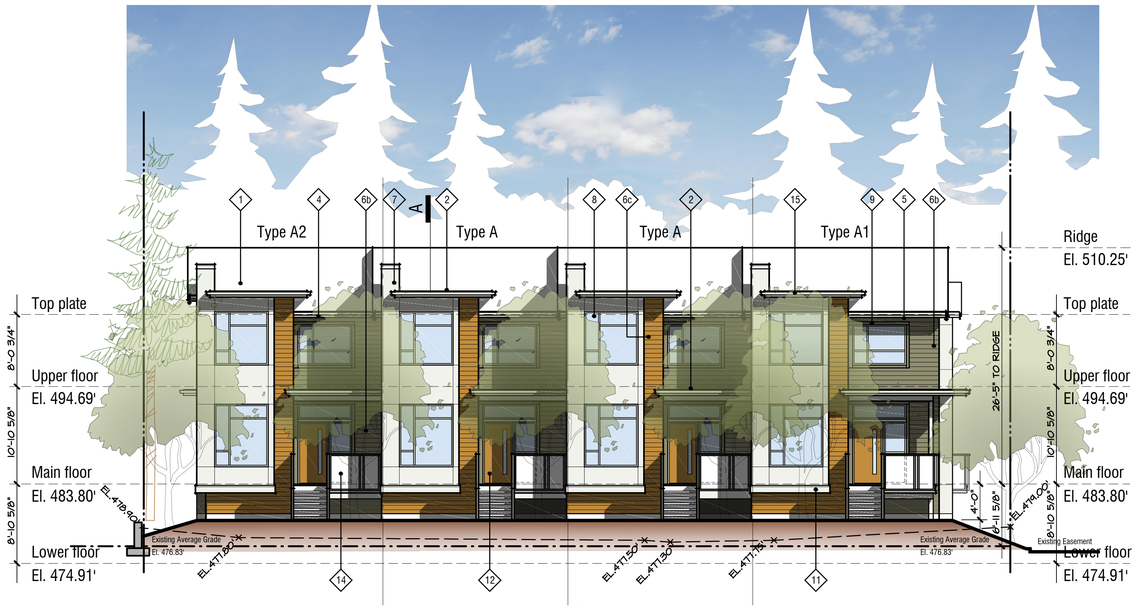
4670 Capilano Road
North Vancouver, BC

Type A - West Building Plans

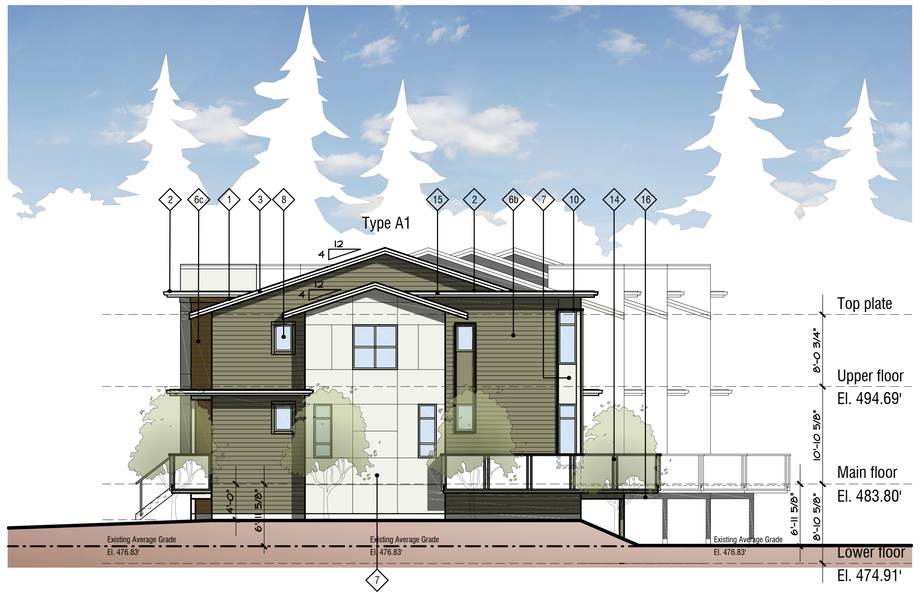
1/8" = 1'-0"
February 26, 2018

0 4 8 12 16 20 FT

A-2.00

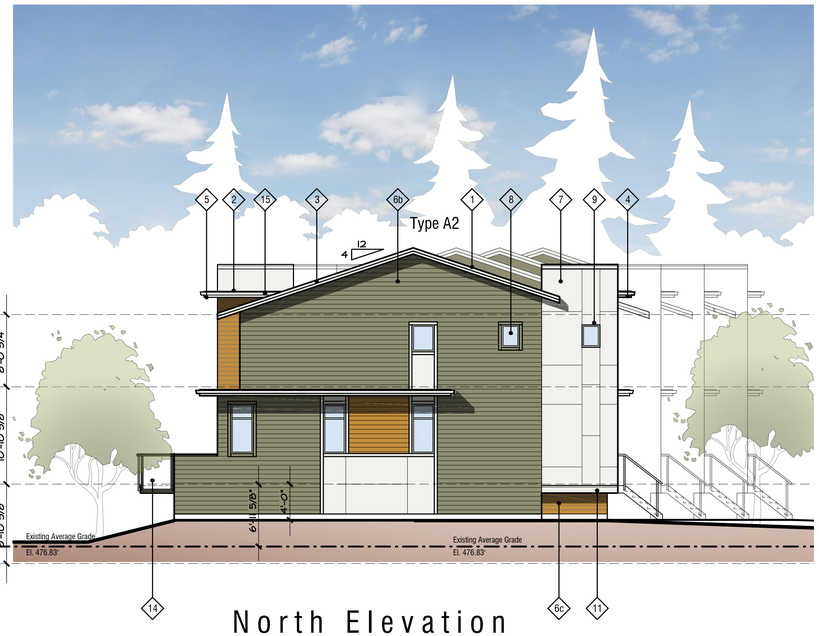


West Elevation (Capilano Road)



South Elevation

East Elevation



North Elevation

Exterior Finish Legend

1	Pitch Roof	Asphalt roof shingles Pabco Premier, Pewter Gray	6a	Lap Siding	HardiePlank Lap Siding, smooth, painted Benjamin Moore, HC-77 Alexandria Beige	8	Windows	Vinyl frames, White Windows
2	Low Slope Roof	2 ply SBS roofing membrane	6b	Lap Siding	HardiePlank Lap Siding, smooth, painted Benjamin Moore, HC-110 Wethersfield Moss	9	Trims Windows & Doors	2x4 wood, painted Painted to matching adjacent cladding colour
3	Gable Fascia	2 x 4 on 2 x 10 wood, painted Benjamin Moore, OC-57 Heron White	6c	Lap Siding	HardiePlank Lap Siding, smooth, painted Custom colour to simulate wood cedar	10	Window Shadow Box	1x4 HardieTrim Board, smooth, painted Painted to matching adjacent cladding colour
4	Fascia	2 x 10 wood, painted Benjamin Moore, OC-57 Heron White	7	Panel & Reveal	HardiePanel, smooth, painted, aluminum reveal to match See elevations for colour	11	Belly Band	2x10 wood, painted Benjamin Moore, OC-57 White Heron
5	Soffit	HardieSoffit Perforated, painted Benjamin Moore, OC-57 Heron White				12	Entry Front Doors	Wood veneer fibreglass, painted
						13	Garage Doors	Overhead garage door w/ glazed panels, Painted to matching adjacent cladding colour
						14	Guard Rail	Aluminum rails with inset glazing, Natural anodized rails
						15	Gutter & RWL	Pre-finished aluminum, White
						16	Posts & Beams	Wood, painted Benjamin Moore, OC-57 White Heron

0 4 8 12 16 20 FT

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Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type A - West Building Elevations

1/8" = 1'-0"
February 26, 2018

A-2.01

West Building Front Elevation From Capilano Road

West Building Front Elevation From Capilano Road

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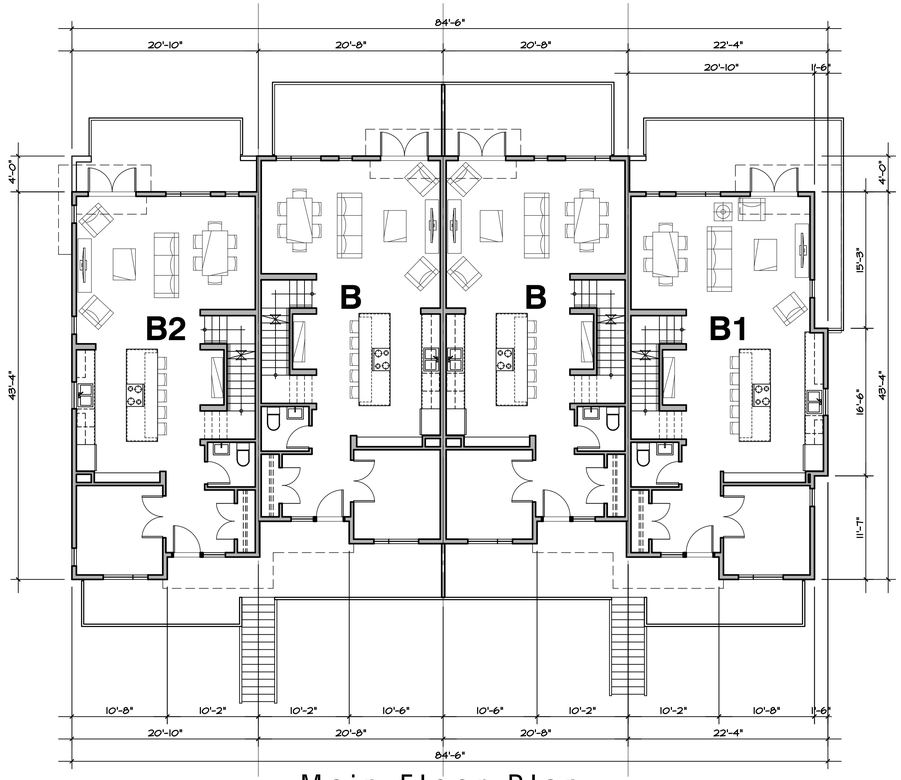
North Vancouver, BC

Type A - West Building
3D Renders

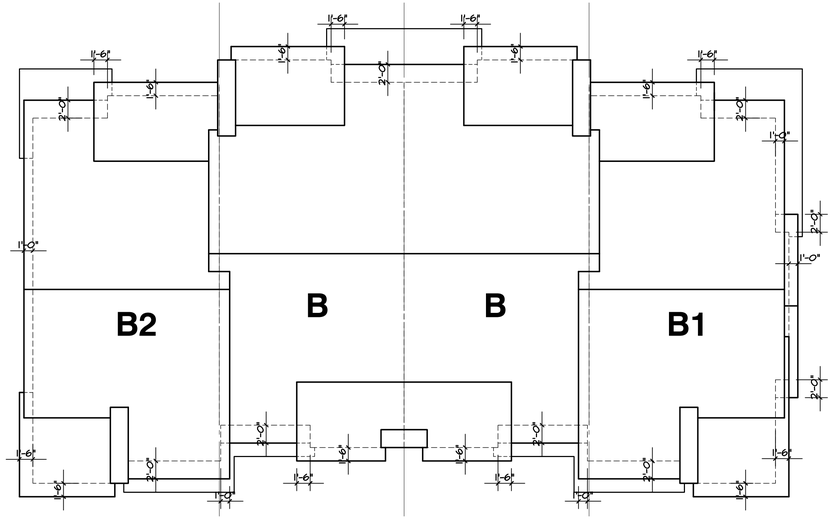
NTS
February 26, 2018

A-2.02

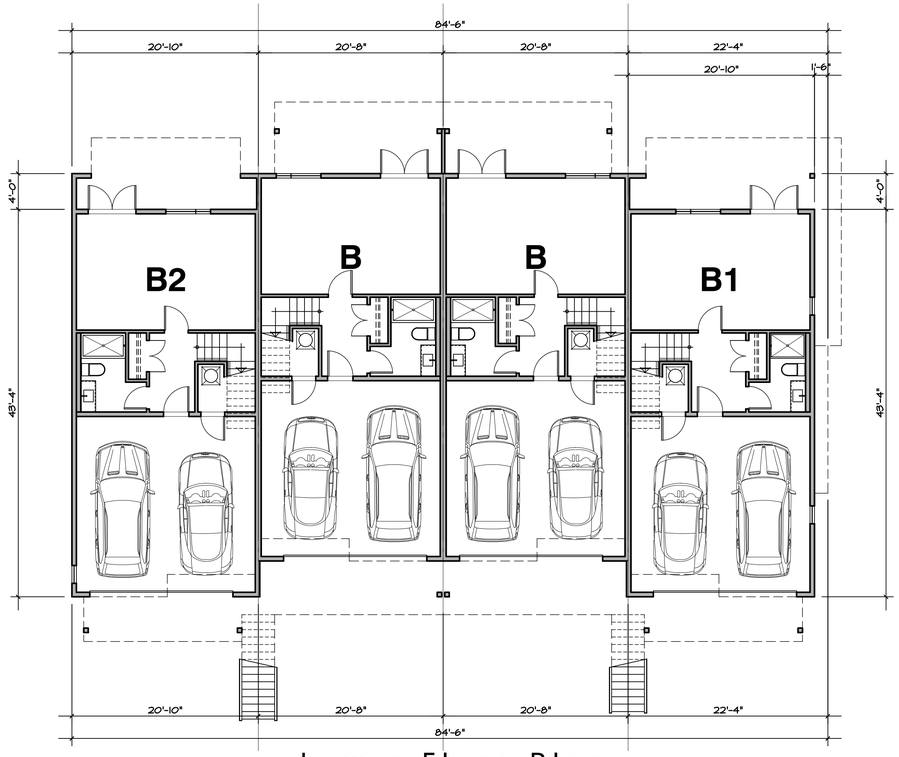


Main Floor Plan

Building Area 3,522 sf



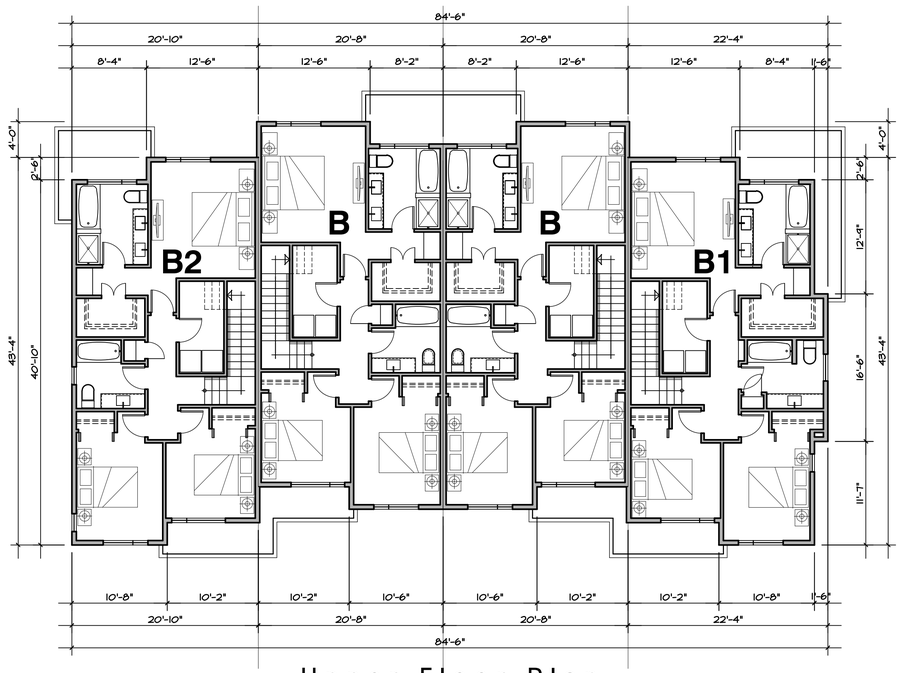
Roof Plan



Lower Floor Plan

Building Area 3,624 sf

Building Coverage 4,813 sf



Upper Floor Plan

Building Area 3,440 sf

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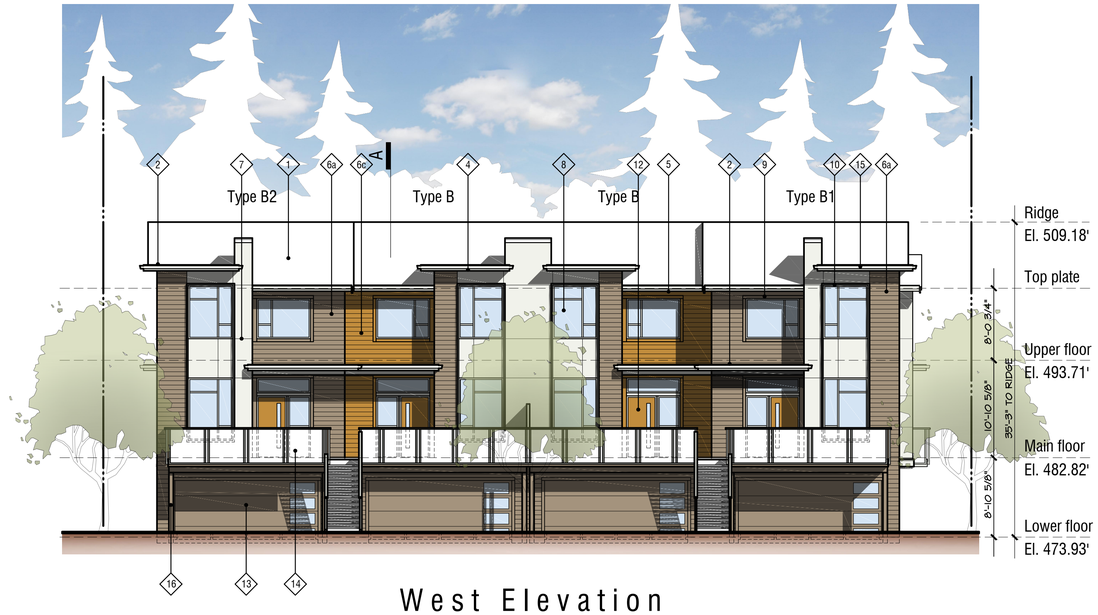
North Vancouver, BC

Type B - East Building Plans

1/8" = 1'-0"
February 26, 2018

0 4 8 12 16 20 FT

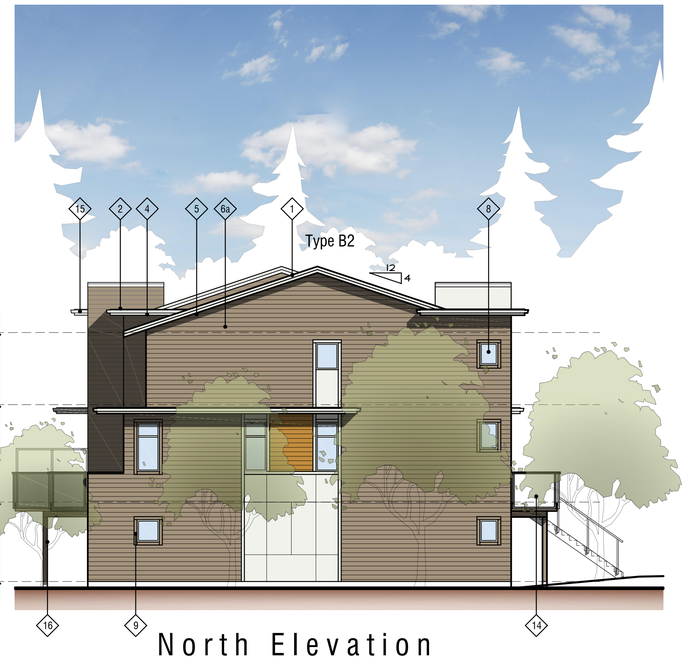
A-3.00



West Elevation

South Elevation

East Elevation



North Elevation

Exterior Finish Legend

1 Pitch Roof	Asphalt roof shingles Pabco Premier, Pewter Gray	6a Lap Siding	HardiePlank Lap Siding, smooth, painted Benjamin Moore, HC-77 Alexandria Beige	8 Windows	Vinyl frames, White Windows	12 Entry Front Doors	Wood veneer fibreglass, painted
2 Low Slope Roof	2 ply SBS roofing membrane	6b Lap Siding	HardiePlank Lap Siding, smooth, painted Benjamin Moore, HC-110 Wethersfield Moss	9 Trims Windows & Doors	2x4 wood, painted Painted to matching adjacent cladding colour	13 Garage Doors	Overhead garage door w/ glazed panels, Painted to matching adjacent cladding colour
3 Gable Fascia	2 x 4 on 2 x 10 wood, painted Benjamin Moore, OC-57 Heron White	6c Lap Siding	HardiePlank Lap Siding, smooth, painted Custom colour to simulate wood cedar	10 Window Shadow Box	1x4 HardieTrim Board, smooth, painted Painted to matching adjacent cladding colour	14 Guard Rail	Aluminum rails with inset glazing, Natural anodized rails
4 Fascia	2 x 10 wood, painted Benjamin Moore, OC-57 Heron White	7 Panel & Reveal	HardiePanel, smooth, painted, aluminum reveal to match See elevations for colour	11 Belly Band	2x10 wood, painted Benjamin Moore, OC-57 White Heron	15 Gutter & RWL	Pre-finished aluminum, White
5 Soffit	HardieSoffit Perforated, painted Benjamin Moore, OC-57 Heron White					16 Posts & Beams	Wood, painted Benjamin Moore, OC-57 White Heron

0 4 8 12 16 20 FT

RAYMOND LETKEMAN
architects inc.
200-970 Homer St. Vancouver B.C. V6B2W7
Tel. 604. 669. 3339 Fax. 604. 669. 5651

Revisions

Issued for Rezoning & Development Permit
August 9, 2017

Re-Issued for Rezoning & Development Permit
February 26, 2018

Client
Wedgewood Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type B - East Building Elevations

1/8" = 1'-0"
February 26, 2018

A-3.01

East Building Front Elevation From Courtyard

East Building Rear Elevation

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Client

Wedgewood Ventures Ltd.

Project

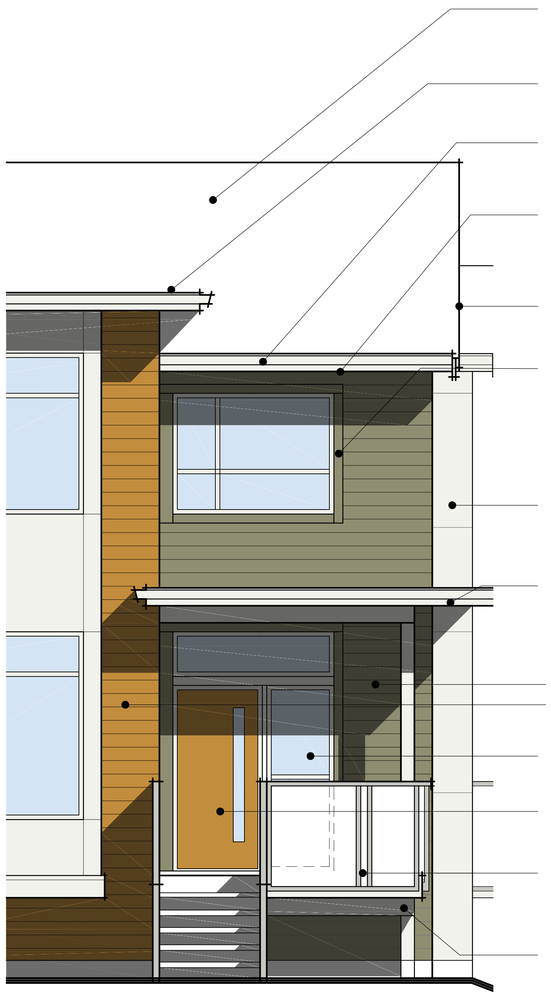
4670 Capilano

4670 Capilano Road
North Vancouver, BC

Type B - East Building Renders

NTS
February 26, 2018

A-3.02



PITCH ROOF:
Asphalt roof shingles
Pabco Premier, Pewter Gray

LOW SLOPE ROOF:
Flat roof with 2 ply SBS membrane

RWL & GUTTER:
Pre-finished aluminum
White

ROOF SOFFIT:
HardieSoffit Perforated, painted,
BM OC-57 Heron White

GABLE FASCIA
2x4 on 2x10 wood, painted, BM OC-57 Heron White

WINDOW TRIMS:
2x4 wood, painted to matching adjacent cladding colour

SHADOW BOX WINDOW TRIMS:
2" wide aluminum tube
Painted to matching adjacent cladding colour

PANEL:
Hardipanel Smooth w/ aluminum reveal to match
Painted, BM OC-57 Heron White

FASCIA:
2x10 wood, painted, BM OC-57 Heron White

LAP SIDING:
HardiePlank lap siding smooth, 6" exposure, painted
West Bldg - BM HC-110 Wethersfield Moss
West Bldg - Custom colour to simulate wood cedar
East Bldg - BM HC-77 Alexandria Beige

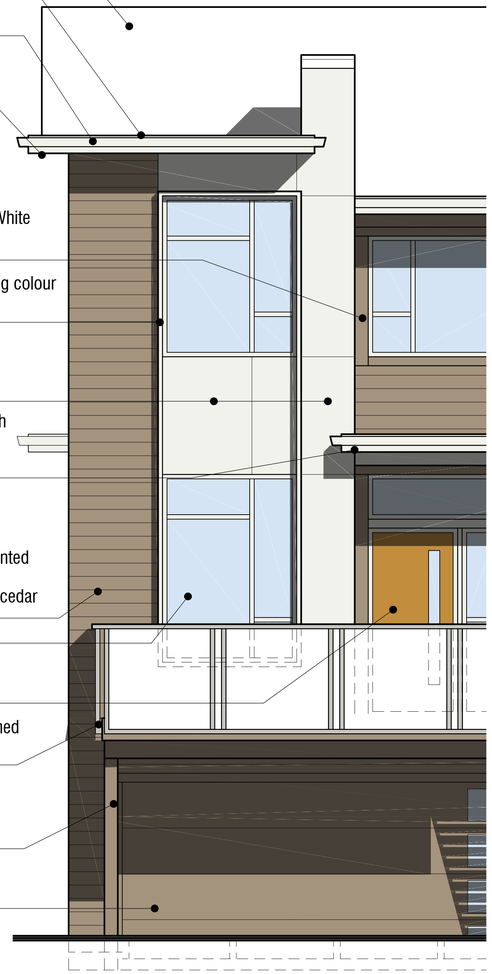
WINDOWS:
Double glazed, vinyl frames, white

FRONT ENTRY DOOR:
Wood Veneer Fibreglass with glazed panel, stained

GUARD RAILS:
Aluminum rails with inset glazing,
Natural anodized rails

POST & BEAM
Wood, painted, BM OC-57 White Heron

GARAGE DOORS:
Overhead garage door w/ glazed panels,



WEST BLDG - TYPE A

EAST BLDG - TYPE B

HardiePlank Lap Siding:
Benjamin Moore HC-110 Wethersfield Moss

HardiePlank Lap Siding:
Custom Colour to Simulate Wood Cedar

HardiePlank Lap Siding:
Benjamin Moore HC-77 Alexandria Beige

HardiePanel Smooth / Fascia / Soffit / RWL:
Benjamin Moore OC-57 Heron White

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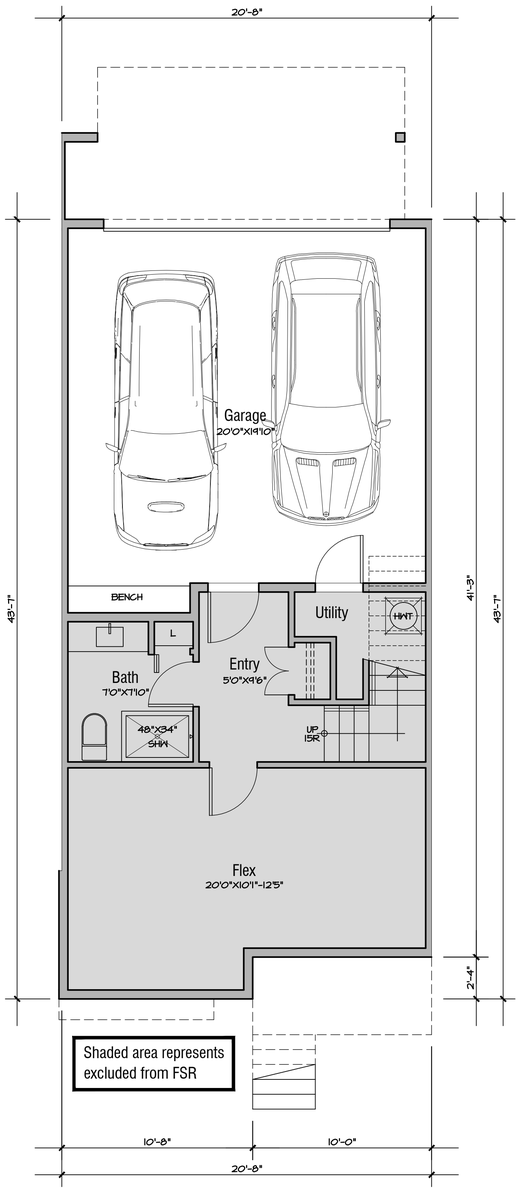
Client
Wedgewood Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Colour & Material

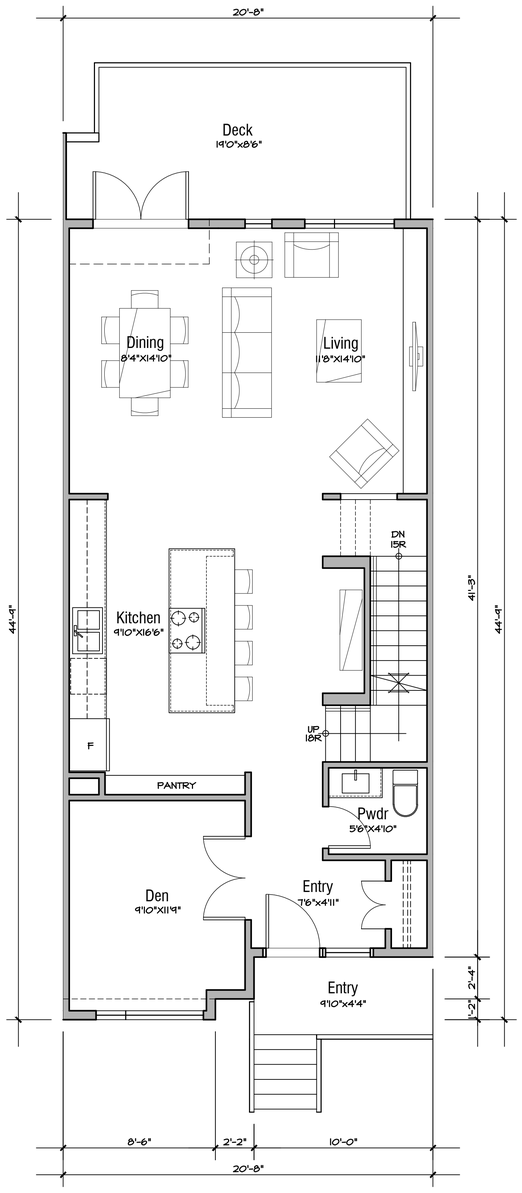
3/8" = 1'-0"
February 26, 2018

A-4.00



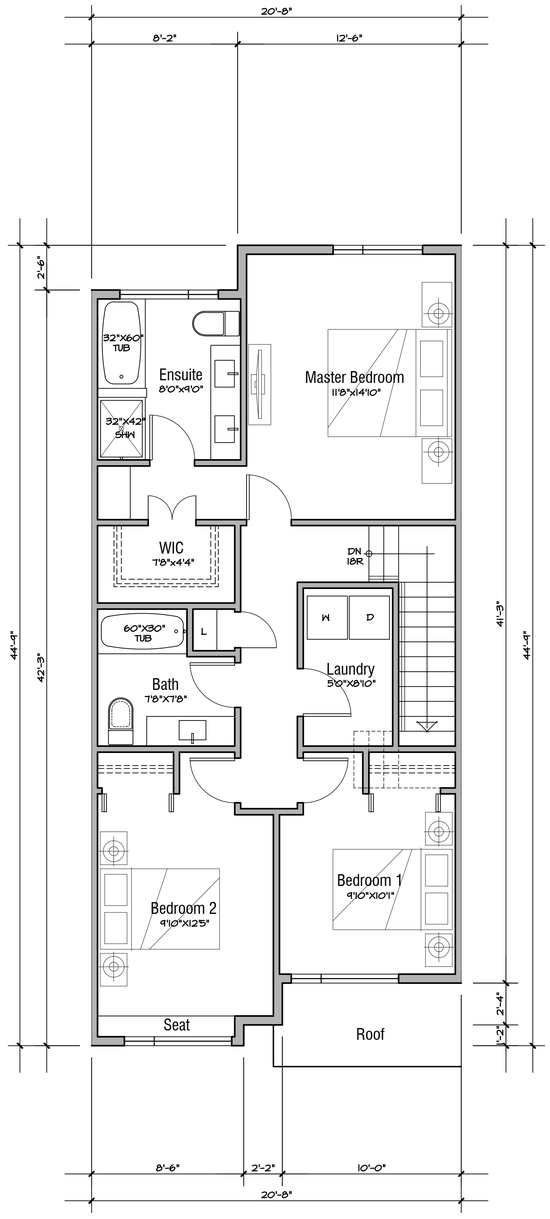
Lower Floor Plan

440 sf FSR Excluded



Main Floor Plan

887 sf FSR



Upper Floor Plan

867 sf FSR

TYPE A PLAN

1,754 sf FSR
(Excluded Basement)

0 2 4 6 8 10 FT

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Client
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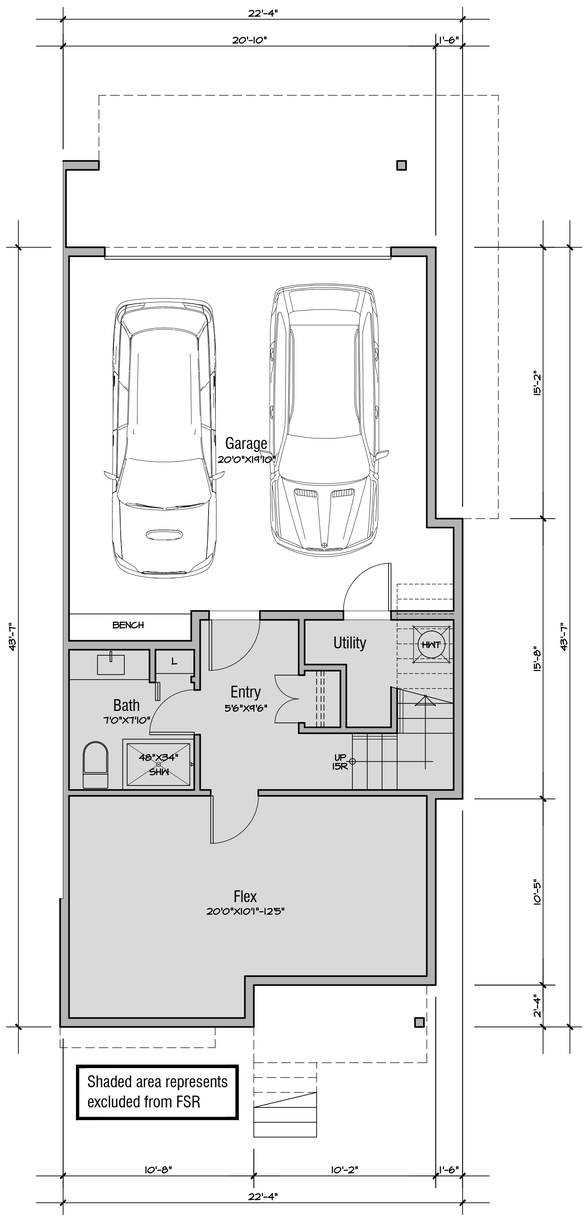
Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type A Unit Plans

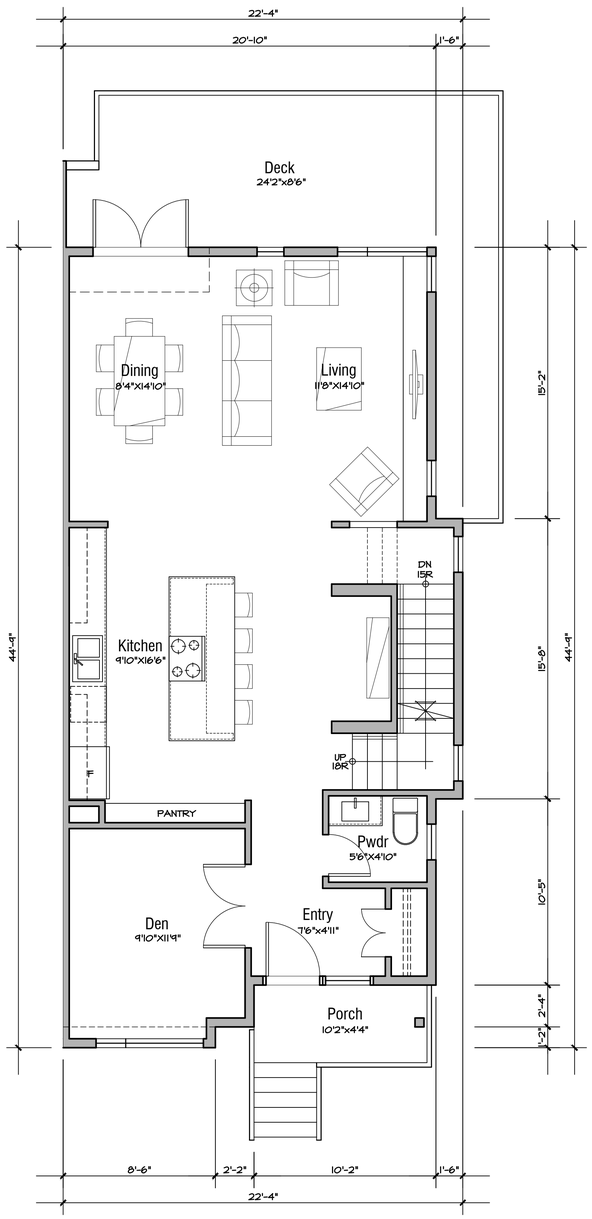
1/4" = 1'-0"
February 26, 2018

A-5.00



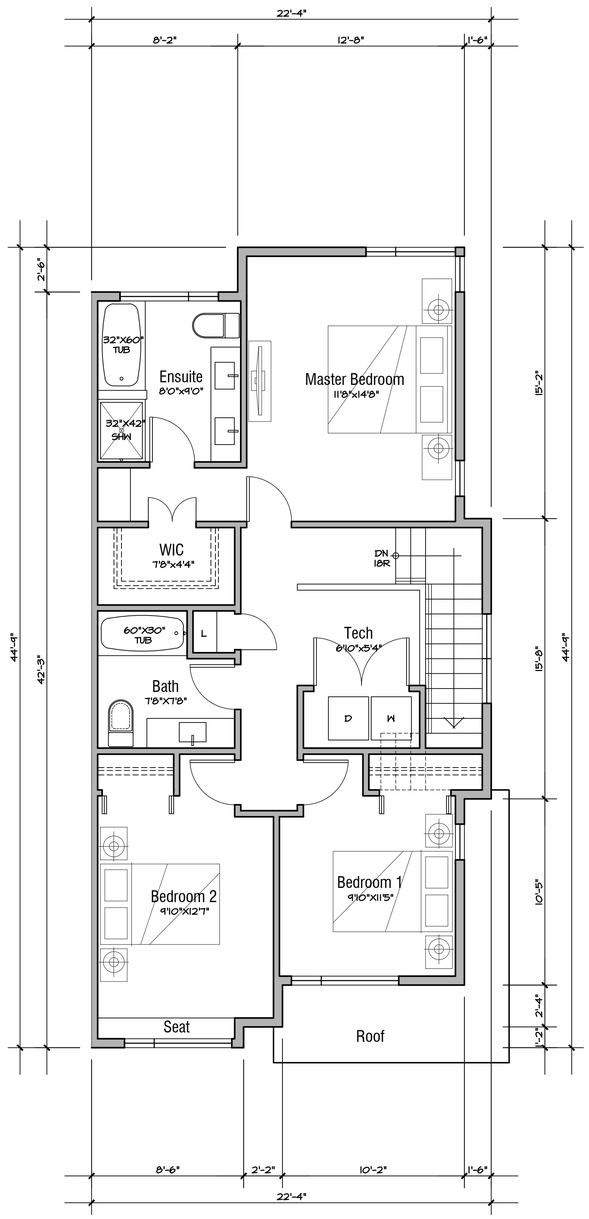
Lower Floor Plan

458 sf



Main Floor Plan

918 sf FSR



Upper Floor Plan

897 sf FSR

TYPE A1 PLAN

1,815 sf FSR
(Excluded Basement)

0 2 4 6 8 10 FT

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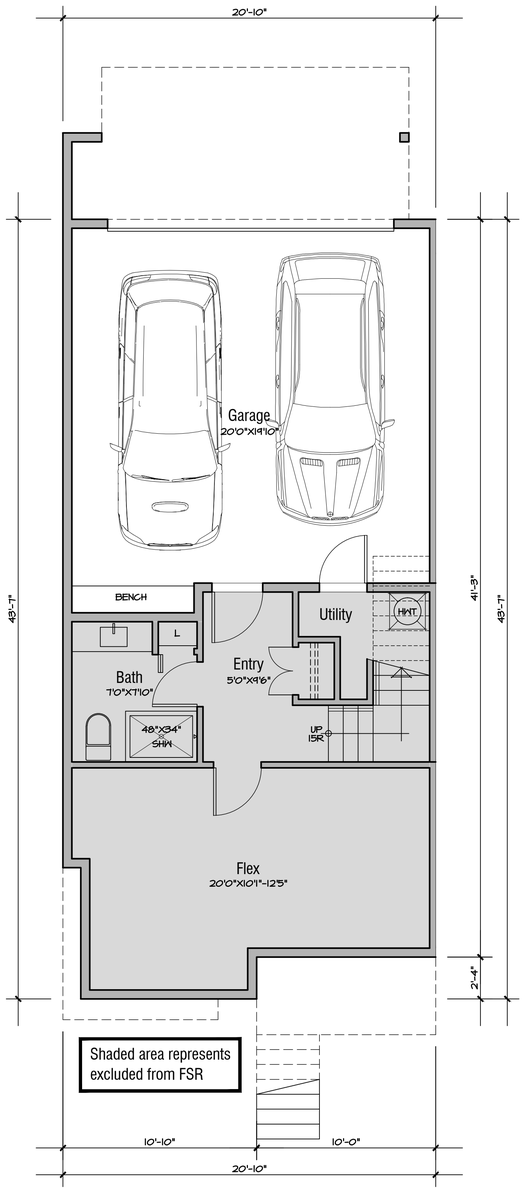
Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type A1 Unit Plans

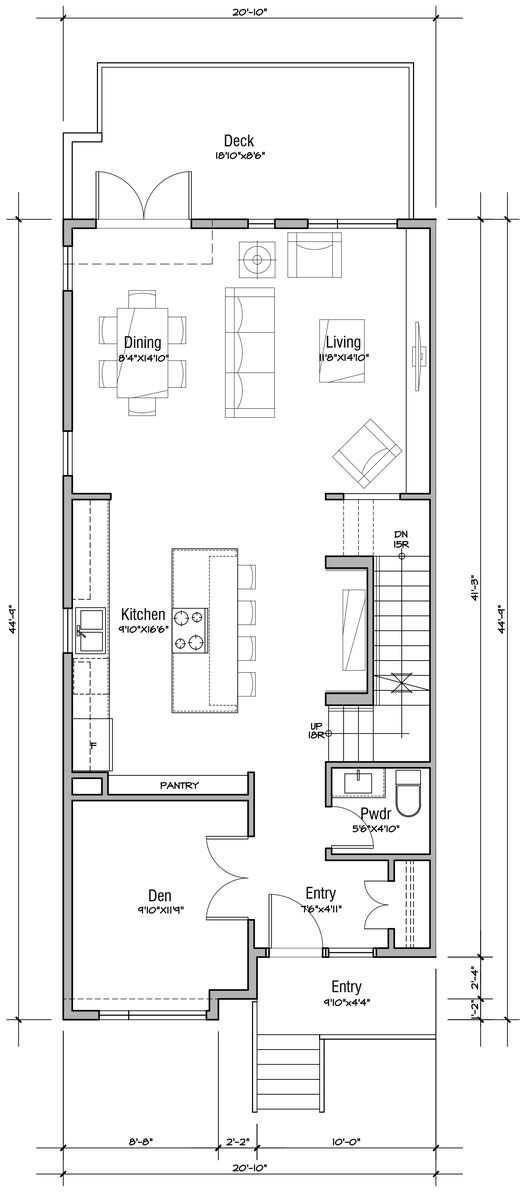
1/4" = 1'-0"
February 26, 2018

A-5.01



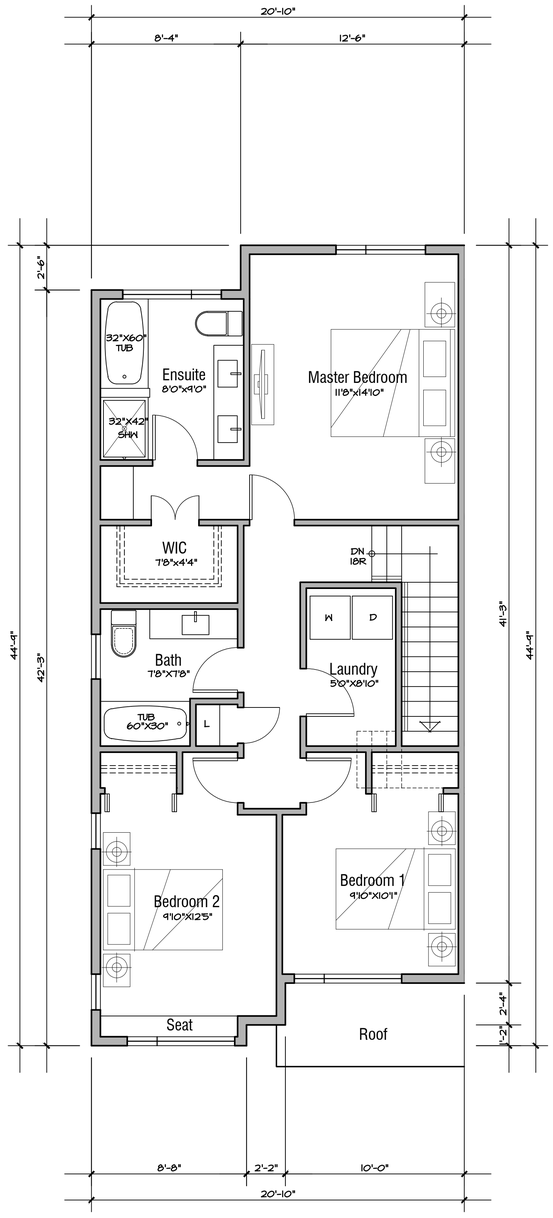
Lower Floor Plan

443 sf



Main Floor Plan

895 sf FSR



Upper Floor Plan

874 sf FSR

TYPE A2 PLAN

1,769 sf FSR
(Excluded Basement)

0 2 4 6 8 10 FT

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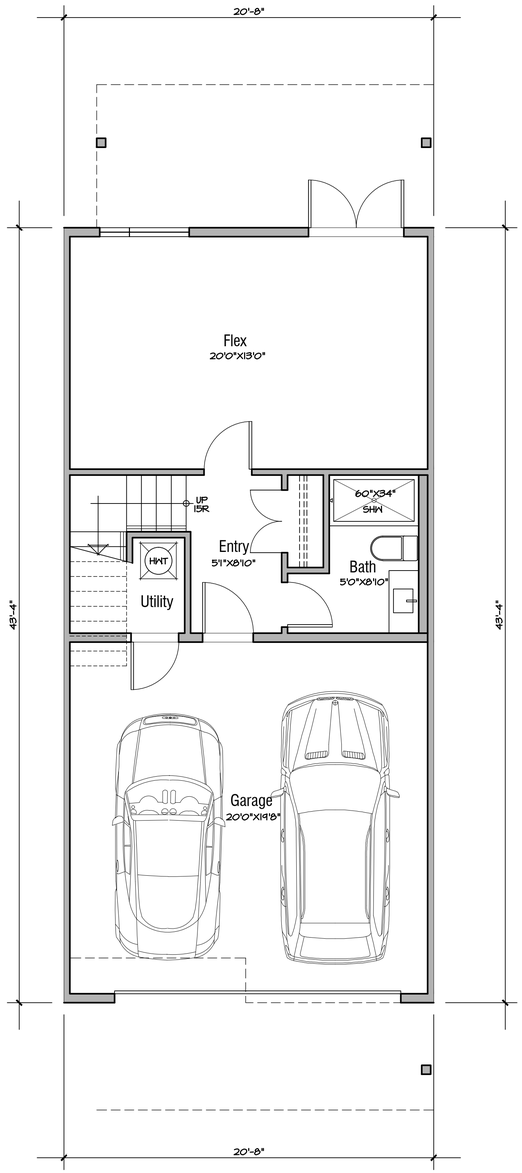
Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type A2 Unit Plans

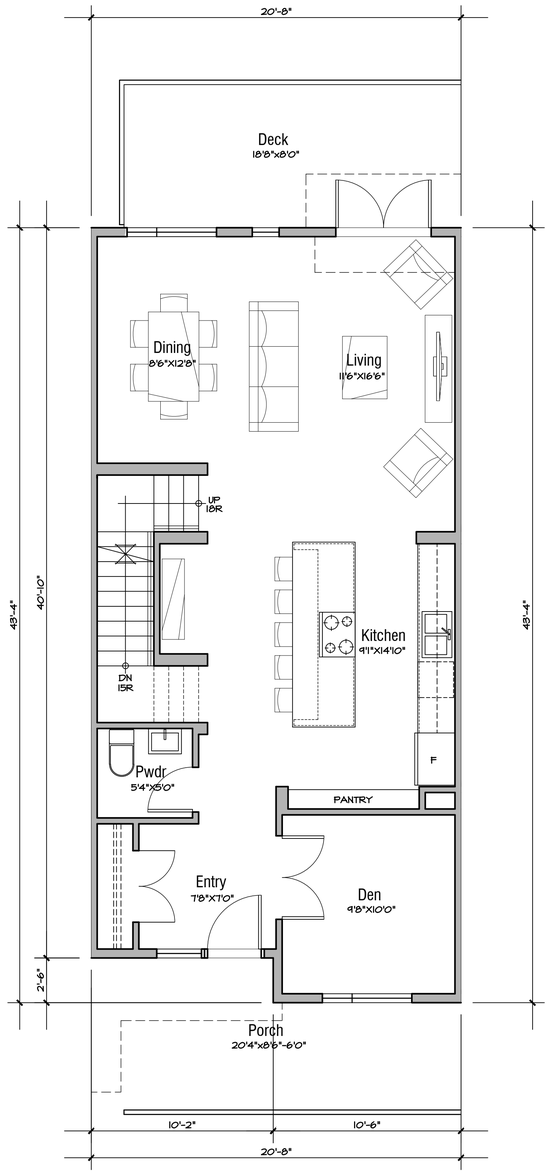
1/4" = 1'-0"
February 26, 2018

A-5.02



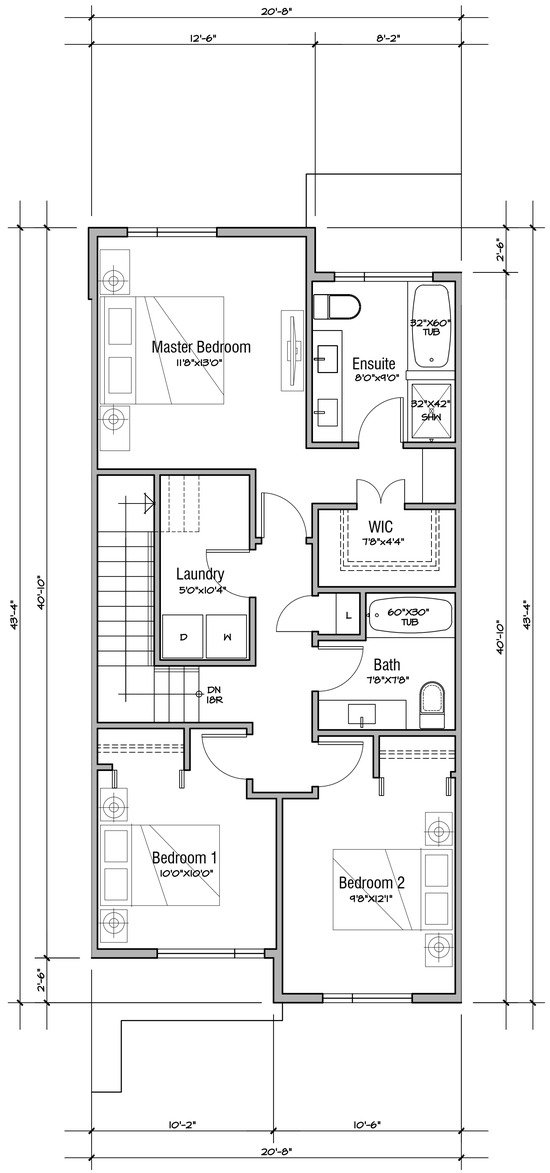
Lower Floor Plan

474 sf FSR



Main Floor Plan

870 sf FSR



Upper Floor Plan

850 sf FSR

TYPE B PLAN

2,194 sf FSR

0 2 4 6 8 10 FT

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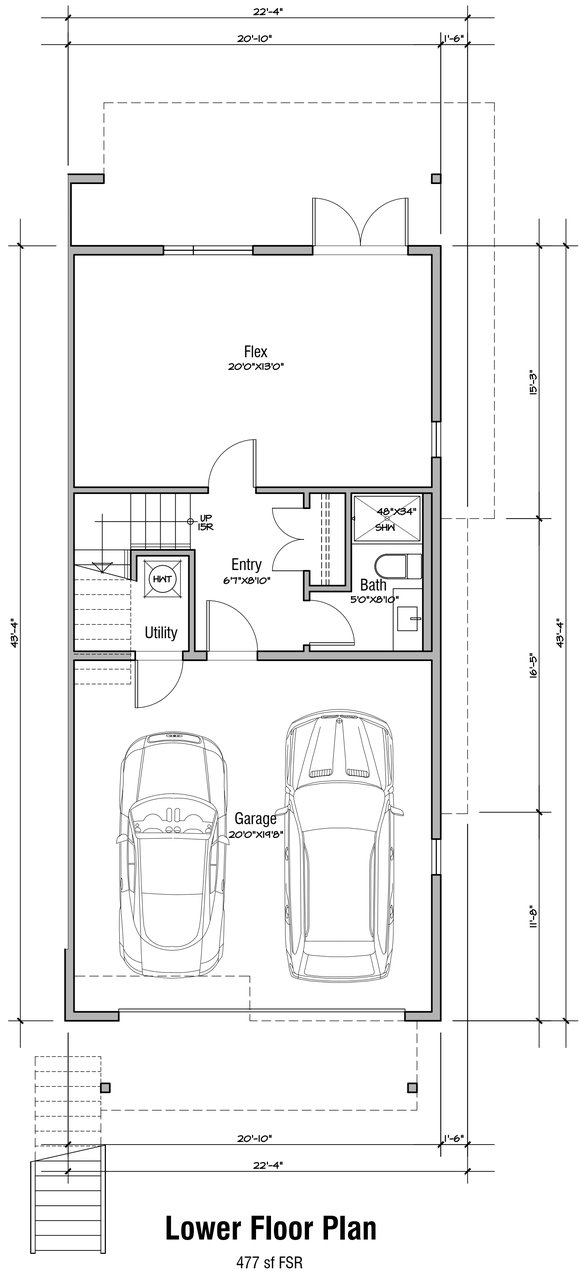
Wedgewood Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type B Unit Plans

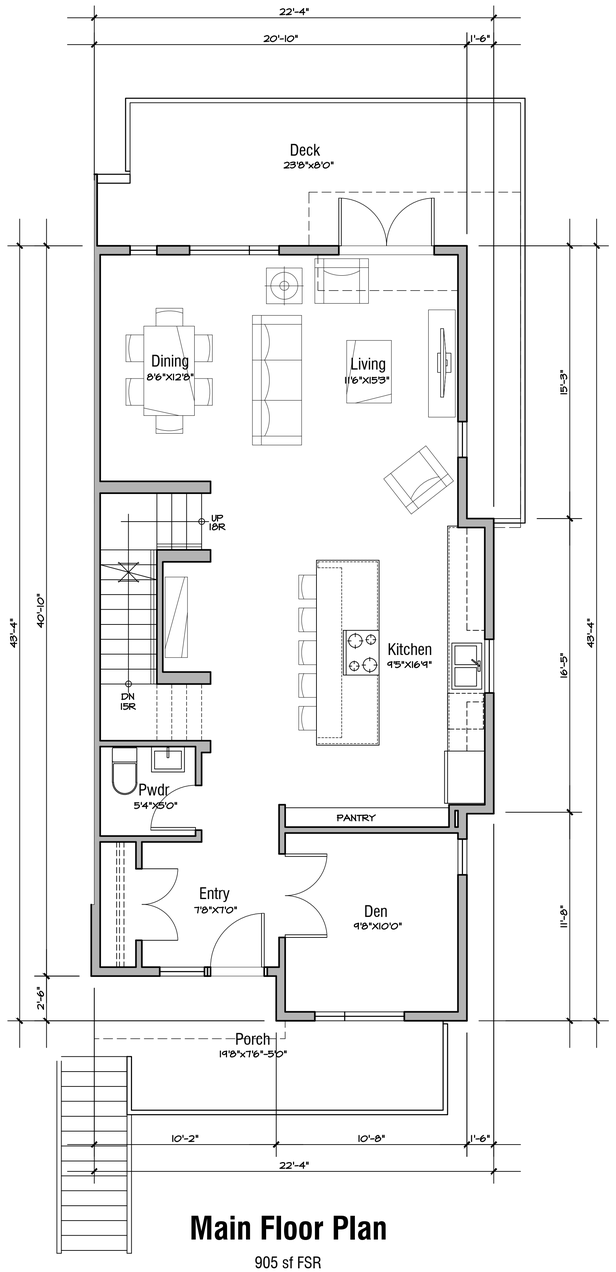
1/4" = 1'-0"
February 26, 2018

A-5.03



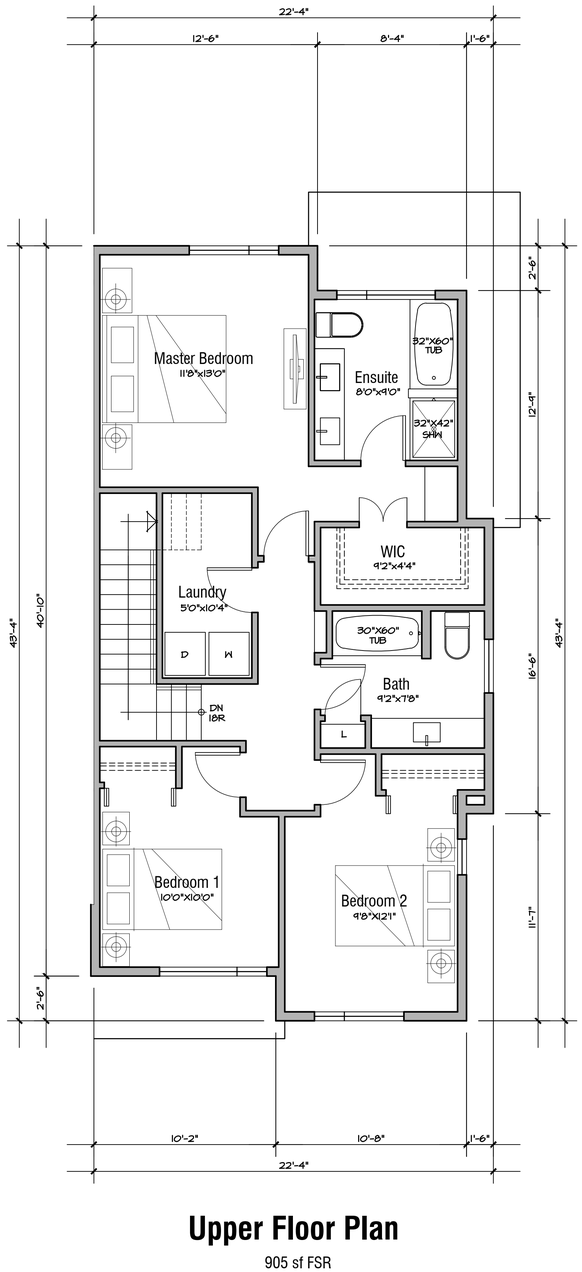
Lower Floor Plan

477 sf FSR



Main Floor Plan

905 sf FSR



Upper Floor Plan

905 sf FSR

TYPE B1 PLAN

2,287 sf FSR

0 2 4 6 8 10 FT

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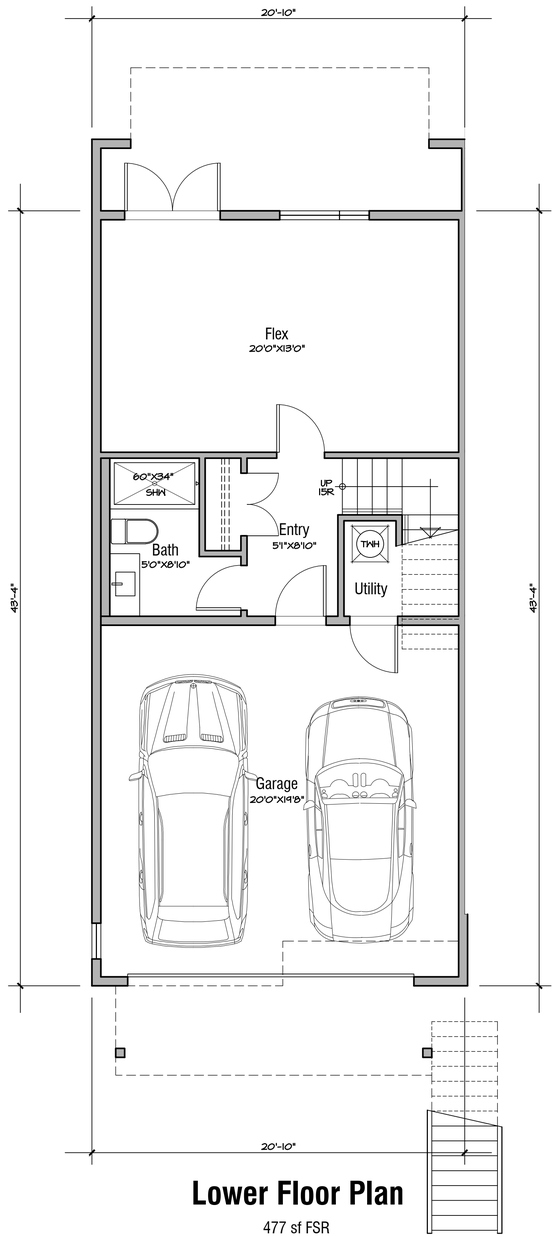
Wedgewood Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Type B1 Unit Plans

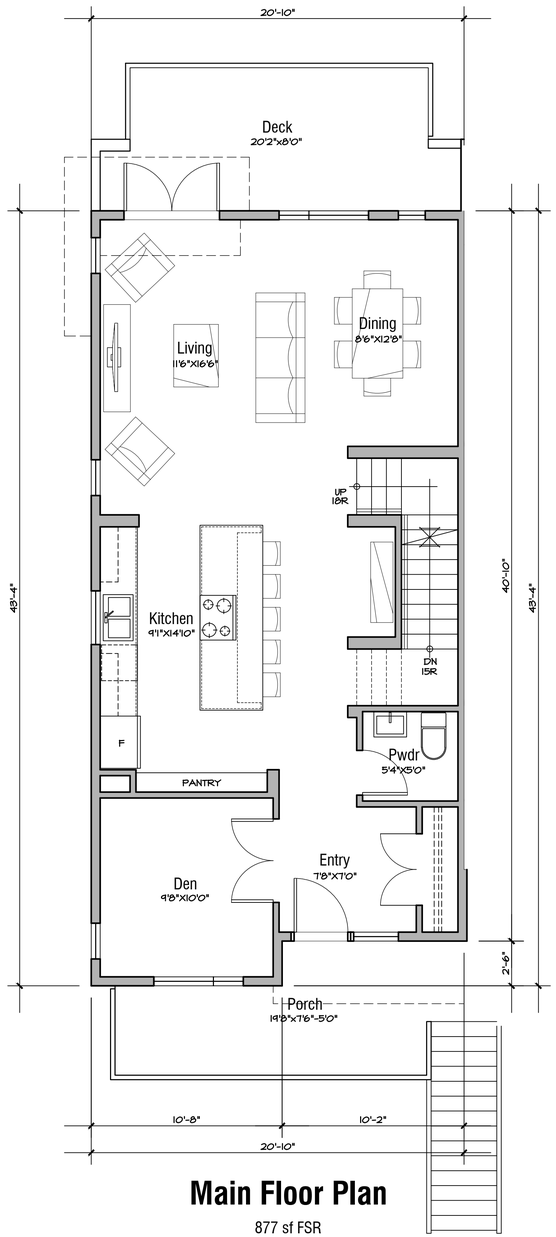
1/4" = 1'-0"
February 26, 2018

A-5.04



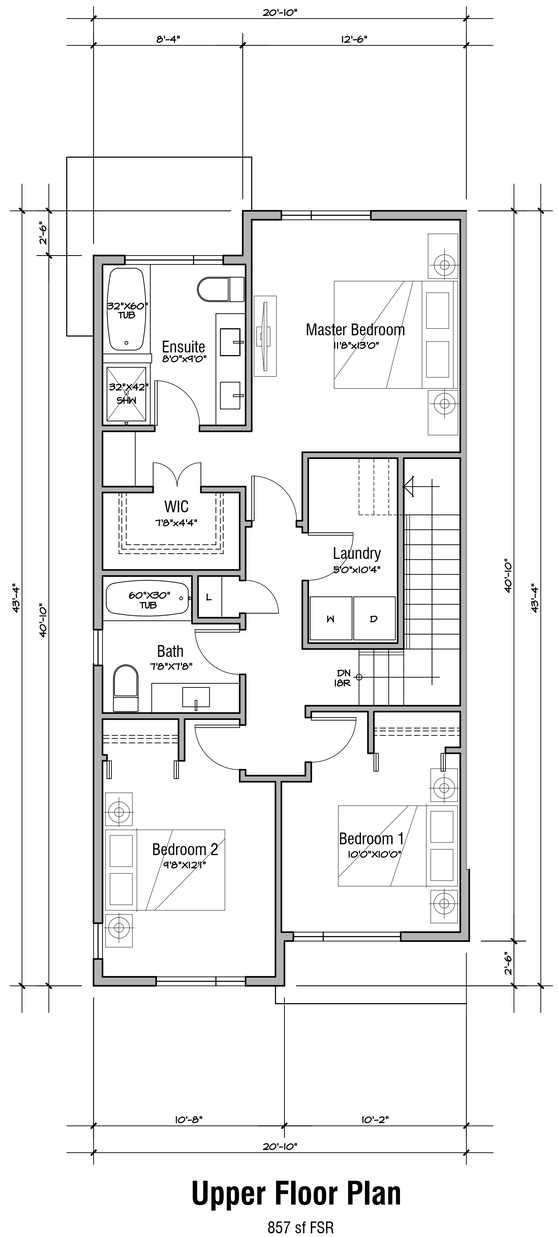
Lower Floor Plan

477 sf FSR



Main Floor Plan

877 sf FSR



Upper Floor Plan

857 sf FSR

TYPE B2 PLAN

2,211 sf FSR

0 2 4 6 8 10 FT

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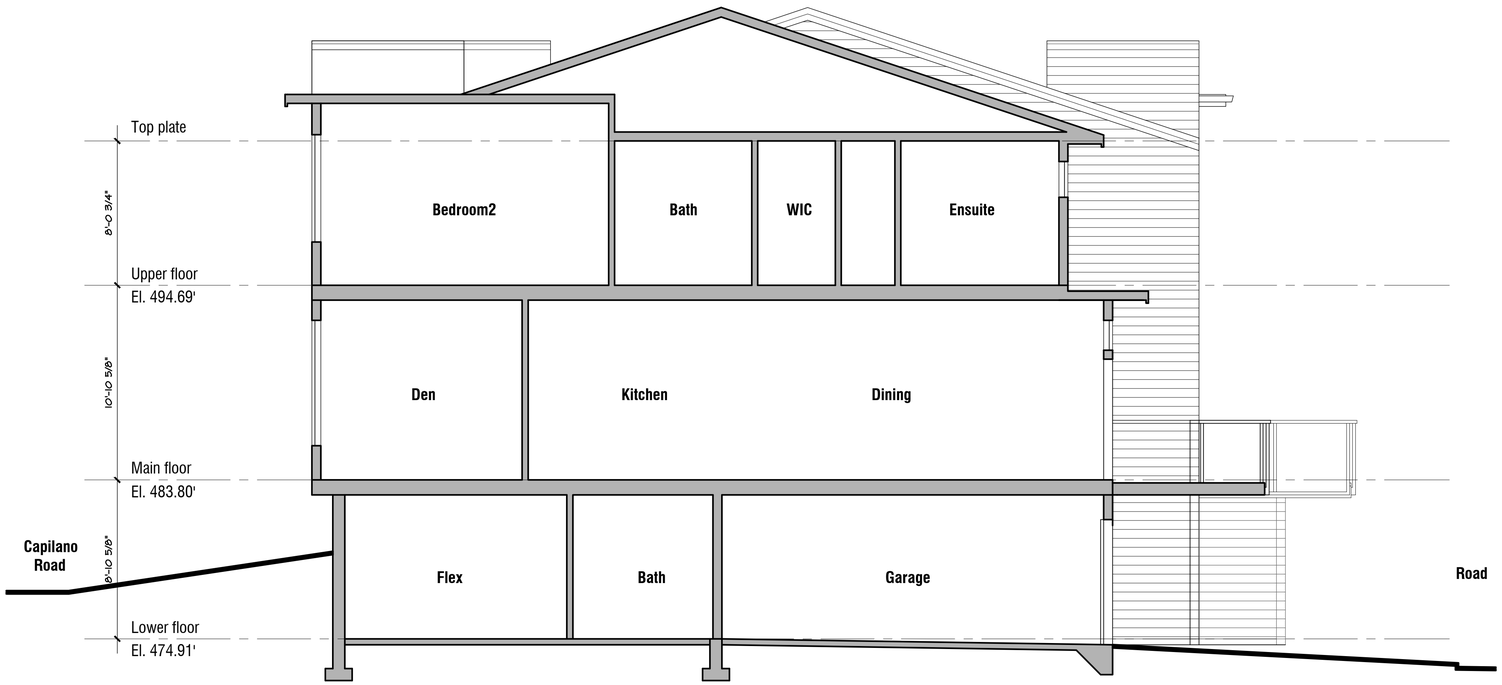
Client
Wedgewood Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

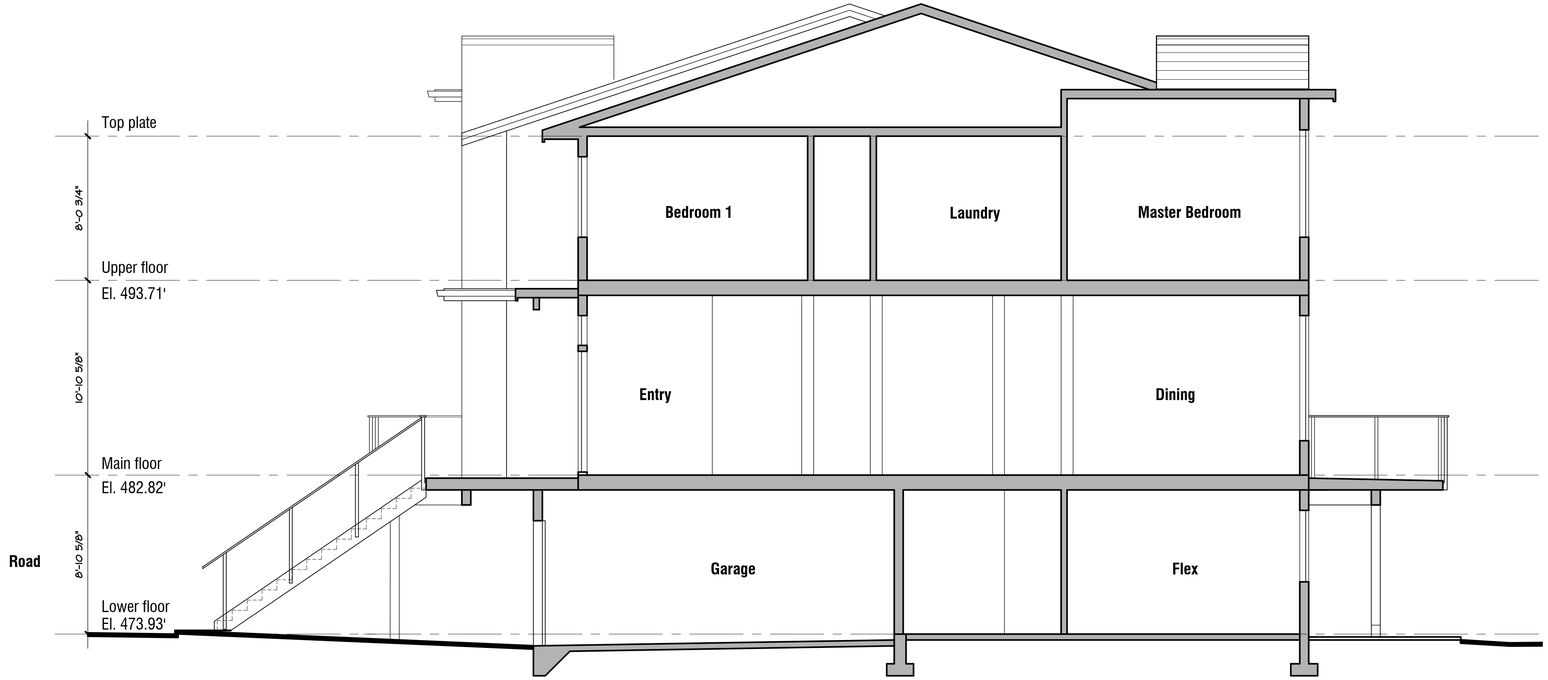
Type B2 Unit Plans

1/4" = 1'-0"
February 26, 2018

A-5.05



Unit A Section



Unit B Section

0 2 4 6 8 10 FT

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Client
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Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Section Unit Type A & B

1/4" = 1'-0"
February 26, 2018

A-6.00

March 21, 10am

March 21, 12pm

March 21, 2pm

March 21, 6pm

June 21, 10am

June 21, 12pm

June 21, 2pm

June 21, 6pm

Sept 21, 10am

Sept 21, 12pm

Sept 21, 2pm

Sept 21, 6pm

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Client

Wedgewood Ventures Ltd.

Project

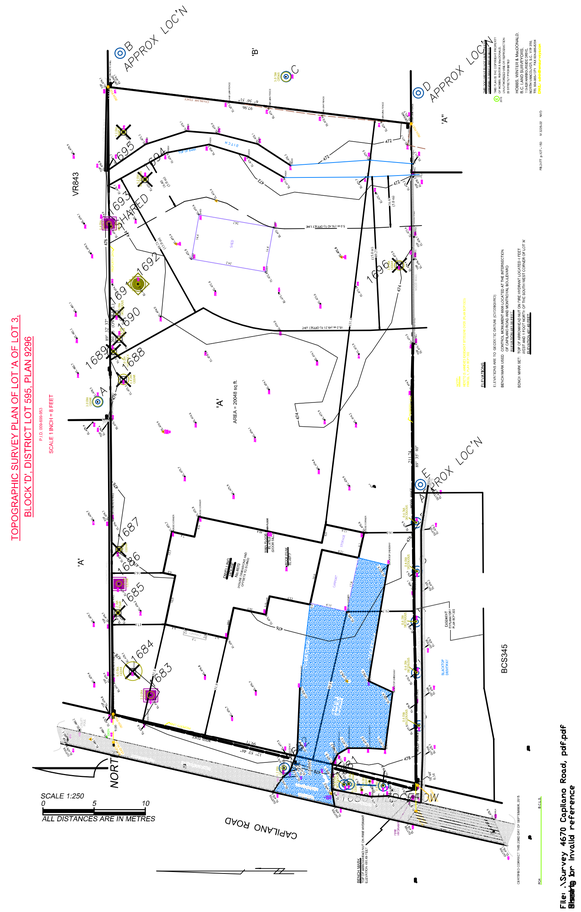
4670 Capilano

4670 Capilano Road
North Vancouver, BC

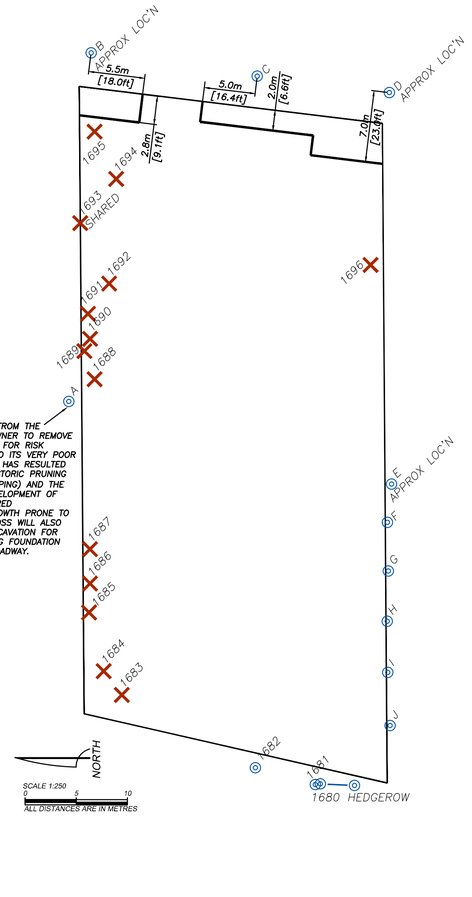
Shadow Analysis

Scale: N.T.S.
February 26, 2018

A-7.00



TREE ASSESSMENT DETAIL - SURVEY BASE



SEEK APPROVAL FROM THE NEIGHBOURING OWNER TO REMOVE OFF-SITE TREE A FOR RISK MITIGATION DUE TO ITS VERY POOR CONDITION WHICH HAS RESULTED FROM SEVERE HISTORIC PRUNING TREATMENTS (TOPPING) AND THE SUBSEQUENT DEVELOPMENT OF WEAKLY STRUCTURED REPLACEMENT GROWTH PRONE TO FAILURE. ROOT LOSS WILL ALSO RESULT FROM EXCAVATION FOR THE NEW BUILDING FOUNDATION AND INTERNAL ROADWAY.

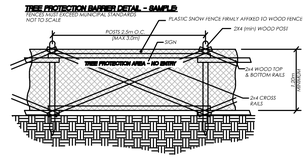
TREE RETENTION DETAIL - PROJECT DESIGN BASE

TREE PROTECTION ZONE RESTRICTIONS:

RESTRICTIONS IN TPZ:
See Arborist Report for further details. Any construction-related work within a **CPZ** and/or within 1.0m of a **RPZ** requires advance approval from the project arborist, and may require on-site direction or supervision from the project arborist. General restrictions in the **TPZ** are as follows:

- No soil disturbance (surface or to any depth) including: trenching, stripping of over-burden, excavation, fill placement, etc.,
- No storage of soil, spoil, gravel, construction materials, waste materials, etc.,
- No waste or washing of concrete, stucco, drywall, paint, or other potentially harmful materials,
- No passage or operation of vehicles or equipment,
- No placement of temporary structures or services,
- No affixing lights, signs, cables or any other device to retained trees,
- No unauthorized pruning or cutting of retained trees.

TREE PROTECTION BARRIER DETAIL - (SAMPLE)
REFER TO MUNICIPAL STANDARDS
NOT TO SCALE



LEGEND:

——— denotes **SITE** or **STUDY AREA BOUNDARY**.

TREE DATA AND VIABILITY RATINGS (ON-SITE TREES ONLY):

denotes **TAG NUMBER** or **ID REFERENCE**.
denotes tree in **SUITABLE CONDITION** (retainable if design can accommodate it).
denotes tree in **MARGINAL CONDITION** (possible candidate subject to design and other conditions).
denotes tree in **UNSUITABLE CONDITION** (not viable for retention).

TREE MANAGEMENT IN PROJECT:

denotes **RETENTION** tree (protection measures required).
denotes **REMOVAL** tree (permit may be required).
denotes **HIGH RISK REMOVAL** tree (permit may be required).
denotes **OFF-SITE** tree (see report for treatment).
denotes **NON-BYLAW** understory tree (as measured by arborist).

TREE PROTECTION SPECIFICATIONS:

denotes **CROWN PROTECTION ZONE** - **CPZ** (dripline extents)
denotes **TREE ROOT PROTECTION ZONE** - **RPZ** alignment for **BARRIERS**. Street tree protection to 0.6m from curb, 0.3m from sidewalk and to dripline extents.
denotes **WORKING SPACE SETBACK (WSS)** 1.5m offset from RPZ or as specified by project arborist for **MANAGED WORK ACTIVITIES** with Project Arborist coordination and supervision.

TREE REPLACEMENT:

XX denotes **REPLACEMENT TREE** proposed (conceptual location - see plant list for details).

REV #	DATE	COMMENTS
0	OCT 17, 2016	INITIAL SUBMISSION

acigroup.ca
ARBORTECH CONSULTING
ACI GROUP
SUITE 145 - 12051 HORSESHOE WAY, RICHMOND, BC V7A 4V4 p 604 275 3484

TREE MANAGEMENT DRAWING

PROJECT:	**PROPOSED TOWNHOUSE DEVELOPMENT**
ADDRESS:	**4670 CAPILANO ROAD, NORTH VAN**
CLIENT:	**WEDGEWOOD CAPILANO HOMES LTD**
ACL FILE:	**16109** SHEET: 1 OF 1

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architects inc.
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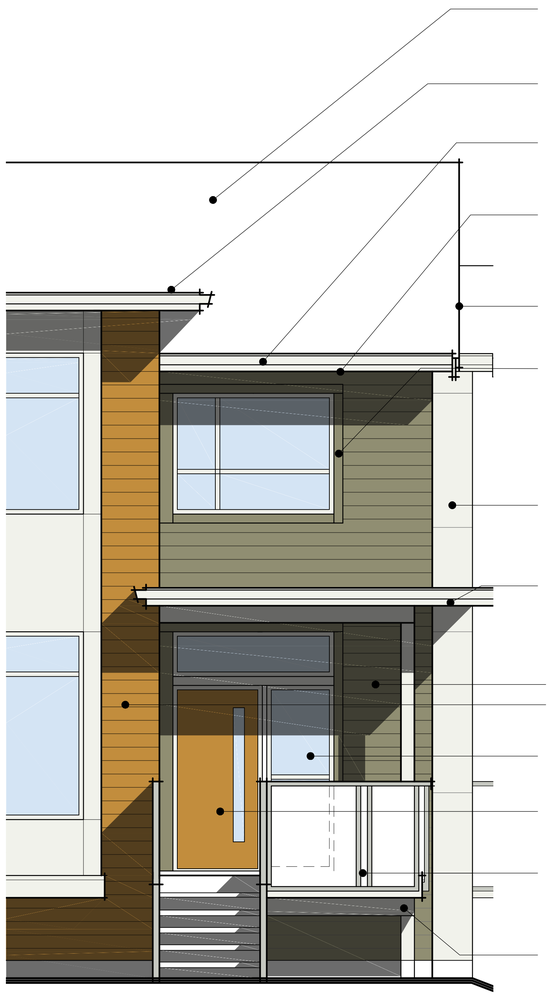
Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Tree Management

NTS
February 26, 2018

A-8.00



PITCH ROOF:
Asphalt roof shingles
Pabco Premier, Pewter Gray

LOW SLOPE ROOF:
Flat roof with 2 ply SBS membrane

RWL & GUTTER:
Pre-finished aluminum
White

ROOF SOFFIT:
HardieSoffit Perforated, painted,
BM OC-57 Heron White

GABLE FASCIA
2x4 on 2x10 wood, painted, BM OC-57 Heron White

WINDOW TRIMS:
2x4 wood, painted to matching adjacent cladding colour

SHADOW BOX WINDOW TRIMS:
2" wide aluminum tube
Painted to matching adjacent cladding colour

PANEL:
Hardipanel Smooth w/ aluminum reveal to match
Painted, BM OC-57 Heron White

FASCIA:
2x10 wood, painted, BM OC-57 Heron White

LAP SIDING:
HardiePlank lap siding smooth, 6" exposure, painted
West Bldg - BM HC-110 Wethersfield Moss
West Bldg - Custom colour to simulate wood cedar
East Bldg - BM HC-77 Alexandria Beige

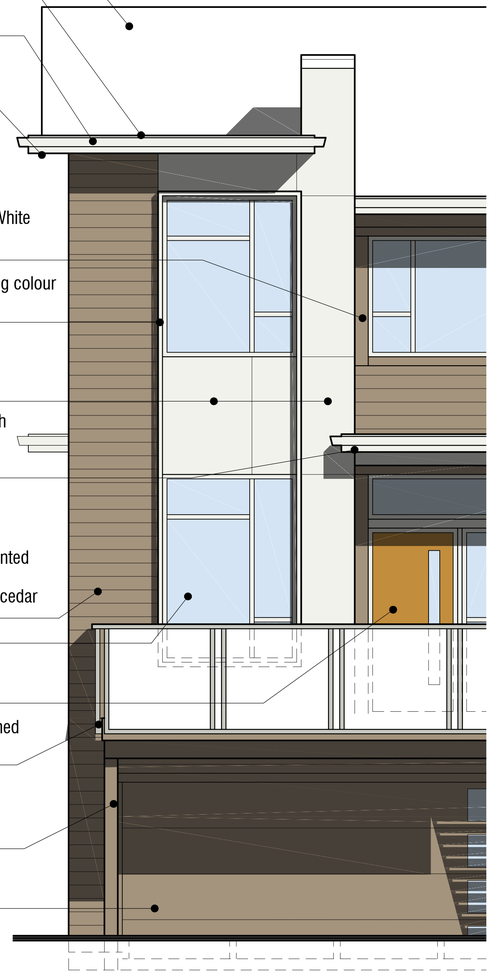
WINDOWS:
Double glazed, vinyl frames, white

FRONT ENTRY DOOR:
Wood Veneer Fibreglass with glazed panel, stained

GUARD RAILS:
Aluminum rails with inset glazing,
Natural anodized rails

POST & BEAM
Wood, painted, BM OC-57 White Heron

GARAGE DOORS:
Overhead garage door w/ glazed panels,



WEST BLDG - TYPE A

EAST BLDG - TYPE B

HardiePlank Lap Siding:
Benjamin Moore HC-110 Wethersfield Moss

HardiePlank Lap Siding:
Custom Colour to Simulate Wood Cedar

HardiePlank Lap Siding:
Benjamin Moore HC-77 Alexandria Beige

HardiePanel Smooth / Fascia / Soffit / RWL:
Benjamin Moore OC-57 Heron White

RAYMOND LETKEMAN
architects inc.
200-970 Homer St. Vancouver B.C. V6B2W7
Tel. 604. 669. 3339 Fax. 604. 669. 5651

Revisions

Issued for Rezoning & Development Permit
August 9, 2017

Re-Issued for Rezoning & Development Permit
February 26, 2018

Client
Wedgewood Ventures Ltd.

Project
4670 Capilano
4670 Capilano Road
North Vancouver, BC

Colour & Material

3/8" = 1'-0"
February 26, 2018

A-4.00

ALL PLANTS TO BE NURSERY GROWN
ALL PLANT MATERIALS AND LABOUR TO CONFORM
TO THE CURRENT EDITION OF THE BCSLA/BCLNA STANDARDS.

ALL PLANT MATERIAL TO BE INSPECTED PRIOR TO DELIVERY ON SITE. CONTRACTOR TO ARRANGE FOR INSPECTION AND MATERIAL TO ASSEMBLED IN ONE LOCATION FOR REVIEW.

IMPORTED GROWING MEDIA SHALL BE A SANDY LOAM OR LOAMY
SAND TEXTURE (NO LESS THAN 50% SAND BY WEIGHT)
CONTAINING 4 AND 15% ORGANINC MATTER (DRY WEIGHT
BASIS).

GROWING MEDIA SHALL VIRTUALLY FREE FROM SUBSOIL ,
WOOD INCLUDING WOODY PLANT PARTS, INVASIVE AND NOXIOUS PLANT AND THEIR REPRODUCTIBLE PARTS, PLANT PATHOGENIC ORGANISMS, ORGANIC OR INORGANIC MATERIALS, TOXINS, STONES OVER 30mm (1.2"), ANY DEBRIS AND FOREIGN OBJECTS.

IMPORTED GROWING MEDIA SHALL CONFORM TO AND BE TREATED AS PER SECTION 6.2.3 TO 6.2.7 INCLUSIVE OF THE CURRENT EDITION BCLNA STANDARDS.

GROWING MEDIUM SHALL CONFORM TO LEVEL 1 "WELL-GROOMED" AREAS: LOW TRAFFIC LAWN AREAS, TREES AND LARGE SHRUBS (1L IN TABLE T-6.3.5.1 OF THE CURRENT EDITION OF THE BSCLA/BCLNA STANDARDS).
IT SHALL POSSESS THE FOLLOWING QUALITIES:

TEXTURE-
*COARSE GRAVEL (LARGER THAN 19mm AND SMALLER THAN 40mm): 0-1%
*ALL GRAVEL (LARGER THAN 2mm AND SMALER THAN 40mm): 0-5%
*SAND (LARGER THAN 0.05mm AND SMALLER THAN 2mm): 50-70%
*SILT (LARGER THAN 0.002mm AND SMALLER THAN 0.05mm): 10-25%
*CLAY (SMALLER THAN 0.002mm): 0-20%
*CLAY AND SILT COMBINED: MAXIMUM 25%

ORGANIC CONTENT: 3-10%

Acidity (pH): 6.0-7.0

DRAINAGE: PERCOLATION SHALL BE SUCH THAT NO STANDING WATER IS VISIBLE 60 MINUTES AFTER AT LEAST 10 MINUTES OF MODERATE TO HEAVY RAIN OR IRRIGATION.

MINIMUM SOIL DEPTH TO BE AS PER TABLE T 6.3.5.5 OF THE CURRENT EDITION BCLNA STANDARDS:

	Over prepared subgrade where the subsoil drains rapidly	Over structures or where the subsoil drains poorly
TREES (10m2 PER TREE)	24"	30"
LARGE SHRUBS	24"	24"
GROUNDCOVERS	12"	9"
LAWN-IRRIGATED	6"	6"
LAWN-NOT IRRIGATED	6"	9"

SOIL DEPTHS WILL BE CHECKED AT TIME OF SUBSTANTIAL COMPLETION REVIEW

SOIL FOR URBAN AGRICULTURE PLOTS IS TO BE URBAN GRO PROVIDED BY VERATEC, OR APPROVED ALTERNATIVE. SOIL FOR URBAN AGRICULTURE AREAS IS TO MEET OR EXCEED THE GUIDELINES FOR COMPOST QUALITY UNDER CANADIAN COUCIL OF MINISTERS OF THE ENVIRONMENT (CCME).

COMPOST IS TO BE TESTED AND RESULTS SUBMITTED TO CONSULTANT PRIOR TO DELIVERY TO SITE.

BEDS TO HAVE 2" MULCH LAYER (after settling) CONSISTING OF ORGANIC COMPOSTED BARK APPLIED.

PLANTED AREAS TO HAVE PERMANENT HIGH EFFICIENCY IRRIGATION SYSTEM - SHOP DRAWINGS ARE TO BE PREPARED BY AN IABC CERTIFIED DESIGNER AND APPROVED BY LANDSCAPE ARCHITECT. IRRIGATION COMPONENTS TO MEET LEED WEc1 REDUCE POTABLE WATER CONSUMPTION BY 50%.

CONTRACTOR TO PROVIDE MAINTENANCE FOR 1 YEAR FOLLOWING SUBSTANTIAL COMPLETION.

CONTRACTOR TO PROVIDE WRITTEN 1 YEAR WARRANTY ON PLANT MATERIAL

CONTRACTOR TO PROVIDE COPY OF SOIL TEST TO LANDSCAPE CONSULTANT 3 WEEKS **PRIOR** TO DELIVERY ON-SITE. TEST TO BE PERFORMED BY AN INDEPENDENT LAB AND IS TO INCLUDE RECOMMENDATIONS FOR BOTH LAWN AND PLANTING BEDS.

CONSULTANT TO APPROVE SOIL BEFORE INSTALLATION. THIS DOES NOT PRECLUDE THE CONSULTANT FROM PERFORMING AN INDEPENDENT SOIL ANALYSIS AT TIME OF SUBSTANTIAL COMPLETION. CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF SOIL THAT DOES NOT MEET SPECIFICATIONS AT NO EXTRA COST TO CLIENT.

CONTRACTOR TO PROVIDE WRITTEN 1 YEAR WARRANTY ON SOIL SPECIFICATIONS.

AN INDEPENDENT SOIL TEST TO BE PROVIDED 1 WEEK PRIOR TO END OF 1 YEAR WARRANTY PERIOD CONTRACTOR TO PROVIDE SOIL AMMENDMENTS TO BRING SOIL UP TO QUALITY RECOMMENDED IN
SOILS REPORT.

SITE INSPECTION
EXAMINE EXISTING SUBGRADE CONDITIONS AND SIGNIFY ACCEPTANCE IN WRITING TO THE CONSULTANT.

ASCERTAIN THE SIZE AND LOCATION OF ALL EXISTING SERVICES AND SUBGRADES PRIOR TO THE WORK.

IMMEDIATELY REPAIR DAMAGE RESULTING FROM FAILURE TO EXERCISE SUCH PRECAUTIONS AT NO COST TO THE OWNER.

ALL PRUNING TO BE IN ACCORDANCE WITH THE BCLNA/BCSLA STANDARDS CURRENT EDITION.

PLANT COUNTS
IN THE CASE OF ANY DISCREPANCY BETWEEN PLANT COUNTS ON PLANT LIST AND PLANT SYMBOLS ON DRAWING, THE DRAWINGS TAKES PRECEDENT. THE CONTRACTOR IS TO VERIFY ALL PLANT COUNTS AND NOTIFY CONSULTANT OF ANY DISCREPANCY.

PLANT LIST

ID	QTY	LATIN NAME	COMMON NAME	SPACING	SCHEDULED SIZE	NOTES
TREES						
Ck	1	Cornus kousa	kousa dogwood	as shown	6cm cal/ B&B	2m standard/ full crown
TREES						
Ac	3	Acer circinatum	vine maple	as shown	3m B&B	full, bushy plants
Aps	5	Acer palmatum 'Seiryu'	Japanese maple	as shown	5cm cal. B&B	full/bushy plants
Claw	2	Chamaecyparis lawsoniana	Lawson Falsecypress, Port Orfo	as shown		
Fsd	14	Fagus sylvatica dawyck gold	golden beech	as shown	4m ht. B&B	Full, bushy plants
Mdb	3	Magnolia x 'Daybreak'	Daybreak Magnolia	as shown	6cm/ B&B	Standard
Stj	2	Styrax japonica	Japanese snowbell	as shown	6cm/ B&B	full/ dense crown
Tp	5	Thuja plicata	Western Red Cedar	as shown	3.5m ht/B&B	
SHRUBS						
Aa	16	Amelanchier alnifolia	Saskatoon serviceberry	7'0"	#5 cont	full/ bushy plants/ multi-stemmed
Aao	7	Amelanchier alnifolia 'Oblisk'	Oblisk Serviceberry	2'1 1/2"	2m B&B	full/ bushy plants/ multi-stemmed
Ae	125	Asarum europeaum	European Wild Ginger	11 3/4"	#1 cont.	full, bushy plants
Ae	132	Asarum europeaum	European Wild Ginger	11 3/4"	#1 cont.	full, bushy plants
Ajs	63	Aucuba japonica 'Rozannie'	Rozannie Japanese Aucuba	2'5 1/2"	#5 cont.	full/ bushy plants. Mature size: 3'x3'
Amb	20	Armeria maritima 'Bloodstone'	Thrift	9 7/8"	#1 cont.	full/ bushy plants
Amb	226	Armeria maritima 'Bloodstone'	Thrift	9 7/8"	#1 cont.	full/ bushy plants
Auu	105	Arctostaphylos uva-ursi	Bearberry, Kinnikinick	1'0"	#1 cont.	full/ bushy plants/ heavy
Bs	67	Blechnum spicant	deer fern	1'5 3/4"	#1 cont	full, bushy plants
Ca	23	Carex albula	frosty curls sedge	1'6"	#2 cont.	full, bushy plants
Cos	35	Cornus sericea	red osier dogwood	3'0"	#2 cont.	full/ bushy plants
Csk	102	Cornus sericea 'kelseyi'	Dwarf Red Osier dogwood	2'0"	#2 cont.	full/bushy
Dc	27	Deschampsia cespitosa 'Goldtau'	tufted hair grass	1'5 3/4"	#2 cont.	full/ bushy plants
Fa	57	Fragaris x ananassa	strawberry	1'4"	SP4	full/ bushy plants
Gp	15	Gaultheria procumbens	Wintergreen	3 5/8"	#1 cont.	full/ bushy plants
Gs	8	Gautheria shallon	salal	4'0"	#5 cont.	full/bushy
Hh	53	Hemerocallis 'Hyperion'	daylily	1'0"	#1 cont	full, bushy plants
Hq	5	Hydrangea quercifolia	hakleaf Hydrangea	4'0"	#3 cont.	full/ bushy plants
Hs	42	Helictotrichon sempervirens	blue oat grass	1'6"	#2 cont.	full/ bushy plants
Is	36	Iris sibirica 'Caesar's Brother'	Caesar's Brother Siberian Iris	1'6"	#2 cont.	staked
Je	43	Juncus effusus	common rush	1'6"	#1 cont.	full, bushy plants
Lm	329	Liriope muscari 'Big Blue'	Big Blue lilyturf	11 3/4"	#1 cont.	full/ bushy plants
Lp	21	Lonicera pileata	Boxleaf Honeysuckle	1'6"	#2 cont.	full, bushy plants
Lpp	16	Lupinus polyphyllus	big leaf lupine	1'6"	#2 cont.	staked
Maa	9	Mahonia aquifolium	tall Oregon grape	2'0"	#3 cont.	full/ bushy plants
Mn	20	Mahonia nervosa	longleaf mahonia	5 1/2"	#1 cont	full/ bushy plants
Ms	51	Miscanthus sinensis 'Adagio'	Adagio maiden grass	2'0"	#3 cont.	full/ bushy plants
Po	21	Physocarpus opulifolius 'Tiny Wine	ninebark	4'0"	#5 cont.	full/bushy
Ps	84	Polystichum setiferum	Alaska fern	2'0"	#2 cont.	full/ bushy plants
RhG	81	Rubeckia "Goldstrum"	Golden Coneflower	1'0"	#2 cont	full/ bushy plants
Rs	9	Ribes sanguineum 'King Edward'	flowering currant	10 7/8"	#5 cont	full/ bushy plants
Sa	16	Symphoricarpos alba	snowberry	2'6"	#5 cont.	full/ bushy plants
Sr	82	Sarcococca ruscifolia	fragrant sarcococca	2'6"	#3 cont.	full/ bushy plants
Tmh	117	Taxus media 'Hicksii'	Anglojap Yew	1'6"	1.2m/B&B	full. bushy plants
Tocc	15	Thuja occidentalis	Eastern Arborvitae	5'0"		
Vc	20	Vaccinium corymbosum	blueberry 'Northsky'	9"	#5 cont	full/ bushy plants
Vo	18	Vaccinium ovatum	evergreen huckleberry	2'6"	#3 cont.	full/ bushy plants
Vot	12	Vaccinium ovatum 'thunderbird'	evergreen huckleberry	7 1/4"	#2cont.	
	0			0"		
OFF-SITE LAWN						
		Non-Netted, grown on sand	Drought-tolerant			
NOTES:						
1 ALL LANDSCAPE TO CONFORM TO THE CURRENT EDITION OF THE BC LANDSCAPE STANDARDS FOR LEVEL 2 'GROOMED' LANDSCAPE TREATMENT IN THE EVENT OF A DISCREPANCY BETWEEN THE PLANT LIST AND THE PLANTING PLAN, THE PLANTING PLAN TAKES PRECEDENCE.						
2 SEARCH AREA TO LIMITED TO BRITISH COLUMBIA						

LANDSCAPE DESIGN RATIONALE

The overall design strategy for this project provides a unifying landscape ground plane that is contemporary, sustainable, and expressive of the unique characteristics of the individual homes.

Homes fronting onto Capilano Road have individual entries with a varied landscape palate to create a sense of individuality. Hard landscape elements here and throughout the project will have a character sympathetic to the contemporary architectural character. The shared entry drive will be enhanced with additional trees and shrub plantings to create a sympathetic landscape character with the adjacent property to the south. The central auto court is unified by a single permeable paving material broken up by perpendicular bands to reduce the scale of the space. The east landscape area has been designed to balance private yard areas and a bio filtration landscape area consisting of native plantings.

4760 Capilano Road

for Wedgewood Capilano Homes LTD

Civic Address: 4670 Capilano Road, North Vancouver, BC
Legal Address: District Lot 595, Plan 9296

eta landscape architecture

1690 West 2nd Avenue
Vancouver . BC . Canada . V6J 1H4

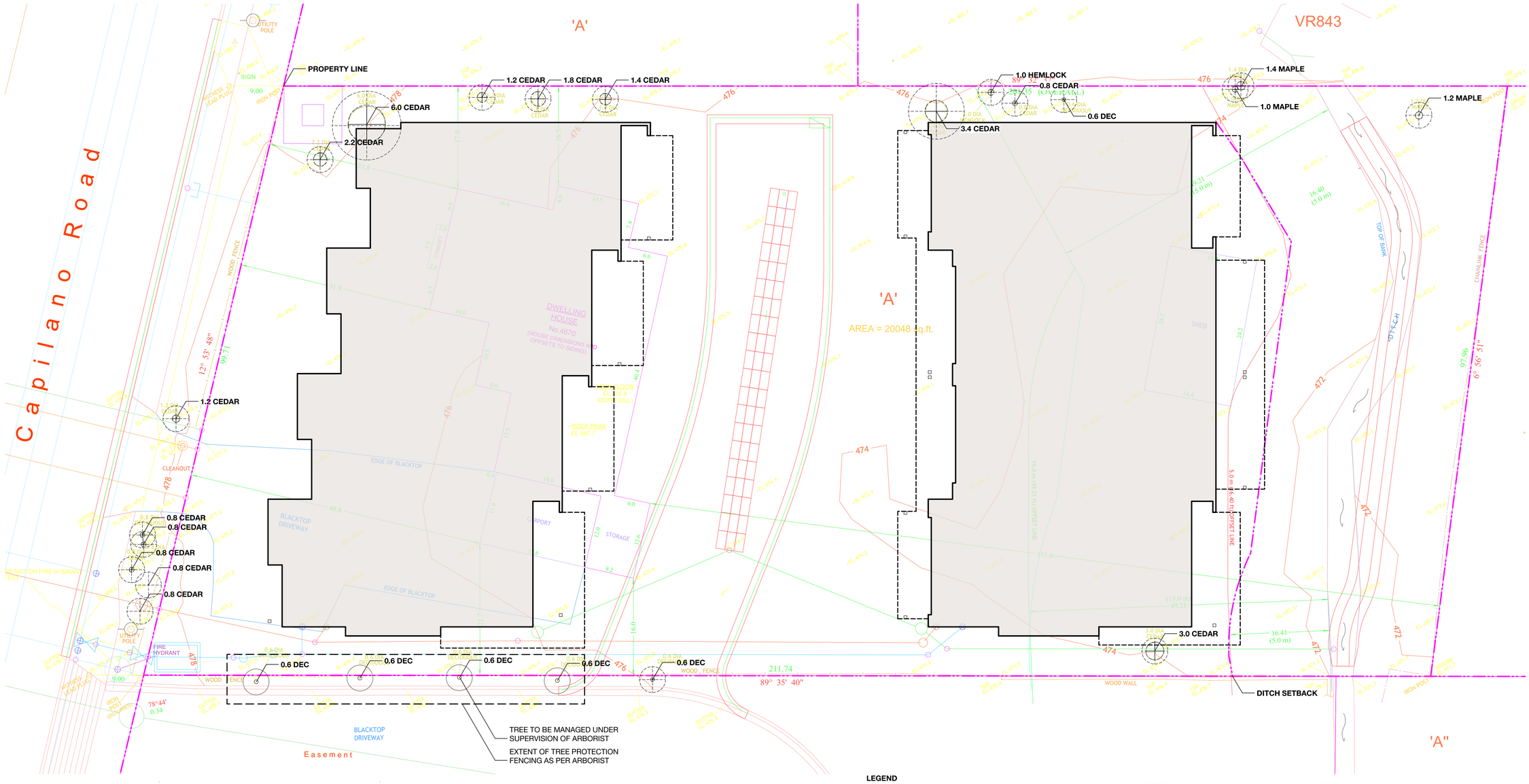
t | 604.683.1456 f | 604.683.1459 w | www.etala.ca

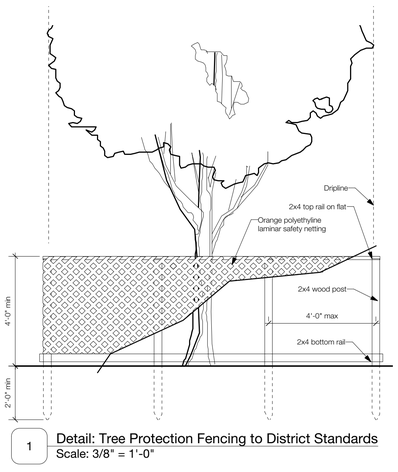
CONSULTANT TEAM

OWNER:	Wedgewood Capilano Homes LTD
ARCHITECT:	Raymond Letkeman Architects Inc
STRUCTURAL:	***
MECHANICAL:	***
ELECTRICAL:	***
LANDSCAPE:	ETA Landscape Architecture

Re-Issued for DP **02/26/2018**

DRAWING LIST





1 Detail: Tree Protection Fencing to District Standards
Scale: 3/8" = 1'-0"

LEGEND

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- TREE PROTECTION FENCE TO DISTRICT STANDARDS

0 5 10 15 20 25 FT

TREE MANAGEMENT PLAN TO BE READ IN CONJUNCTION WITH THE ARBORIST REPORT

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
A	17-08-08	Issued for RZ and DP
B	18-02-26	Re-Issued for DP

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Project

4760 Capilano Road

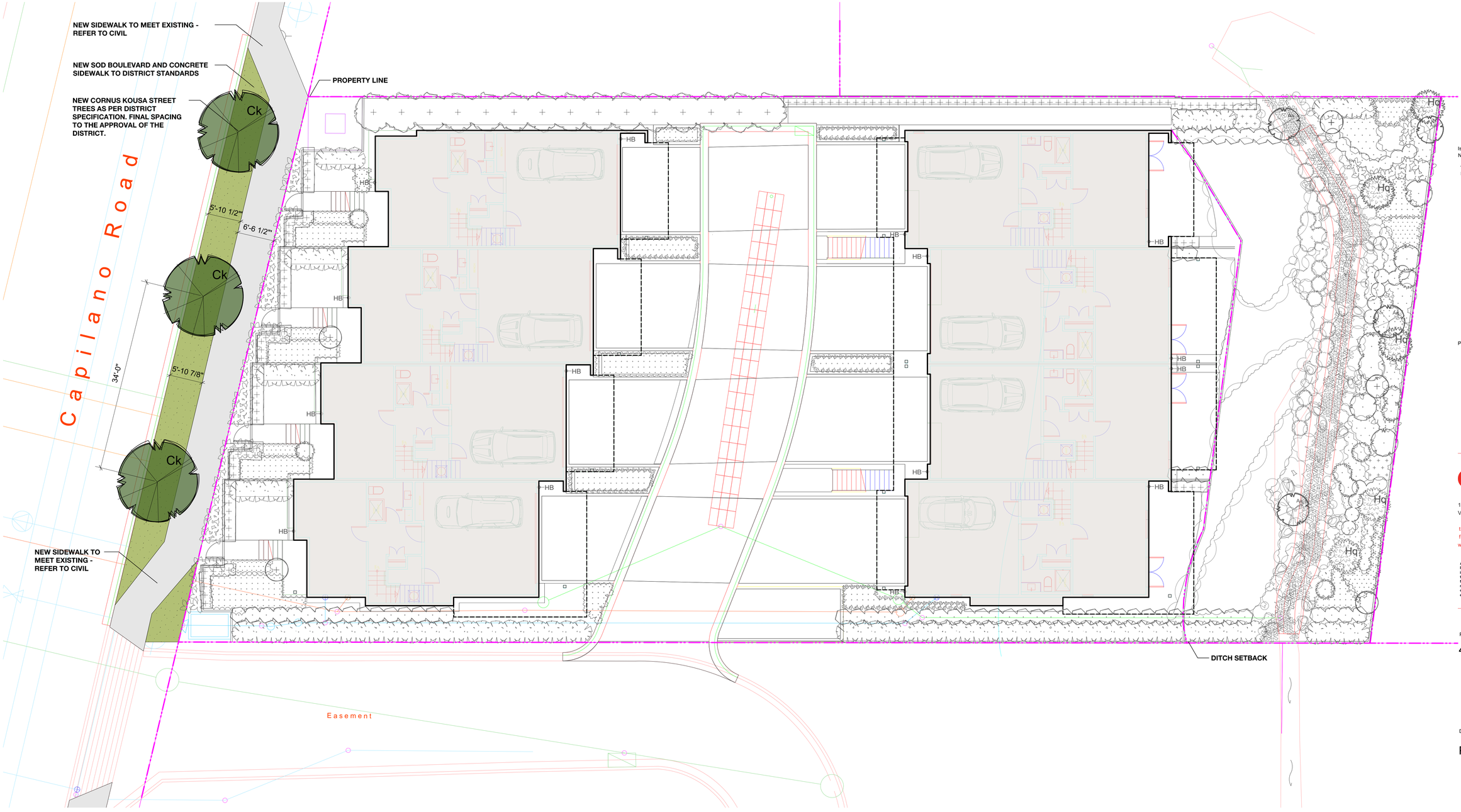
Drawing Title

Tree Management Plan

District Lot
595
Plan
9296

Project Manager	Project ID
GE	21718
Drawn By	Scale
VG	1/8"=1'0"
Reviewed By	Drawing No.
Reviewed By	L1.0
Date	of
17/08/01	11

Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx



0 5 10 15 20 25 FT

District Lot
Plan
9296

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
A	17-08-08	Issued for RZ and DP
B	18-02-02	Re-Issued for DP

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Project

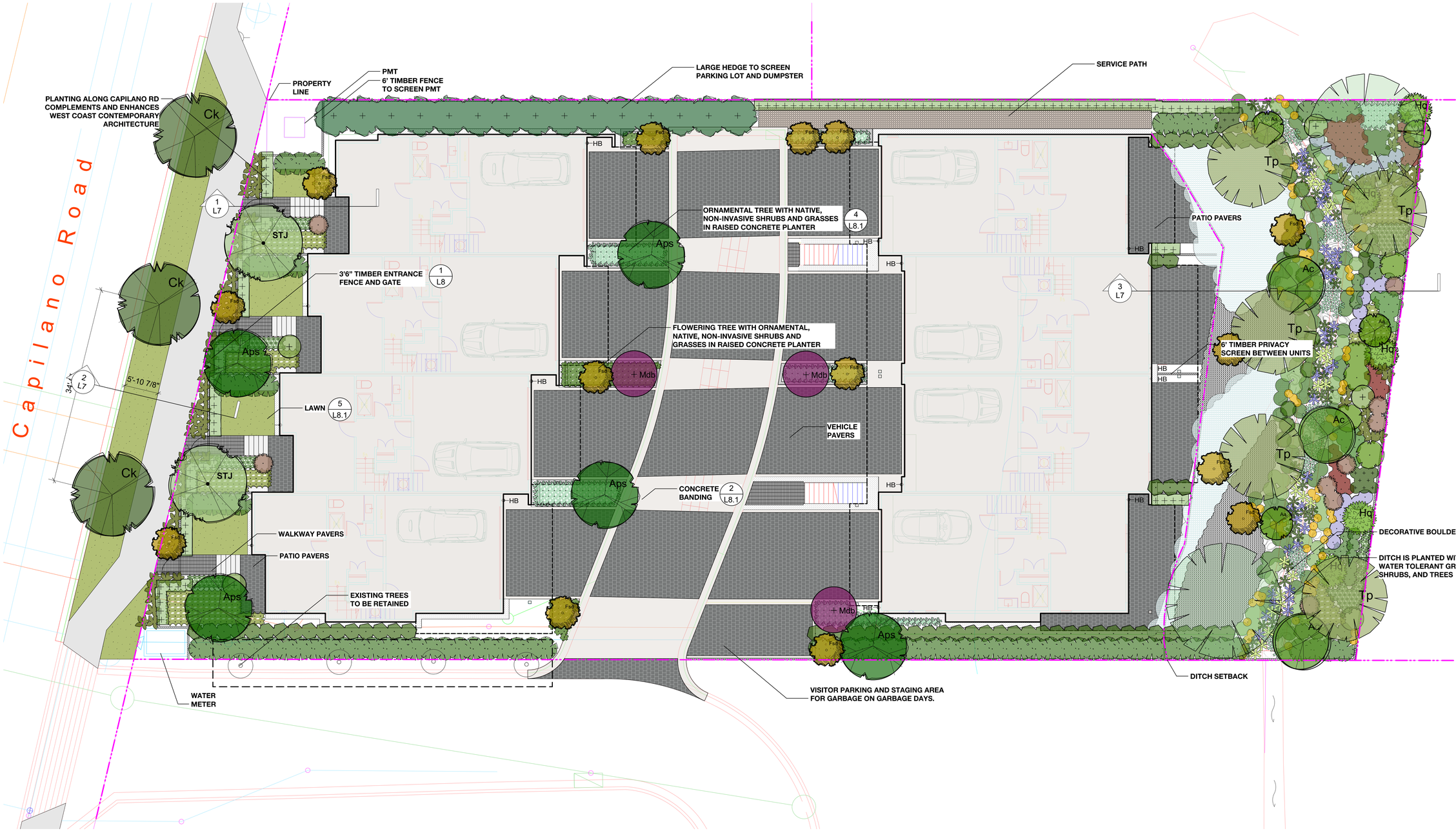
4760 Capilano Road

Drawing Title

Public Realm Plan

Project Manager: GE	Project ID: 21718
Drawn By: VG	Scale: 1/8"=1'0"
Reviewed By: Reviewed By	Drawing No.: L2.0
Date: 17/08/01	of 11

Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx



0 5 10 15 20 25 FT

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
A	17-08-08	Issued for RZ and DP
B	18-02-02	Re-Issued for DP

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Project

4760 Capilano Road

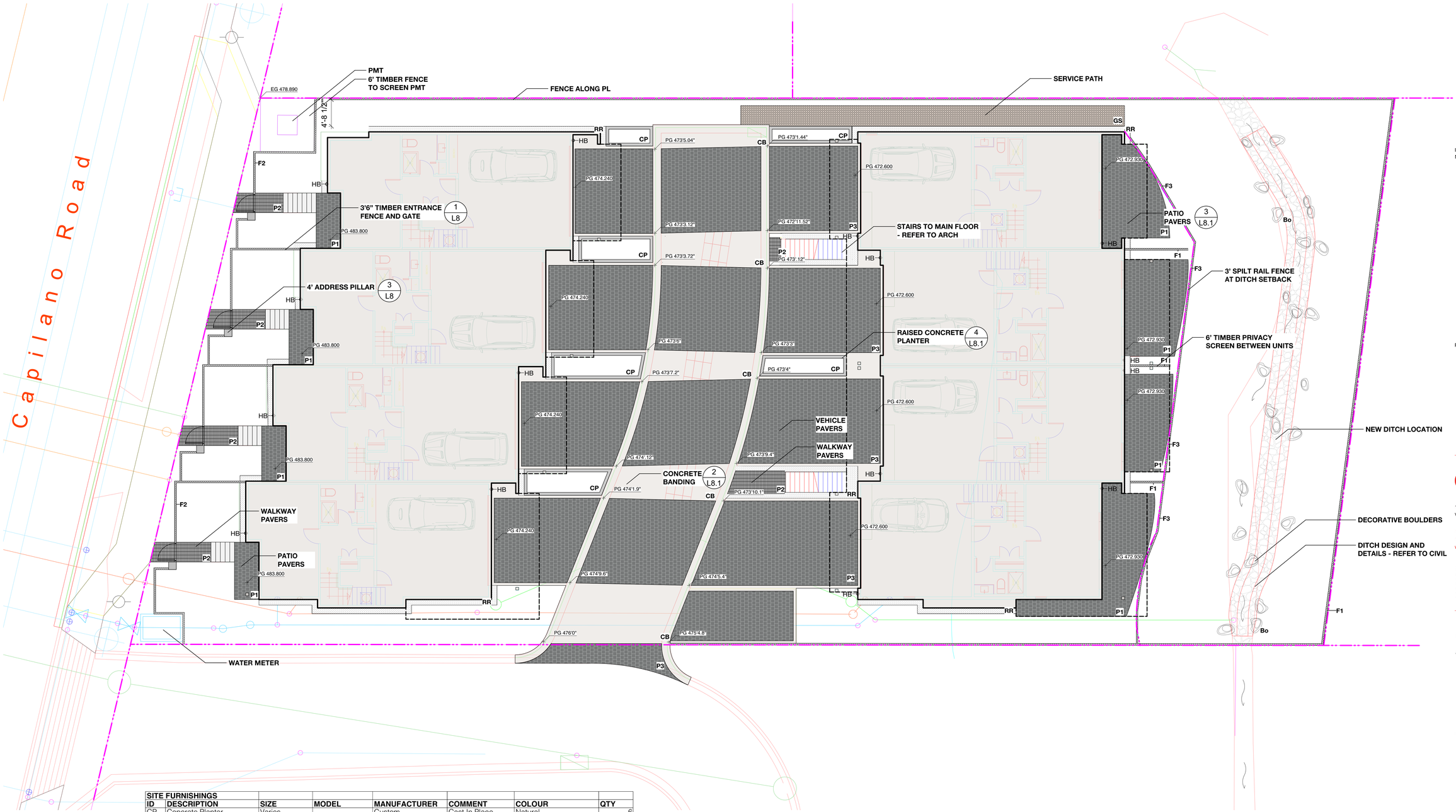
Drawing Title

Landscape Plan

District Lot
Site Plan
9296

Project Manager	Project ID
GE	21718
Drawn By	Scale
VG	1/8"=1'0"
Reviewed By	Drawing No.
Reviewed By	L3.0
Date	of
17/08/02	11

Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx



SITE FURNISHINGS							
ID	DESCRIPTION	SIZE	MODEL	MANUFACTURER	COMMENT	COLOUR	QTY
CP	Concrete Planter	Varies		Custom	Cast In Place	Natural	6
SITE LIGHTING							
SW	Step / Wall Light						10
MATERIALS							
ID	**DESCRIPTION**	**SIZE**	**MODEL**	**MANUFACTURER**	**COMMENT**	**COLOUR**	**QTY**
CB	Concrete Banding			Custom	Saw-Cut	White	
Bo	Boulders	Varies			On-Site Stockpile		
F1	6' Fence	Varies		Custom	Cedar	Natural	
F2	3'6" Entry Fence and Gate	Varies		Custom	Cedar	Natural	
F3	3' Spilt Rail Fence	Varies					
GS	Gravel Service Entry					Natural	
P1	Paver 1		Piazza Series	Abbotsford Concrete		Charcoal	
P2	Paver 2		Piazza Series	Abbotsford Concrete		Natural	
P3	Paver 3		Classic Standard	Abbotsford Concrete		Charcoal	
RR	River Rock Drip Strip					Natural	
NOTE: IN THE EVENT OF A DISCREPANCY BETWEEN THE SITE FURNISHINGS, MATERIALS, AND LIGHTING SCHEDULE QUANTITIES AND THE LANDSCAPE PLANS, THE LANDSCAPE PLANS TAKE PRECEDENCE.							

0 5 10 15 20 25 FT

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
A	17-08-08	Issued for RZ and DP
B	18-02-02	Re-Issued for DP

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Project

4760 Capilano Road

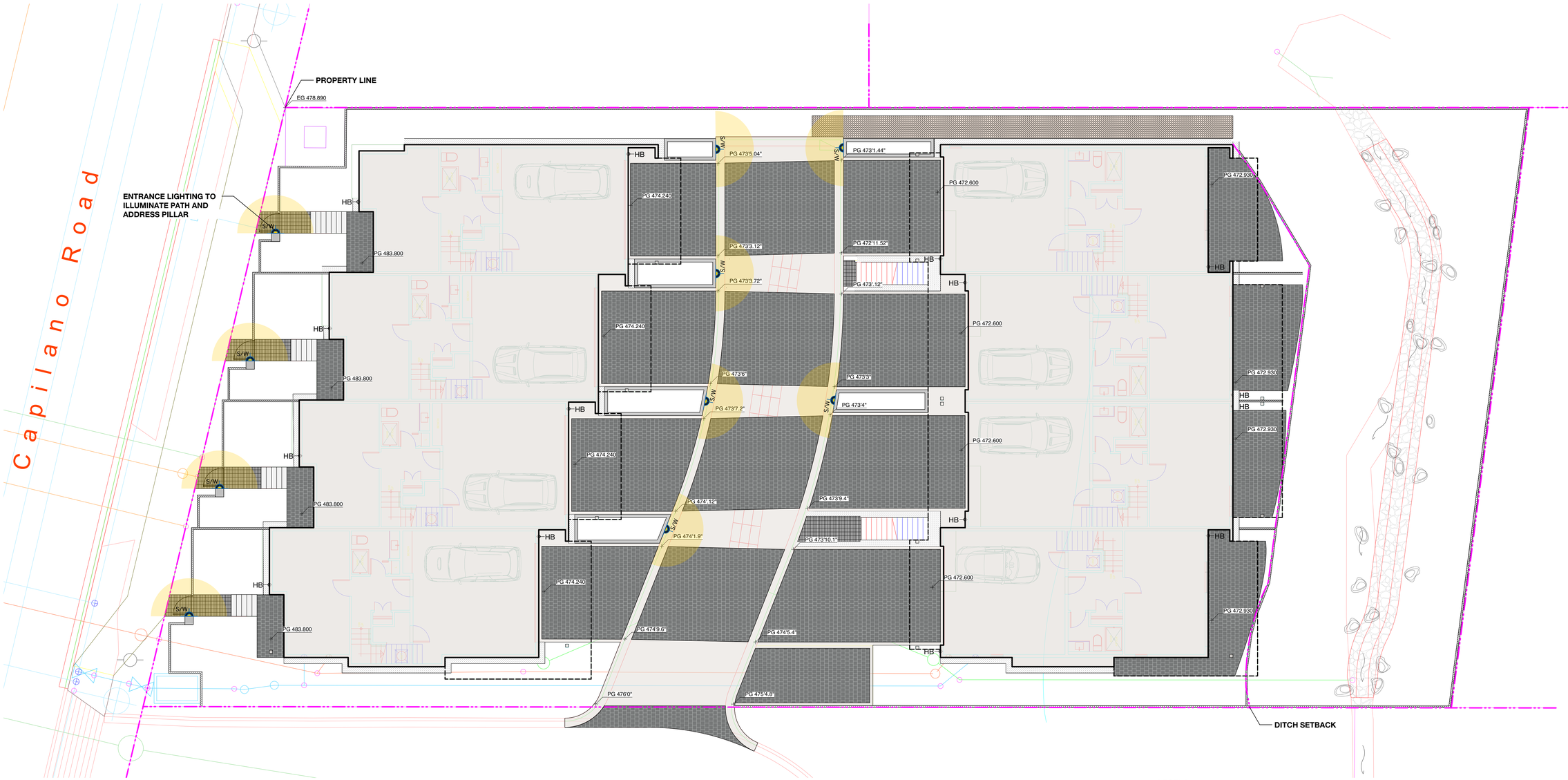
Drawing Title

Hardscape Plan

District Lot
5985 Plan
9296

Project Manager	Project ID
GE	21718
Drawn By	Scale
VG	1/8"=1'0"
Reviewed By	Drawing No.
Reviewed By	L4.0
Date	of
17/08/02	11

Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx



LEGEND

S/W **STEP / WALL LIGHT**

0 5 10 15 20 25 FT

SITE FURNISHINGS							
ID	**DESCRIPTION**	**SIZE**	**MODEL**	**MANUFACTURER**	**COMMENT**	**COLOUR**	**QTY**
CP	Concrete Planter	Varies		Custom	Cast In Place	Natural	6
SITE LIGHTING							
SW	Step / Wall Light						10
MATERIALS							
ID	**DESCRIPTION**	**SIZE**	**MODEL**	**MANUFACTURER**	**COMMENT**	**COLOUR**	**QTY**
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F3	3' Spilt Rail Fence	Varies					
GS	Gravel Service Entry					Natural	
P1	Paver 1		Piazza Series	Abbotsford Concrete		Charcoal	
P2	Paver 2		Piazza Series	Abbotsford Concrete		Natural	
P3	Paver 3		Classic Standard	Abbotsford Concrete		Charcoal	
RR	River Rock Drip Strip					Natural	
NOTE: IN THE EVENT OF A DISCREPANCY BETWEEN THE SITE FURNISHINGS, MATERIALS, AND LIGHTING SCHEDULE QUANTITIES AND THE LANDSCAPE PLANS, THE LANDSCAPE PLANS TAKE PRECEDENCE.							

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
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B	18-02-02	Re-Issued for DP

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Project

4760 Capilano Road

Drawing Title

Lighting Plan

District Lot
Plan
595
9296

Project Manager: GE	Project ID: 21718
Drawn By: VG	Scale: 1/8"=1'0"
Reviewed By: Reviewed By	Drawing No.: L5.0
Date: 17/08/02	of 11

Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx

PLANTING ALONG CAPILANO RD COMPLEMENTS AND ENHANCES WEST COAST CONTEMPORARY ARCHITECTURE

LARGE HEDGE TO SCREEN PARKING LOT AND DUMPSTER

PROPERTY LINE

ORNAMENTAL TREE WITH NATIVE, NON-INVASIVE SHRUBS AND GRASSES IN RAISED CONCRETE PLANTER

FLOWERING TREE WITH ORNAMENTAL, NATIVE, NON-INVASIVE SHRUBS AND GRASSES IN RAISED CONCRETE PLANTER

DECORATIVE BOULDERS

DITCH IS PLANTED WITH NATIVE, NON-INVASIVE, WATER TOLERANT GRASSES, SHRUBS, AND TREES

DITCH SETBACK

Capilano Road

34'-0"

5'-10 7/8"

LAWN

4 L8.1

5 L8.1

15-Tocc
3-Sr
20-Amb
5-Tmh
7-Ps
26-Amb
1-Rs
48-Lm
6-Tmh
STJ
4-Sr
7-Tmh
14/Ps
26-Amb
1-Ct
48-Lm
7-Tmh
Aps
4-Sr
7-Tmh
15-Ps
26-Amb
1-Rs
48-Lm
7-Tmh
STJ
4-Sr
7-Tmh
15-Ps
26-Amb
1-Ct
88-Lm
8-Ps
8-Tmh
Aps
16-Ajs
24-Auu
25-Sr
16-Auu
28-Ae
52-Ae
Aps
65-Auu
Mdb
Mdb
42-Ae
59-Ae
Aps
45-Ae
30-Ajs
30-Sr
Mdb
Aps
3-Tmh
2-Ajs
3-Ajs
4-Tmh
56-Tmh
8-Ajs
4-Sr
8-Dc
18-RhG
11-Ms
11-Bs
4-Sr
31-Ae
Hq
4-Ct
8-Dc
27-Fa
10-Fa
8-Vc
16-Ps
13-Is
14-Je
5-Ca
33-Lm
12-Bs
55-Amb
1-Ms
3-Dc
37-RhG
4-Vot
39-Ms
3-Vot
11-Bs
10-Mn
6-Vc
33-Lm
23-Is
10-Fa
9-Ps
16-Sa
6-Aao
10-Mn
21-Bs
10-Fa
65-Csk
18-Je
8-Dc
7-Rs
6-Vc
26-RhG
5-Vot
8-Bs
15-Gp
18-Ca
11-Je
67-Amb
31-Lm
1-Ct
4-Ajs
4-Bs
4-Sr
Tp
Ac
Hq
Tp
Ac
Tp
Hq
Tp
Ac
Tp
5%-Maa
30%-Cos
20%-Csk
18%-Lp
20%-Aa
7%-Gs
20%-Hs
20%-Lpp
15%-Vo
25%-Hh
10%-Po
5%-Maa
30%-Cos
20%-Csk
18%-Lp
20%-Aa
7%-Gs
20%-Hs
20%-Lpp
15%-Vo
25%-Hh
10%-Po
HB
Fsd

0 5 10 15 20 25 FT

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
A	17-08-08	Issued for RZ and DP
B	18-02-02	Re-Issued for DP

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Project

4760 Capilano Road

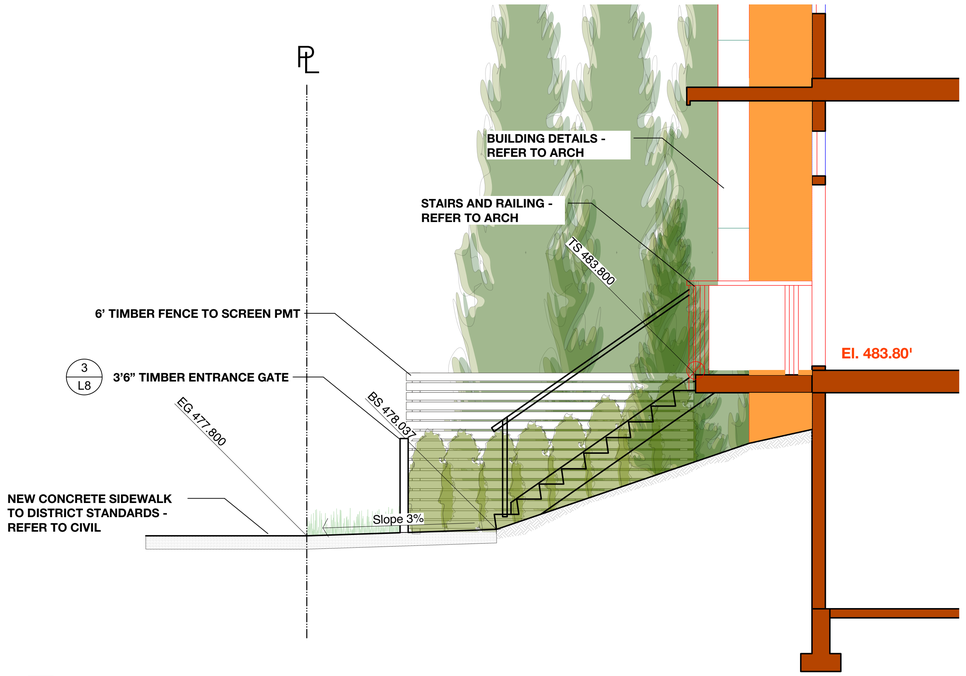
Drawing Title

Planting Plan

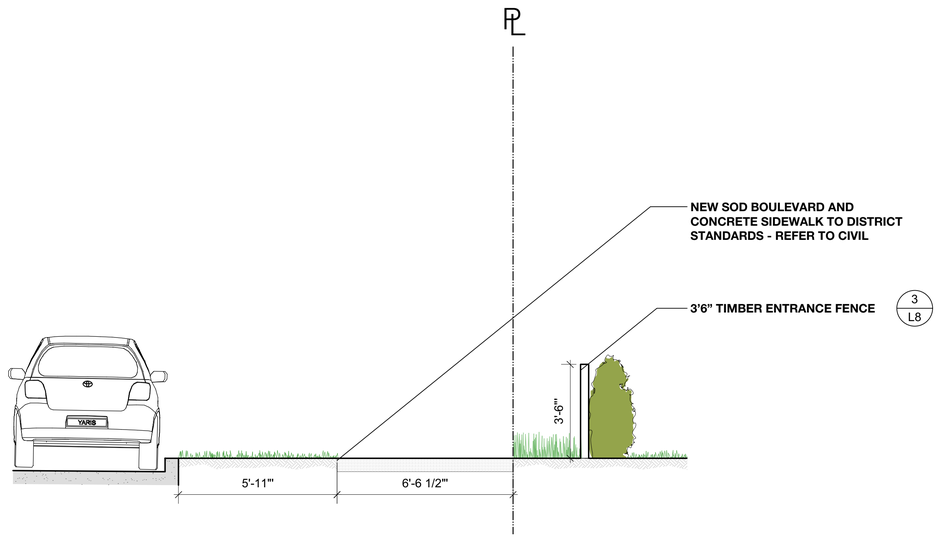
District Lot
595, Plan
9296

Project Manager: GE	Project ID: 21718
Drawn By: VG	Scale: 1/8"=1'0"
Reviewed By: Reviewed By	Drawing No.: L6.0
Date: 17/08/02	of 11

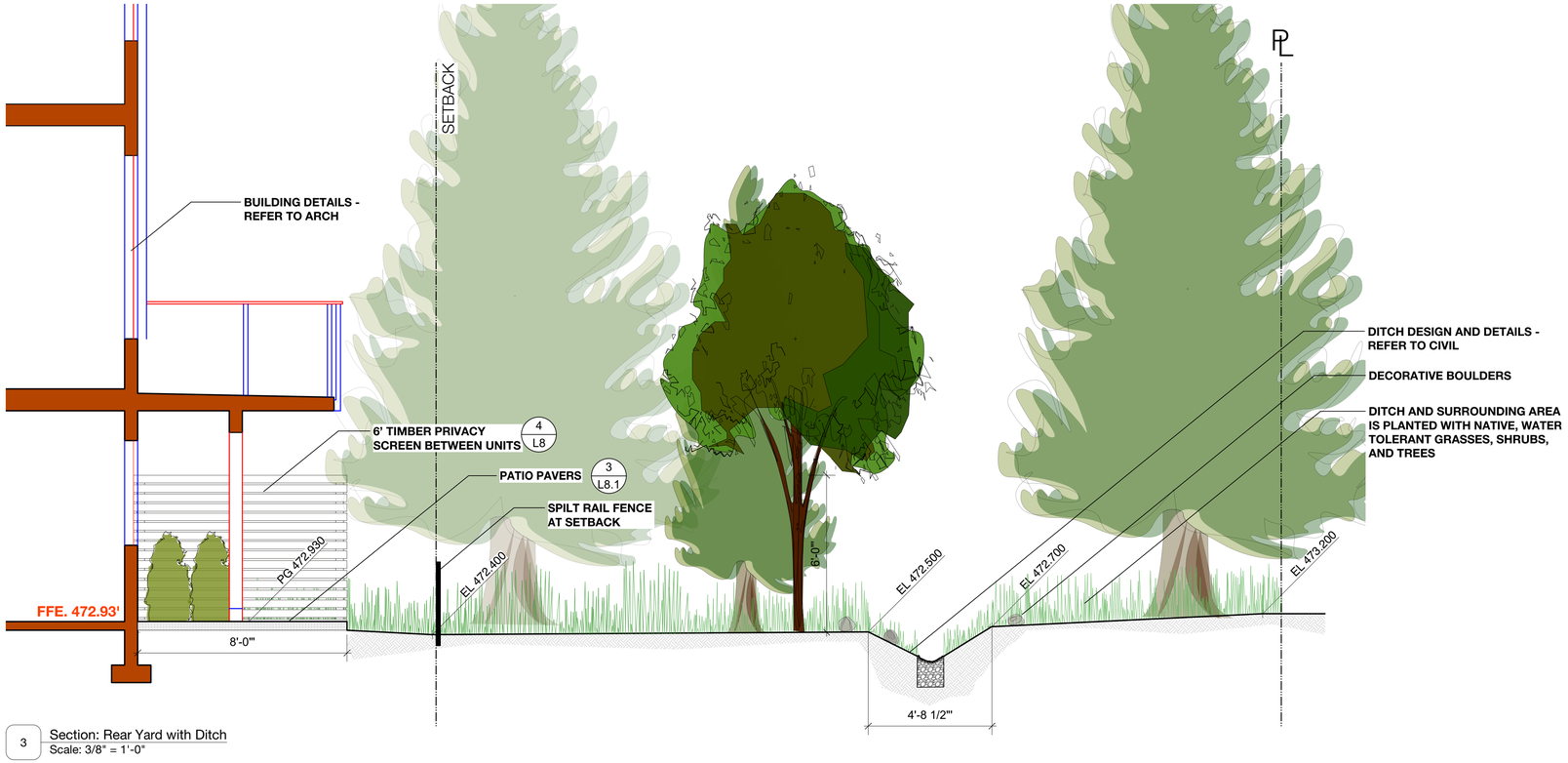
Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx



1 Section: Front Yard through Patio
Scale: 3/8" = 1'-0"



2 Section: Capilano Road Street Frontage
Scale: 3/8" = 1'-0"



3 Section: Rear Yard with Ditch
Scale: 3/8" = 1'-0"

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
A	17-08-08	Issued for RZ and DP
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Project

4760 Capilano Road

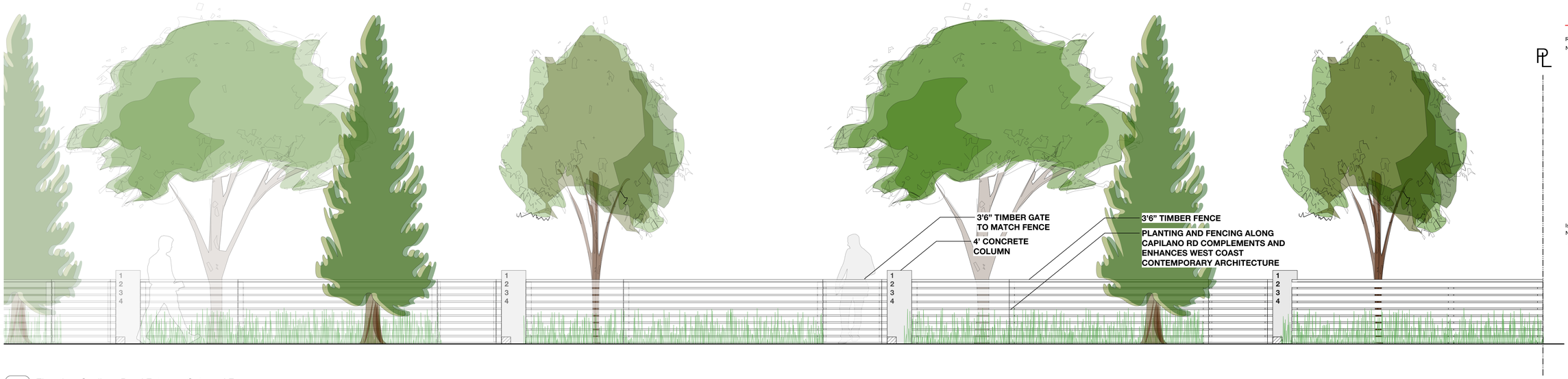
Drawing Title

Landscape Sections

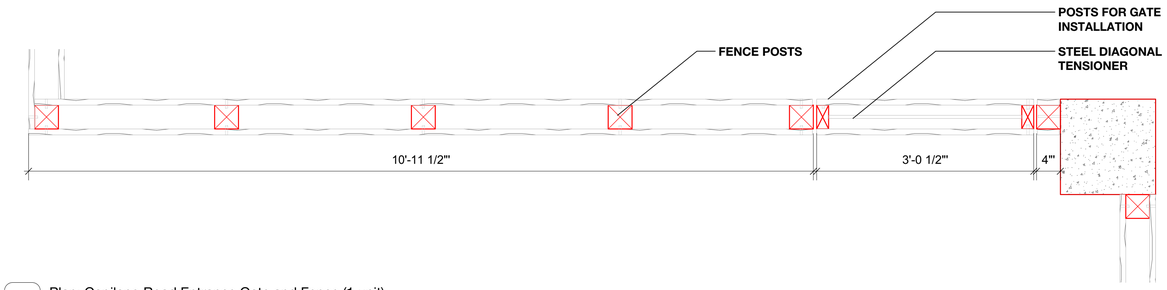
District Lot 598, Plan 9296

Project Manager	Project ID
GE	21718
Drawn By	Scale
VG	1/8"=1'0"
Reviewed By	Drawing No.
Reviewed By	L7.0
Date	of
17/08/02	11

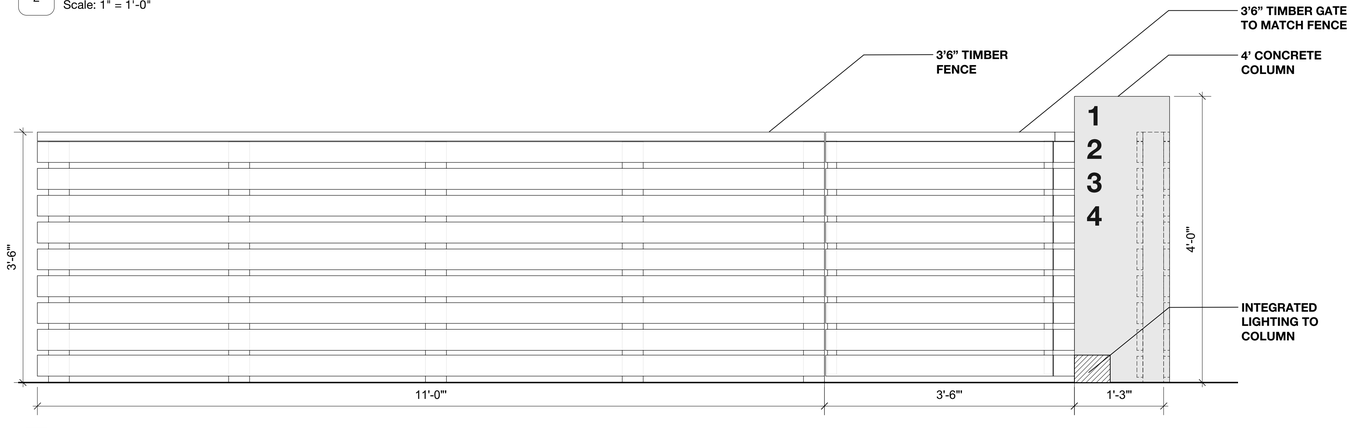
Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx



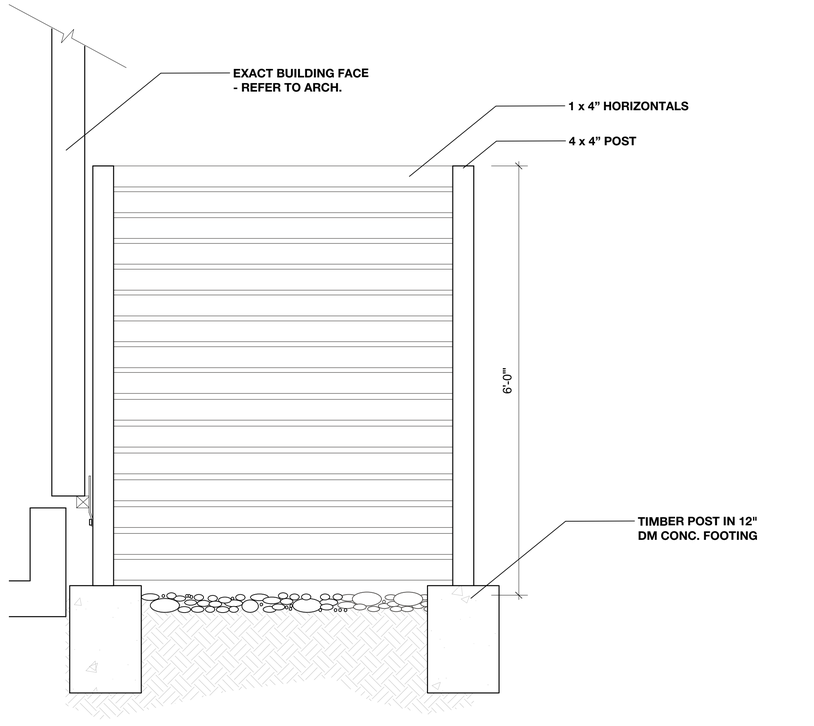
1 Elevation: Capilano Road Entrance Gate and Fence
Scale: 3/8" = 1'-0"



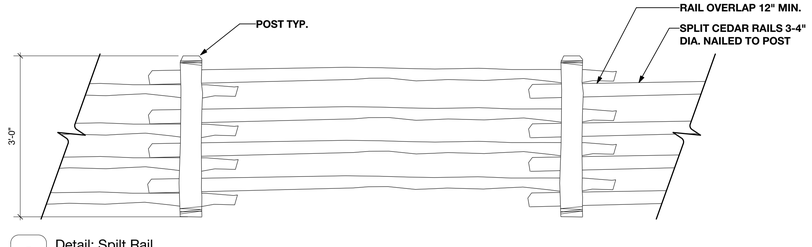
2 Plan: Capilano Road Entrance Gate and Fence (1 unit)
Scale: 1" = 1'-0"



3 Elevation: Capilano Road Entrance Gate and Fence (1 unit)
Scale: 1" = 1'-0"



4 Section: Privacy Screen
Scale: 1" = 1'-0"



5 Detail: Spilt Rail
Scale: 3/4" = 1'-0"

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
A	17-08-08	Issued for RZ and DP
B	18-02-02	Re-Issued for DP

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Project

4760 Capilano Road

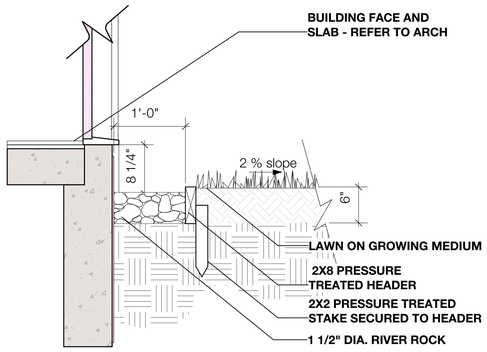
Drawing Title

Fence, Screen and Gate Details

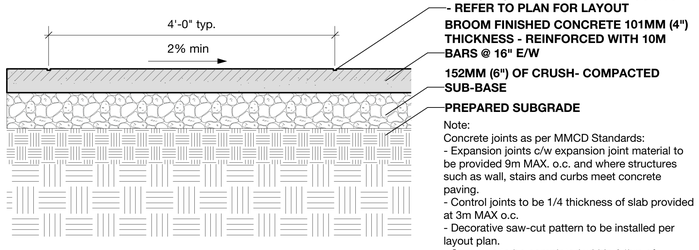
District Lot
Strata Plan
9296

Project Manager	Project ID
GE	21718
Drawn By	Scale
VG	As Noted
Reviewed By	Drawing No.
Reviewed By	L8.0
Date	of
17/08/03	11

Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx

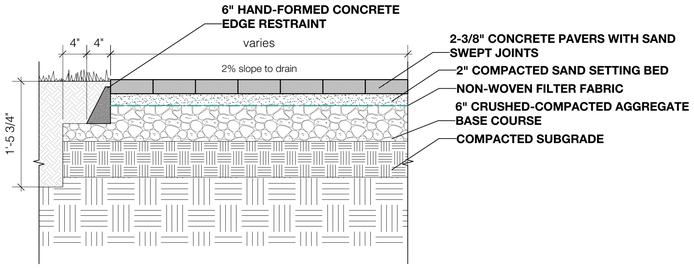


1 Detail: Drip strip, on grade
Scale: 1" = 1'-0"

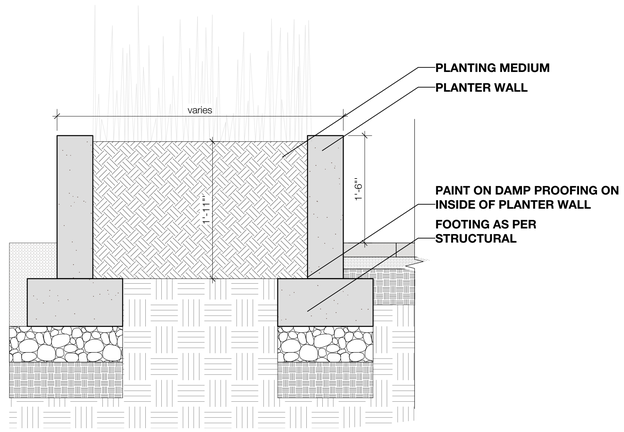


Note:
Concrete joints as per MMCD Standards:
- Expansion joints c/w expansion joint material to be provided 9m MAX. o.c. and where structures such as wall, stairs and curbs meet concrete paving.
- Control joints to be 1/4 thickness of slab provided at 3m MAX o.c.
- Decorative saw-cut pattern to be installed per layout plan.
- Saw-cuts to be completed within 24hrs of pouring the slab.

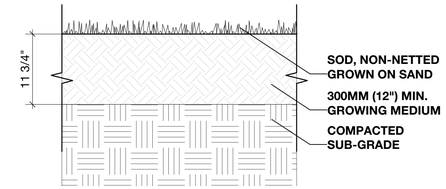
2 Detail: Concrete, on Grade
Scale: 1" = 1'-0"



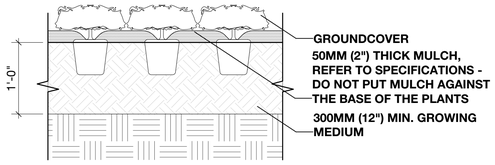
3 Pavers on grade
Scale: 1" = 1'-0"



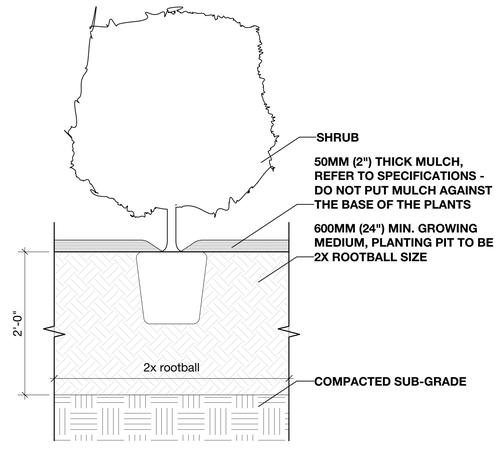
4 Detail: CIP Concrete Planter, on Grade
Scale: 1" = 1'-0"



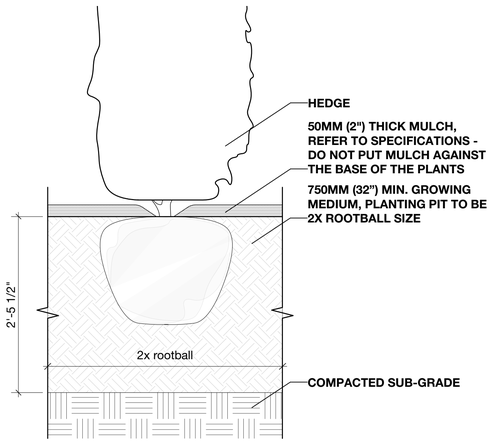
5 Detail: Lawn installation on grade
Scale: 1" = 1'-0"



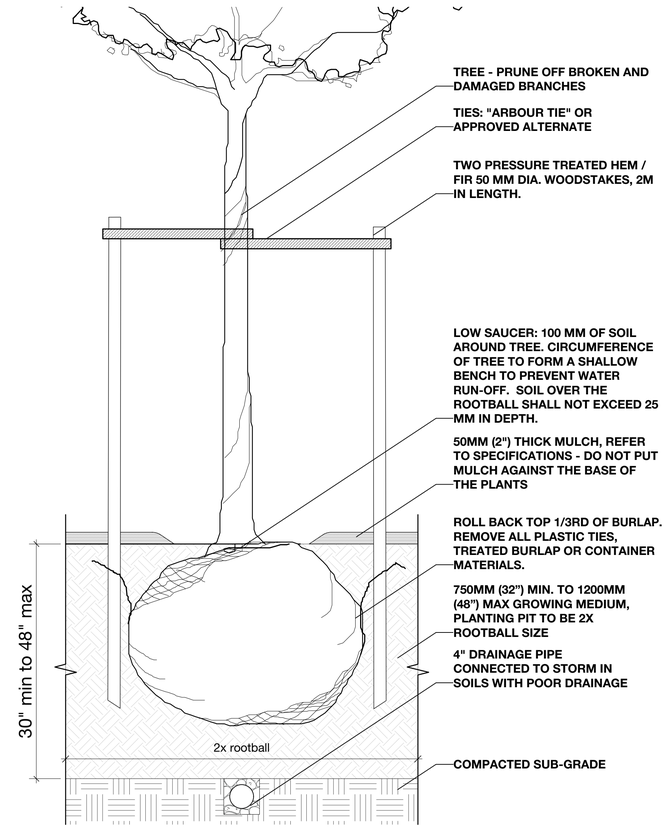
6 Detail: Groundcover installation on grade
Scale: 1" = 1'-0"



7 Detail: Shrub installation on grade
Scale: 1" = 1'-0"

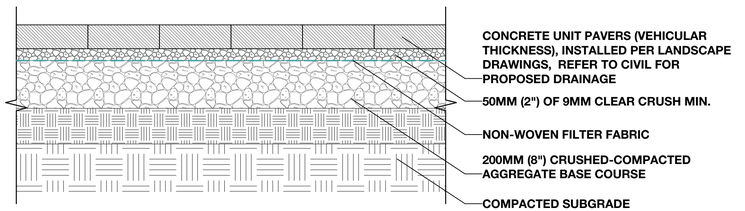


8 Detail: Hedge installation on grade
Scale: 1" = 1'-0"



Minimum width of tree pit shall be the rootball diameter plus 24"
Tree wells shall be 36" in depth
Tree wells in boulevards shall be connected by a continuous soil trench of at least 24"x in depth

9 Detail: Tree installation on grade
Scale: 1" = 1'-0"



NOTE:
DETAIL TO BE COORDINATED WITH CIVIL CONSULTANT

10 Detail: Vehicular Concrete Unit Pavers - At Grade
Scale: 1" = 1'-0"

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
A	17-08-08	Issued for RZ and DP
B	18-02-02	Re-Issued for DP

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Project

4760 Capilano Road

Drawing Title

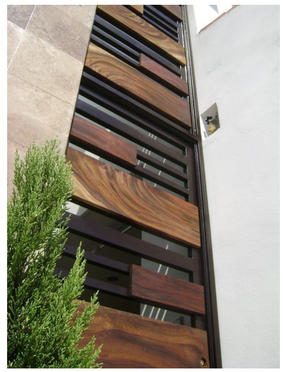
Landscape Details

District Lot
598, Plan
9296

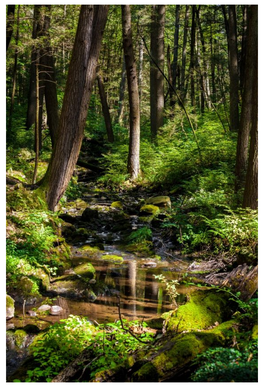
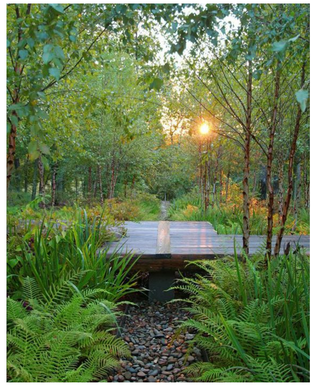
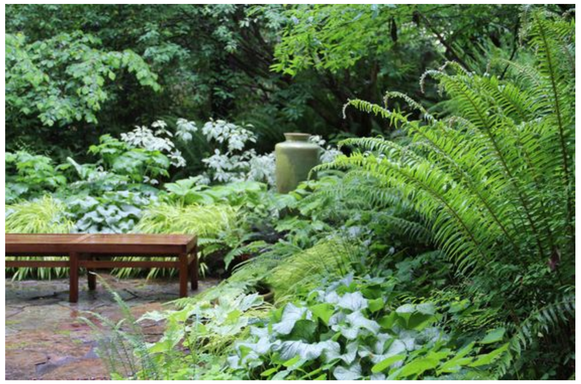
Project Manager	Project ID
GE	21718
Drawn By	Scale
VG	1/8"=1'0"
Reviewed By	Drawing No.
Reviewed By	L8.1
Date	of
17/08/02	11

Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx

FENCING, SCREENS AND GATES

PLANTING


CONCRETE PLANTERS

TREES

AMELANCHIER ALNIFOLIA

ACER CIRCINATUM

ACER PALMATUM 'SEIRYU'

FRAXINUS OXYCARPA

MAGNOLIA x 'DAYBREAK'

STYRAX JAPONICA

SHRUBS+GROUNDCOVERS

ASARUM EUROPEAUM

AMERIA MARITIMA 'BLOODSTONE'

ARCTOSTAPHYLOS UVA-URSI

BLECHNUM SPICANT

LIRIOPE MUSCARI 'BIG BLUE'

TAXUS MEDIA 'HICKSII'

Revision

No.	Date	Revision Notes

Issue

No.	Date	Issue Notes
A	17-08-08	Issued for RZ and DP
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Project

4760 Capilano Road

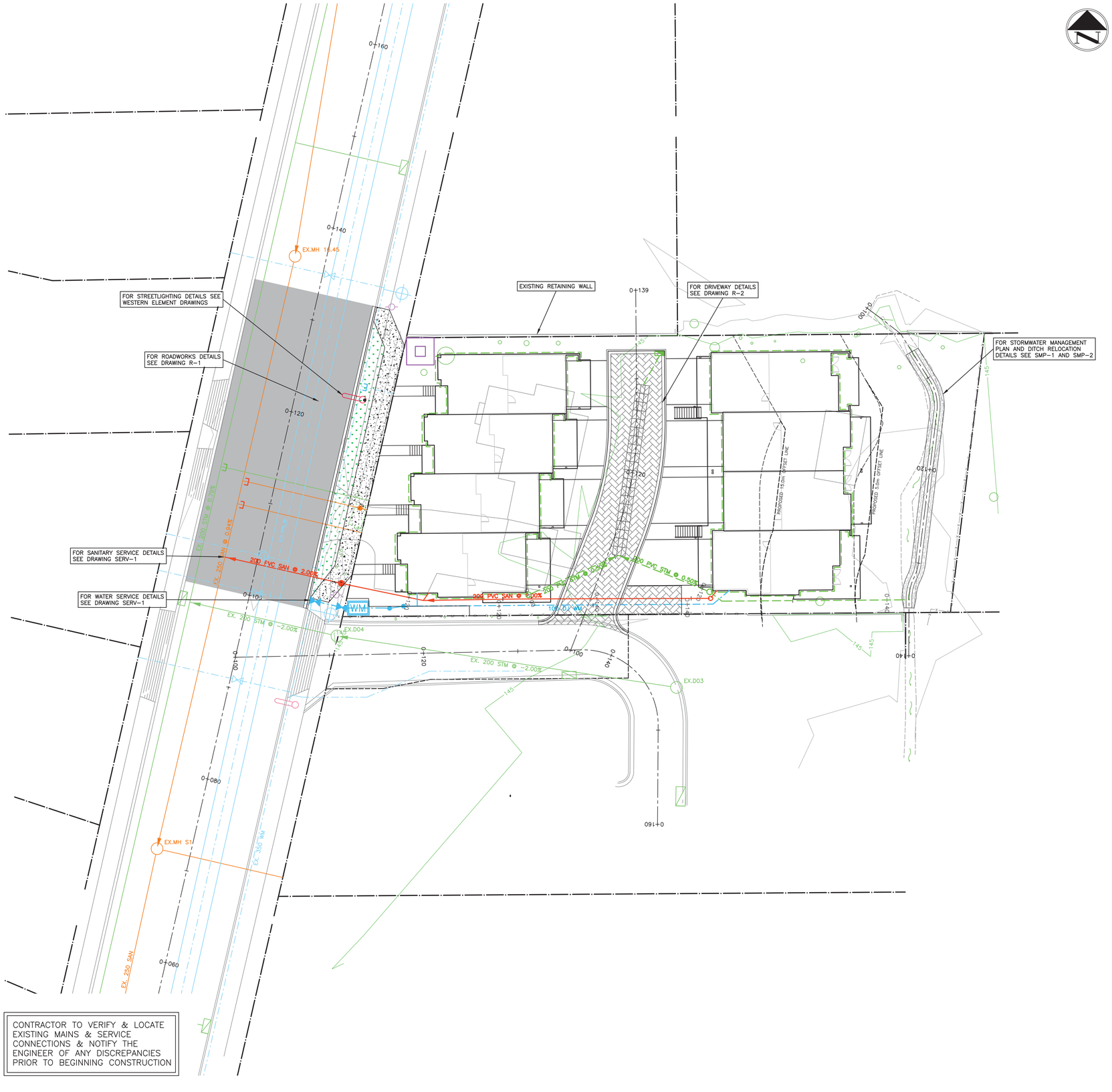
Drawing Title

Precedent Images

District Lot
595, Plan
9296

Project Manager	Project ID
GE	21718
Drawn By	Scale
VG	1/8"=1'0"
Reviewed By	Drawing No.
Reviewed By	L9.0
Date	of
17/05/04	11

Plot Date:
18-3-12
21718 4760 Cap Rd Master v2018.vwx

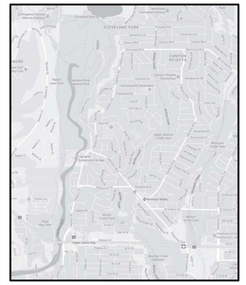


GENERAL NOTES

1. THE CONTRACTOR SHALL ENSURE THAT ALL APPROVALS REQUIRED FOR THE PROPOSED WORK HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
2. ALL CONSTRUCTION WITHIN THE PROPERTY MUST CONFORM TO THE MUNICIPAL STANDARDS, MASTER MUNICIPAL SPECIFICATIONS, CURRENT B.C. BUILDING CODE, & B.C. PLUMBING CODE.
3. A PRE-CONSTRUCTION MEETING BETWEEN ENGINEER, THE CONTRACTOR, AND DISTRICT OF NORTH VANCOUVER IS REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION. TO BE COORDINATED BY THE CONTRACTOR.
4. CONTRACTOR TO PROVIDE EMERGENCY CONTACT LIST, INSURANCE AND SURETY DOCUMENTATION AND PROPOSED SCHEDULE OF WORK TO THE DNV AND THE ENGINEER AT THE PRE-CONSTRUCTION MEETING.
5. THE CONTRACTOR IS TO OBTAIN A DISTRICT OF NORTH VANCOUVER HIGHWAY USE PERMIT PRIOR TO COMMENCING WORKS.
6. THE CONTRACTOR MUST NOTIFY ENGINEER THEN THE DISTRICT OF NORTH VANCOUVER'S CONSTRUCTION OFFICE @ 604-990-3886, 48 HOURS PRIOR TO STARTING CONSTRUCTION TO ESTABLISH AN INSPECTION SCHEDULE.
7. ALL CONSTRUCTION IN DISTRICT OF NORTH VANCOUVER (DNV) ROAD R.O.W. MUST CONFORM TO THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) AND DISTRICT OF NORTH VANCOUVER DEVELOPMENT SERVICING BYLAW #8145 SCHEDULE D.2, SUPPLEMENTARY SPECIFICATIONS AND STANDARD DETAIL DRAWINGS. ALL MATERIALS AND PRODUCTS TO BE IN ACCORDANCE WITH DNV ACCEPTED MATERIAL AND PRODUCTS LIST.
8. ALL CONSTRUCTION WITHIN THE PROPERTY MUST CONFORM TO THE MASTER MUNICIPAL SPECIFICATIONS, B.C. BUILDING CODE & B.C. PLUMBING CODE.
9. THE CONTRACTOR WILL CONSTRUCT ALL WORKS TO THE SATISFACTION OF THE INSPECTORS FROM THE ENGINEER AND THE REGULATORY AUTHORITY (THE "DNV"). IF APPLICABLE ADDITIONALLY, THE TELUS WORKS UNDER THE DIRECTION AND TO THE SATISFACTION OF THE TELUS INSPECTOR, HYDRO WORKS TO SATISFACTION OF THE BC HYDRO INSPECTOR, FORTIS BC WORKS TO SATISFACTION OF THE FORTIS BC INSPECTOR, SHAW WORKS TO SATISFACTION OF THE SHAW INSPECTOR. THE CONTRACTOR WILL FORWARD TO THE ENGINEER CERTIFICATION OF ACCEPTANCE OR APPROVAL FROM THE ABOVE NOTED INSPECTORS ON COMPLETION OF THE WORK. ELECTRICAL WORKS, IF APPLICABLE TO ALSO BE UNDER PERMIT WITH BC ELECTRICAL SAFETY BRANCH WITH A COPY OF PERMIT AND SIGN OFF TO BE FORWARDED TO THE ENGINEER BY THE CONTRACTOR. CONTRACTOR TO GIVE MINIMUM 48 HOURS NOTICE TO RELEVANT INSPECTOR TO ALLOW FOR INSPECTION ON WORKS AND UPDATE ENGINEER ON SAME.
10. THE CONTRACTOR WILL PERFORM AT HIS OWN COST ALL TESTING REQUIRED BY THE REGULATORY AUTHORITY (THE "DNV"), MMCD AND THE ENGINEER. TESTING SHALL BE DONE BY AN INDEPENDENT SPECIALTY TESTING FIRM. CONTRACTOR TO GIVE ENGINEER 48 HOURS' NOTICE ON ALL TESTING. COPIES OF TESTS TO BE FORWARDED DIRECTLY BY THE TESTING FIRM TO ENGINEER AND GEOTECHNICAL ENGINEER BY EMAIL.
11. LOCATIONS OF EXISTING UNDERGROUND SERVICES HAVE BEEN DETERMINED FROM UTILITY AS-CONSTRUCTED DRAWINGS AND THIRD PARTY SURVEY. CONTRACTOR TO CONTACT BC ONE CALL AND PROVIDE COPIES TO ENGINEER AND VERIFY THE LOCATION OF ALL EXISTING SERVICES AND TO NOTIFY ENGINEER OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS PRIOR TO BEGINNING OF CONSTRUCTION.
12. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR EXISTING SERVICES AND ANY SERVICES DISTURBED ARE TO BE REPLACED TO THE SATISFACTION OF THE APPROVING AUTHORITY, THE ENGINEER AND/OR APPROPRIATE UTILITY CORPORATION.
13. ALL CUTS IN EXISTING ASPHALT REQUIRED FOR TRENCHING SHALL BE VERTICAL, MINIMUM 80 MM DEEP, WITH A DIAMOND SAW & REPLACED WITH MINIMUM 80 MM ASPHALT OR MATCHING EXISTING WHICHEVER IS GREATER UNLESS OTHERWISE NOTED, AFTER BACKFILL AND COMPACTION. ALL PAVEMENTS, BOULEVARDS, DRIVEWAYS, FENCES ETC. ARE TO BE RESTORED TO ORIGINAL OR BETTER CONDITION WHEN NO IMPROVEMENT IS PROPOSED UNDER THIS CONTRACT.
14. WHEN NO IMPROVEMENTS ARE PROPOSED UNDER THIS CONTRACT, THE EXISTING SECTION(S) OF ROADWAY, BOULEVARD OR LANDSCAPE SHALL BE KEPT CLEAN AND CLEAR FOR THE DURATION OF CONSTRUCTION AND LEFT IN SAME CONDITION AS PRIOR TO CONSTRUCTION.
15. THE CONTRACTOR'S SURVEYOR WILL RECORD AND CERTIFY ALL INFORMATION REQUIRED FOR THE ENGINEER TO PROVIDE A COMPLETE SET OF AS-CONSTRUCTED DRAWINGS INCLUDING CENTERLINE, FOG LINE, EDGE OF ASPHALT, SIGNS, INVERTS, RIMS, PIPE SIZES AND ALL APPURTENANCES. SEE SUPPLEMENTAL SPECIFICATION FOR DETAILS.
16. TRAFFIC CONTROL PER APPROVED TRAFFIC MANAGEMENT PLAN & THE MINISTRY OF TRANSPORTATION 'TRAFFIC MANUAL FOR WORK ON ROADWAYS'/TRANSPORTATION ASSOCIATION OF CANADA 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES'. CONTRACTOR TO INFORM ENGINEER AND DNV IMMEDIATELY OF ANY FORESEEN OR UNFORESEEN CHANGES TO THE SCHEDULE.
17. VEHICULAR ACCESS TO EXISTING DWELLINGS AND BUSINESS' TO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE CONTRACT.
18. PEDESTRIANS SHALL BE PROTECTED AT ALL TIMES. ANY CLOSURES OF THE SIDEWALK OR LANES TO BE COORDINATED WITH AND APPROVED BY THE ENGINEER AND A PERMIT FROM REGULATORY AUTHORITY OBTAINED BY THE CONTRACTOR AND FORWARDED TO ENGINEER. CONTRACTOR TO PROVIDE REQUIRED NOTICES.
19. RESIDENTS AND BUSINESSES DIRECTLY AFFECTED BY CONSTRUCTION OF THIS PROJECT SHALL BE GIVEN 48 HOURS WRITTEN NOTICE OF THE PROPOSED START OF CONSTRUCTION. IF CONSTRUCTION ENTERS ONTO PRIVATE PROPERTY, THE CONTRACTOR OR DEVELOPER'S AGENT WILL REQUIRED WRITTEN AUTHORIZATION FROM THE PRIVATE PROPERTY OWNER. ENGINEER TO BE FORWARDED COPY OF AUTHORISATION.
20. RETAINING DESIGNATED TREES IS OF PRIME IMPORTANCE. WHEN WORKING IN PROXIMITY TO A DESIGNATED TREE OR WHEN ROOTS ARE ENCOUNTERED, THE CONTRACTOR SHALL CONSULT A CERTIFIED ARBORIST BEFORE PROCEEDING TO PREVENT DAMAGE TO TREES.
21. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THAT NO SILT IS DISCHARGED TO THE STORM DRAINAGE SYSTEM, ROADWAYS OR ADJACENT PROPERTIES DURING THE COURSE OF CONSTRUCTION IN ACCORDANCE WITH DFO/MOELP'S "LAND DEVELOPMENT GUIDELINES FOR THE PROTECTION OF AQUATIC HABITAT". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL & MAINTAIN ALL EROSION & SEDIMENT CONTROL WORKS.
22. FOR BC HYDRO, TELUS, AND FORTIS INSTALLATION, SEE APPROPRIATE UTILITY COMPANY DRAWINGS AND SPECIFICATIONS. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY SHOULD SITE CONDITIONS BECOME ALTERED FROM EXPECTATION.
23. SEE LANDSCAPE DRAWINGS FOR PLANTING, SOFTSCAPE AND DECORATIVE PAVEMENT DETAILS.
24. SEE ELECTRICAL ENGINEER DRAWINGS FOR STREETLIGHT & TRAFFIC SIGNAL DETAILS.
25. ONSITE SERVICING WORKS TO COMMENCE ONLY AFTER OFFSITE SERVICE CONNECTION HAS BEEN INSTALLED & VERIFIED.
26. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THEY ARE WORKING FROM THE MOST UP TO DATE DESIGN PACKAGE INCLUDING DRAWINGS AND REPORTS.
27. A PORTION OF THE CONTRACT DOCUMENTS IS INCLUDED BY REFERENCE. COPIES OF THESE DOCUMENTS HAVE BEEN REFERENCED IN THE TENDER PACKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT CURRENT RELEVANT COPIES OF ALL DRAWINGS AND CONTRACT DOCUMENTS ARE FORWARDED TO SURVEYORS, TESTING AGENCIES, SUBCONTRACTORS, SUPERINTENDENTS, ESTIMATORS, PROJECT MANAGERS, SITE STAFF AND ANY OTHER RELEVANT PARTIES. CONTRACTOR CONFIRMS THEY HAVE REVIEWED SAME PRIOR TO SUBMITTING TENDER.
28. SUB-CONTRACTORS SHALL NOT COMMUNICATE WITH THE ENGINEERS OR OWNER DIRECTLY ON ANY CONTRACTUAL OR TECHNICAL ISSUE. THEY SHALL DIRECT THEIR ISSUES TO THE CONTRACTOR DIRECTLY WHOSE RESPONSIBILITY IT TO DEAL WITH THESE ISSUES ON THEIR BEHALF WITH THE ENGINEER. REVIEW AND APPROVAL OF ANY CONTRACTUAL MATTER INCLUDING PROGRESS PAYMENT, CHANGE ORDER, PAYMENT OF HOLDBACK, FINAL PAYMENT, INSURANCE AND WARRANTY, ETC. SHALL DIRECTED TO THE ENGINEER. CONTRACTOR MUST ONLY TAKE DIRECTION FROM THE ENGINEER IN REGARDS TO CHANGES TO DESIGN OR EXTRA WORKS.
29. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS OR NOTIFIED TO THE CONTRARY BY THE ENGINEER, THE CONTRACTOR IS THE 'PRIME CONTRACTOR' FOR THE PURPOSE OF ALL APPLICABLE LAWS RELATIVE TO OCCUPATIONAL HEALTH AND SAFETY, INCLUDING THE DISCHARGE OF ALL DUTIES OF THE 'PRIME CONTRACTOR' UNDER THE WORKERS COMPENSATION ACT (BRITISH COLUMBIA), NOTWITHSTANDING THAT THE ENGINEER, THE OWNER OR ANOTHER CONTRACTOR MAY PROVIDE FROM TIME TO TIME SOME OF THE SERVICES NORMALLY PROVIDED BY SUCH 'PRIME CONTRACTOR'. IN THIS SECTION 'PRIME CONTRACTOR' MEANS THE CONTRACTOR SO DEFINED UNDER THE WORKERS COMPENSATION ACT (BRITISH COLUMBIA).
30. CONTRACTOR TO CONTACT BC ONE CALL A MINIMUM OF 2 BUSINESS DAYS PRIOR TO STARTING EXCAVATION WORKS

NOT FOR CONSTRUCTION

CREUS Engineering
Civil Engineers & Project Managers
#610 EAST TOWER - 221 ESPLANADE WEST, NORTH VANCOUVER BC, V7M3J3
PH: 604-987-9070 WEBSITE: www.creus.ca



SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

"I, FRED CIAMBRELLI, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING STANDARDS AND IN ACCORDANCE WITH: THE DISTRICT OF NORTH VANCOUVER DESIGN CRITERIA MANUAL, DATED NOV 2009, THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD), VERSION 2000 AND THE DISTRICT OF NORTH VANCOUVER SUPPLEMENTARY MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (SUPPLEMENTARY SPECIFICATIONS AND SUPPLEMENTARY STANDARD DRAWINGS), ADOPTED BY THE DISTRICT OF NORTH VANCOUVER.

client

WEDGEWOOD CAPILANO HOMES LTD.

project

4670 CAPILANO ROAD
DIST NORTH VANCOUVER

title

KEY

no.	(y/m/d)	revision	chk'd
1	18-02-16	ISSUED FOR DEVELOPMENT PERMIT	LJC

current rev. # 1

engineer of record: FMC	scales: hor: 1:200 vert: -
designed by: FMC	DNV file no.
drawn by: CWB	file no. 17221
date: 2017-06-30	drawing no. KEY-1

c.) 4670 Capilano Road: Detailed Planning Application – Rezoning and Development Permit for 8 ground oriented townhomes

Mr. Darren Veres, Development Planner, introduced the project and explained the context.

The Chair thanked the applicant team for their presentation and asked if there were any questions of clarification from the Panel:

Questions were asked and answered on the following topics:

- How will the garbage and recycling procedures function? Individual pick up for units is proposed to create efficiency and avoid congestion on site and in the neighbourhood.
- How wide is the service path? The service path is 1.8 metres or approximately 6 feet.
- Are the B Building units accessed by stairs? 2 stairs will service 4 units above parking.
- What is the most efficient way to back out of the garages? By simply backing out onto the main easement should suffice.
- What is the main source of heat? An Energy Consultant hasn't been hired yet but typically forced air on the main floor is used for these types of developments.

Mr. Alfonso Tejada, District Urban Design Planner, provided the following comments for consideration:

- Contextual connections work with the landscape and elevated townhome shapes make it unique and functional on both sides of the site.
- The material could be switched on and off to highlight the contextual integration and repetition of the built form.
- The fencing proposed seems out of place and something that should be reviewed.

The Chair invited comments from the Panel members and the following comments and items for consideration were provided:

- Features are quite nice but the details need to be fleshed out for the cedar fence.
- The colour scheme seems very monolithic for Building B: some softening could be used to better relate it to the rest of the site.
- A good overall layout design and smart use of the easement to address accessibility issues to the site.
- Like the staggered geometry, very attractive project: Repetitiveness works well but could use one more colour to make the buildings pop.
- Consider access and clear signage for first responders to all units located at the back of each building.
- Additional softening of the landscape, screening to the north side and variety of plantings could really make the shared backyard space quite nice.
- The shifting or articulation of the units is appreciated to give the site some diversity; and further refinement on the north side with the window placement would be beneficial.

- White Hardie panel is a maintenance issue but could work if maintenance is consistent in the long run.
- Capping of flashing with overhang would be beneficial to reduce the long-term wear.

The Chair invited the project team to respond. Mr. Letkeman, of Letkeman Architects, acknowledged the Panel's suggestions, appreciated the comments, and was happy to take them into account in the design development.

The Chair invited the Panel to compose a motion:

MOVED by Tieg Martin and **SECONDED** by Diana Zoe Coop:

THAT the ADP has reviewed the proposal and recommends APPROVAL of the project SUBJECT to addressing to the satisfaction of staff the items noted by the Panel in its review of the project the highlights of which are listed below:

- Colour Palette – Give further consideration to colour choices and the maintenance issues and consider adding one additional colour.
- Landscape –Give further consideration to the style of fence and the use of landscaping in the interior area to soften the hardscape.
- First Responders - Ensure ease of access and clear wayfinding is reviewed for first responders.
- North Elevation – Consider screening options and further articulation of the façade on the north side of the property.

CARRIED

TREE MANAGEMENT REPORT

FOR DEVELOPMENT APPLICATION PURPOSES

Report Date:	**October 14, 2016**	**Rev 1: February 15, 2018**
ACL File:	**16109**	
Project Details:	**Proposed Townhouse Development** **4670 Capilano Road, North Vancouver**	
Prepared For:	**Attn.: James Fox** **Wedgewood Capliano Homes Ltd** **450 East 21 Avenue** **Vancouver, BC V7L 3C2**	

BACKGROUND

This subject site is comprised of an existing building with open landscape conditions and drainage ditch in the rear yard. The proposed development includes the construction of a new townhouse development, internal roadway and relocation of the existing drainage ditch with significantly increased site coverage as compared to the existing land use.

Arbortech Consulting has been retained to undertake an arboricultural assessment of the existing trees located within or in close proximity to the above referenced development site. Municipal bylaw has been considered. Staff from this office visited the site on January 27, 2016 to inspect the trees and to review the site conditions. The client has supplied a survey drawing showing topographic features and tree locations and an architectural site plan for our reference in completing this assessment. This study presents tree condition findings and proposed tree preservation strategies that are subject to municipal approvals. Our findings are in accordance with arboricultural best management practices and with consideration of regulatory requirements and are based on the pre-existing condition of the trees combined with the anticipated impacts and mitigation opportunities from construction. This summary report should be read in conjunction with the enclosed reference documents.

METHODOLOGY

Tree condition assessment was performed using Basic Visual Tree Assessment (VTA) procedures that are developed and standardized by this firm. This study is not a formal Tree Risk Assessment, however we have considered our findings of the health and structural condition of the subject trees in context to the proposed land use in order to determine the suitability and viability for retention of the subject trees. The VTA includes the identification of the species, size and condition of the subject trees (health and structural stability). We identify outward signs/symptoms that indicate the presence of health deficiencies, structural defect, and growing site constraints that can affect the viability for retention. Detailed assessments were not performed except as noted herein.

Tree condition ratings for on-site trees consider the VTA results, as well as their viability and suitability for retention in context to the land use and expected scope of construction. Our rating system is designed to enable the prudent selection of retention trees that will provide value to the site and the community, and that can be expected to survive and thrive after the changes to their growing environment. The intent is to implement a selection process and adequate protection measures to ensure that retained trees will be a valued asset, and not be a liability to the owners upon completion of the project.

145 – 12051 HORSESHOE WAY RICHMOND, BC V7A 4V4 P 604 275 3484 F 604 275 9554 aclgroup.ca

Condition Rating Scale – On-site Trees: (with description)

UNSUITABLE	MARGINAL	SUITABLE
A tree in very poor condition that is deemed not viable for retention in active land use areas due to pre-existing challenges, such as; advanced health decline, significant structural defects, species characteristic, or growing site related impairments. May be retained in large passive use tree retention area, subject to risk assessment.	A tree in poor to fair condition that has a pre-existing defect that may affect its survival considering the proposed land use, or that could be considered for retention conditional to certain special measures. These trees may be viable for retention in conjunction with adjacent trees (in groves), with treatment, or in large passive use tree retention area, subject to risk assessment.	A tree in good or excellent condition with no overt or identifiable significant defects, and is well suited for consideration of retention if the project design can accommodate the required protection zone. Suitable for consideration of retention singly or in groves and stands.

Condition Rating Scale – Off-site and City Trees: (self-explanatory)

VERY POOR	POOR	FAIR	GOOD	SPECIMEN

TREE RETENTION FINDINGS

Tree retention and removal is specified based on the tree condition findings, as well as the impacts from the construction related to implement the current project design, as presented or described by the client. Design revisions and special measures that may be feasible to mitigate impacts and retain certain viable trees are noted where applicable.

The existing trees are described in detail below, along with their proposed treatment. The successful preservation of trees will require compliance to the tree protection guidelines. Tree Protection Zones (TPZ) consist of the Crown Protection Zone (CPZ), the Root Protection Zone (RPZ), and the Working Space Setback (WSS). See tree protection guidelines and drawing for further details.

Tagged Trees: The size, type and condition of the subject trees are detailed in the attached Tree Inventory and Assessment List. The locations and the designated treatment of the subject trees are detailed on the attached Tree Management Drawing.

On-Site Trees:

Based on our tree conditions findings, our review of the current project design, and coordination from the owner and design team, we present the following tree retention and removal strategy and recommendations. The specifications are provided in the supporting documents, the tree inventory list, and the tree management drawing attached to this report.

Retain and Protect 1 Tree:

Tree Tag/ID 1695: Retain this tree with protection measures as shown on the Tree Management Drawing. It is our understanding that the creek location adjacent to this tree will remain undisturbed. Protection fences can be installed in alignment with the current top of bank. Any work within the TPZ (i.e. management of invasive species, pruning, landscape finishing) must be coordinated with this office for on-site supervision by the project arborist to direct low impact methods and make recommendations in accordance with arboricultural best management practices.

Remove 10 Trees – Due to Condition:

Remove trees deemed as unsuitable or marginal condition that cannot be considered for retention due to the pre-existing condition in relation to the proposed land use. The basis for the removal specification is due to their current health or structural impairments resulting in an expectation that they will not survive the development impacts (mortality or destabilization). These trees may also be in conflict with the proposed construction, and their pre-existing poor condition does not warrant re-design to accommodate them.

Tree #s 1684, 1685, 1687, 1688, 1689, 1690, 1691, 1694, 1695 and 1696

Remove 4 Trees – Due to Construction Conflicts:

These trees were considered for retention, however we have determined that they will sustain excessive impacts in the site preparation or the construction phase of the development, based on the current design. Opportunities for re-design of the project and/or the use of special measures (low impact methods of materials) to accommodate the protection requirements for these trees were not feasible as determined by the project design team.

Tree #s 1683, 1686, 1692, and 1693: *Excessive root loss will result from excavation for the new building foundations and these trees are proposed.*

Table 1. Tree Retention and Removal by Condition

CONDITION (considers health and structural assessment)	**Total**	**Remove**	**Retain**
UNSUITABLE A tree in very poor condition that is deemed not viable for retention in active land use areas due to pre-existing advanced health decline or significant structural defects.	10	9	1
MARGINAL A tree in poor to fair condition that has a pre-existing defect that may affect its survival considering the proposed land use, or that could be considered for retention conditional to certain special measures (i.e. with adjacent trees, with treatment, etc.)	3	3	0
SUITABLE A tree in good or excellent condition with no overt or identifiable significant defects, and is well suited for consideration of retention if the project design can accommodate the required protection zone.	1	1	0
TOTALS	**14**	**13**	**1**

Private Off-Site Trees:

The off-site trees located within influencing distance of this project are proposed to be treated as follows:

Protect:

Protect 8 off-site trees as detailed herein and on the Tree Management Drawing. Certain additional precautions may be recommended.

Tree #'s B, C, D, E, G, H, I AND J.

- *The project arborist must be on-site during any works within or directly adjacent to the TPZ to undertake root pruning, direct low impact methods and make recommendations in accordance with arboricultural best management practices.*

Refer to Owner for Removal Authorization:

Refer the following trees to their respective owner for consideration of approval to remove them due to the reasons noted below. Any tree removal authorized by the neighbour would be subject to municipal permitting requirements (if applicable). If a neighbour does not approve the recommended removal, then design revision may be required to accommodate a required tree protection zone.

Tree A:

- *Seek approval from the neighbouring owner to remove this tree due to its pre-existing very poor condition for risk mitigation. This tree has been historically topped at 15m above grade, resulting in a decayed pruning wound and the development of multiple replacement leaders which have developed a weak structural form prone to failure. Root loss will also result from the excavation for the new building foundation and preparation for construction of the internal roadway. If approval cannot be obtained, then further coordination with this office will be necessary for protection recommendations which will be required to be implemented and maintained within the site for the duration of construction and may have design implications.*

Trees E, F and G:

- *Seek approval from the neighbouring owner to remove these trees due to direct conflict with the internal roadway. If approval cannot be obtained, then further coordination with this office will be necessary for protection recommendations which will be required to be implemented and maintained within the site for the duration of construction and may have design implications.*

Municipal Trees:

The trees in the public road or lane or frontages may be at risk of root or crown damage from construction activities, therefore protection measures and precautions are required. The minimum street tree protection requirements prescribed by the municipality may not be sufficient to protect the trees adequately, therefore we recommend compliance with the tree protection guidelines and any other special measures noted on the Tree Management Drawing. Certain trees may conflict with underground or overhead services, or other civil infrastructure installations or upgrades and are not able to be protected adequately. Those trees are noted for referral to the applicable municipal department.

Refer to Municipality for Approval to Remove:

The following municipal owned trees cannot be retained in the present project design:

- **Tree #'s 1680, 1681 and 1682:** Seek Parks department approval to remove *these trees due to their very poor condition and direct conflict with pathways and front yard access. If approval cannot be obtained, then further coordination with this office will be necessary for protection recommendations which would be required to be implemented and maintained within the site for the duration of construction and may have design implications.*

TREE REPLACEMENT

Tree replacement requirements will be confirmed by the municipality in relation to their policies. The municipality generally requires two replacement trees for each bylaw tree to be removed (2:1 quota), up to a maximum quantity for the lot size or the available space for planting. The replacement trees must meet city requirements for minimum size at planting (i.e. 6 cm calliper for deciduous species and 3.5 m height for coniferous species) and other criteria. Replacement tree design details will be specified by others.

SUMMARY RECOMMENDATIONS

Long term tree preservation success will only be possible if the trees are protected to respect the alignments and restrictions of the Tree Protection Zones (TPZ) comprised for the Crown Protection Zone (CRZ) and the Root Protection Zone (RPZ), as detailed on the Tree Management Drawing attached. Considering the findings herein, the existing trees within the proposed development require coordination throughout the project as follows:

1. All applicable design drawings for this project should be coordinated to fully comply with the tree protection specifications as shown on the Tree Management Drawing (attached).
2. The detailed design process and project revisions should be coordinated with the project arborist so that tree retention and protection can be reviewed and/or municipal approvals for those revisions can be obtained.
3. The final tree management report, supporting documents, and drawing should be included as a reference in the project specifications.
4. Check with the municipality for approvals of the tree retention and removal scheme before proceeding with any tree treatments, site preparation activities, demolition or construction.
5. Maintain compliance to the tree protection measures and/or implement other treatments specified for retention trees (on-site and off-site) during demolition, site preparation and construction phases in compliance with the Tree Management Drawing and pursuant to municipal regulations and requirements.

6. Undertake specified enhancement or mitigation treatments within or adjacent to TPZ including but not limited to; root pruning, soil enhancements, pruning to manage the health and structure of the tree, pruning for construction or land use required clearances, low impact site preparation or excavations for services, utilities, footings, foundations, retaining walls, driveways, patios, sidewalks or other hard landscape features.
7. All contractors, subcontractors and trades undertaking any scope of construction on the project in proximity to retained trees should be made aware of the restrictions and responsibilities for tree retention, any special measures required, and coordinate their work activities with the project arborist accordingly, and that failure to comply may result in fines or other action levied by the municipality.

Thank you for choosing Arbortech Consulting for your project needs. If there are any questions regarding this report, please contact the undersigned.

Respectfully Submitted By:

Prepared By:	***Certifications and Qualifications of the Author:***	***Contact Information:***
 **Nick McMahon,** **Consulting Arborist**	• ISA Certified Arborist #PN-7136A, • Qualified Tree Risk Assessor (TRAQ), • Certified Tree Risk Assessor #1763,	Office: **604 275 3484** Mobile: **604 812 2986** Email: **nick@aclgroup.ca**

Enclosures;
Tree Protection Guidelines,
Assumptions and Limiting Conditions,
Tree Inventory and Assessment List,
Tree Management Drawing.

TREE PROTECTION GUIDELINES

1. **CONTACT INFORMATION:**

The municipality may require that the developer or owner of the project retain this firm to provide tree protection compliance consulting services through the course of the project. A ***Letter of Undertaking*** or ***LOU*** (also referred to as a letter of assurance or a comfort letter) will be supplied upon request, subject to a mutually acceptable contract for those services. If an ***LOU*** is executed, the project arborist is required to attend at certain milestones and to report non-compliance issues to the municipality. Once the ***LOU*** is in place, all tree protection questions, clarifications and coordination, should be directed to:

ARBORTECH CONSULTING
OFFICE: ***604 275 3484***
EMAIL: ***trees@aclgroup.ca***

A project arborist will be assigned, and a pre-construction meeting scheduled.

2. TREE PROTECTION ZONES (TPZ):

Tree protection is defined relative to the centre of the tree trunk where it emerges from the ground and/or the extent and spread of the crown or roots of the tree. The ***TPZ*** is comprised of three main components:

CPZ – CROWN PROTECTION ZONE SETBACKS:

- Specified by the project arborist to be at a minimum of the dripline extents of the crown (furthest reaching branches and foliage). Restrictions on any aerial encroachment within a CPZ are required in order to protect from tree damage. This includes structures and overhead utilities, and the working space required to build or maintain them. An allowance for the future growth of the tree crown (spread and height) as well as the working space should be considered by the project design team. Pruning may be possible to accommodate certain encroachments but may not be feasible – consult with project arborist to confirm.

RPZ – ROOT PROTECTION ZONE SETBACKS:

- Specified by the project arborist based on tree species, tree condition, soil type and depth, soil drainage, topography, wind exposure and changes thereof, constrained root conditions, and acceptable thresholds for root loss specific to those factors. RPZ alignments that are smaller than the CPZ may be designed by the project arborist conditional to special measures being implemented, such as root pruning and compensatory enhancement treatments. Restrictions on any disturbances within a RPZ are required in order to maintain tree health and tree stability.

WSS – WORKING SPACE SETBACKS:

- A 1.5m setback zone, or an alternate setback specified by the project arborist, outside of the ***RPZ***, where the design of structures, finished grading and/or hard landscape features requires attention to avoiding encroachment of soil removal of any scope, over-excavation for working space, cut slopes, fill slopes and/or retaining walls and where project arborist design review and/or on-site direction is required in order to mitigate preventable damage to roots within the RPZ.

3. TPZ RESTRICTIONS:

Any access or construction related work within a ***CPZ***, ***RPZ*** and/or ***WSS*** requires advance approval and on-site direction by the project arborist. General restrictions in the ***TPZ*** are as follows:

- No soil disturbance (surface or to any depth) including; trenching, stripping of over-burden, excavation, fill placement, etc.,
- No storage of soil, spoil, gravel, construction materials, waste materials, etc.,
- No waste or washing of concrete, stucco, drywall, paint, or other potentially harmful materials,
- No passage or operation of vehicles or equipment,
- No placement of temporary structures or services,
- No affixing lights, signs, cables or any other device to retained trees,
- No unauthorized pruning or cutting of retained trees.

4. DESIGN DETAILS, DESIGN REVISIONS AND CONSTRUCTION MANAGMENT:

The detailed designs (architectural, mechanical, civil, landscape, geo-technical, etc.), as well as construction planning (excavation, shoring, access/egress, crane operations, etc.) should be coordinated to respect the tree protection measures outlined herein, and with the ***TPZ*** setbacks specified on the ***Tree Management Drawing*** prepared by this office. Where proposed design elements conflict with the TPZ, advanced detailed assessments by the project arborist may be possible, such as; root mapping to non-invasively remove soil and trace major roots, and advance root pruning to culture the tree and direct root growth in advance of construction.

5. BARRIERS – TREE PROTECTION FENCES:

Barriers should be erected at the CPZ setback where possible, but must be installed at the RPZ specified alignments as a minimum tree protection measure. Signs stating "TREE PROTECTION ZONE - NO ENTRY" must be placed on the tree protection fence at a suitable frequency at the direction of the project arborist. The contractor, sub-contractors and trades should be made aware of the restrictions therein. The barriers must be maintained at those alignments in good condition, and may not be removed for any reason (including landscaping), unless prior approval from the project arborist is obtained.

6. SURVEYING:

Trees located close to a property line may require additional surveying to confirm ownership. Tree barriers aligned with or within close proximity to a property line, a restrictive covenant line, and/or an environmentally sensitive or protected area may require a survey tio enable accurate barrier installation.

7. TREE PRUNING, TREATMENTS AND ENHANCEMENTS:

Additional tree treatments or measures for retained trees may be required by the project arborist, including but not limited to;

- Pruning for risk mitigation, crown cleaning, crown restoration, form, building or overhead clearance, and/or sight lines.
- Pre-treatments such as staged root pruning, root mapping, vertical aeration and other treatments.
- Installation of soil amender (i.e. organic composted mulch) within the ***RPZ*** to mitigate soil desiccation and to add fertility.
- Supplemental watering to compensate for soil hydrology changes.
- Low impact stump removal for stumps located within a ***CPZ*** (i.e. stump grinding or digging under project arborist supervision).
- Windfirming of new forest edges created by clearing of the development lands, including; re-assessment, removals, pruning, modification to wildlife tree, or other treatments as specified by the project arborist.

No tree or hedge pruning may be carried out unless undertaken or directed by the project arborist and it is performed by a qualified tree service contractor working under the direction of the project arborist. The qualified tree service contractor must employ ***ISA Certified Arborist(s)*** and carry out their work to ***ANSI A300 and ANSI Z133 Standards*** and ***Best Management Practices***.

8. DEMOLITION OPERATIONS:

If tree removal is proposed to be undertaken in conjunction with the demolition, tree removal permits may be required. Note that some municipalities will not approve tree removal at this phase. In either case, the municipality may relax the requirement for barrier installation prior to demolition subject to protecting existing trees via on-site direction and supervision by the project arborist during the process of demolishing existing structures and hardscapes. A ***LOU*** may be required by the municipality.

9. TREE REMOVAL/CLEARING OPERATIONS:

Certain trees may not be shown or referenced in the documents prepared by this office, but may require removal (i.e. undersize or non-bylaw trees or untagged trees). The contractor and the land clearing subcontractor should verify the tree removal and clearing scope based on their own site investigation. The developer/owner and their contractor should also coordinate with the project arborist in advance to identify retained trees, to review the work plan, and to review and ensure compliance with the tree protection measures. Note that neighbour approvals, additional municipal permits and/or authorizations from regulatory bodies may be required.

10. CONSTRUCTION OPERATIONS:

The project manager, site superintendent and/or foreman should meet with the project arborist in advance of commencing work on the project to review tree protection measures and to identify and resolve any anticipated tree protection related challenges.

The trunks, branches, foliage and roots of retained trees, as well as the soil within the ***TPZ***, must not be damaged by construction activities. The use of aerial lifts, cranes or other overhead equipment is restricted in proximity to retained trees and should be planned with the size and height of the crown of the tree accordingly – pruning to reduce the height of retained trees (topping or heading) CANNOT be accommodated. It is recognized that certain unpredictable construction conflicts with a TPZ may arise that could interfere with the protection of the selected trees, however any encroachment into a TPZ and/or changes to the tree retention scheme are subject to approval in advance by the project arborist and the municipality. Special measures required for tree protection compliance related to construction work in the ***CPZ*** or within 1.0m of a ***RPZ*** or to accommodate managed encroachments into a ***TPZ*** may include, but is not limited to:

- Root pruning by the project arborist, to work in the over-burden or rooted soil depths (typically not more than 1.5m depth) to identify roots to expose them and protect them and/or cut them so that they are not torn out by the digging machinery.
- Installing armour or suspended structures over the soil within ***RPZ*** to accommodate temporary worker or equipment passage within a ***TPZ***. Several types of armouring may be available. Implementation is at the discretion of the project arborist and may be conditional to municipal approvals.
- Low impact trenching using air-vac or hydro-vac, with arborist supervision, to accommodate underground services or utilities. This option is restricted as to viability by; proximity, scope, depth, shoring needs, tree species, site/soil conditions and other factors.

11. LANDSCAPING OPERATIONS:

Removal of the tree barriers requires advance coordination and approval by the project arborist. The operation of equipment of any size or type, the placement of growing medium, all grading and sub-base preparation for hard landscape features. (i.e. sidewalks and patios), site preparation for retaining walls and footings, excavation for fences, signs and other landscape features, digging of planting holes for new plants and trees, the digging of trenches for irrigation, drainage and lighting infrastructure, and the placement of turf and other surface finishing, all have a high potential for causing damage to trees, roots or soil. Advance coordination between the landscape contractor and our office prior to landscape operations commencing is required to avoid tree protection non-compliance and bylaw issues.

ASSUMPTIONS AND LIMITING CONDITIONS

This report was prepared for and on the behalf of the client as addressed herein, and it is intended for their use in its entirety for the purposes of meeting conditions pertaining to applicable regulatory approvals, and for reference during the completion of the project. Arbortech Consulting shall not accept any liability derived from the partial, unintended, unauthorized or improper use of this report.

Upon receipt of payment on account in full, this report will become the property of the client.

This report is restricted only to the subject trees as detailed in this report. Except as stated herein, no other trees were inspected or assessed as part of the work related to the preparation of this report. Note that there may be other trees on the site that are not included, for example if the tree is undersize in relation to municipal requirements for reporting. For this reason, this report should not be used as a specification for reference in tendering site preparatory works such as land clearing and tree removal.

The inner tissue of the trunk, limbs and roots, as well as the majority of the root systems of trees are hidden within the tree and the ground. Also, trees have adaptive growth strategies that can effectively mask defects. Tree assessment is limited to relying on the outward signs of defect and health issues that are indicators of the presence of defects. We use our training, experience and judgement, however it is possible that certain defects are not able to be identified. Arbortech Consulting cannot guarantee that a tree is free of defect.

The accuracy of the locations of trees, property lines and other site features were not verified by Arbortech Consulting. We do not warrant that third party information as correct. Third party information provided to the consultant may have been relied upon in the formation of the opinion of the consultant in the preparation of this report, and that information is assumed to be true and correct.

The use of maps, sketches, photographs and diagrams are intended only as a reference for the readers' use in understanding the contents and findings of this report, and are not intended as a representation of fact.

Approvals from a municipality and/or senior government agencies may be required in relation to certain recommendations and/or treatments provided in this report. The owner is responsible to make application for, pay related fees and costs for, and meet all requirements and conditions for the issuance of such permits, approvals or authorizations.

TREE INVENTORY AND ASSESSMENT LIST

Notes:

Tag # denotes the tag affixed to the tree for reference in report and on drawing. See drawing or figure for locations.
Ht denotes the height of the tree in metres as measured or estimated by the assessor if applicable.
Dbh denotes the diameter of the trunk measured in cm, at 1.4 m above grade or as per arboricultural standards (i.e. for multi stem trees).
Class denotes the structural class of a tree growing in a forest stand environment;
- **UNDER** = understory tree forming a component of the lower secondary canopy.
- **SUPP** = suppressed tree with negligible trunk taper and very small crown.
- **COD** = codominant tree having limited trunk taper and moderate crown ratio (20 to 40%).
- **DOM** = dominant tree having some anchoring attributes to the primary canopy, with good trunk taper, established crowns and comparatively robust root systems.

Cond denotes health and structural rating using Visual Tree Assessment (VTA) procedures.
- **On-Site Tree Ratings: U** denotes unsuitable, **M** denotes marginal, **S** denotes suitable
- **Off-Site Tree Ratings: VP** denotes very poor, **P** denotes poor, **F** denotes fair, **G** denotes good, **SP** denotes specimen

Loc denotes the ownership of trees based on the survey and project plans provided;
- **On** denotes on-site, **Off** denotes private neighbour tree, **City** denotes road or lane tree, **Park** denotes tree in existing/proposed Park, **ESA** denotes tree in existing/proposed ESA

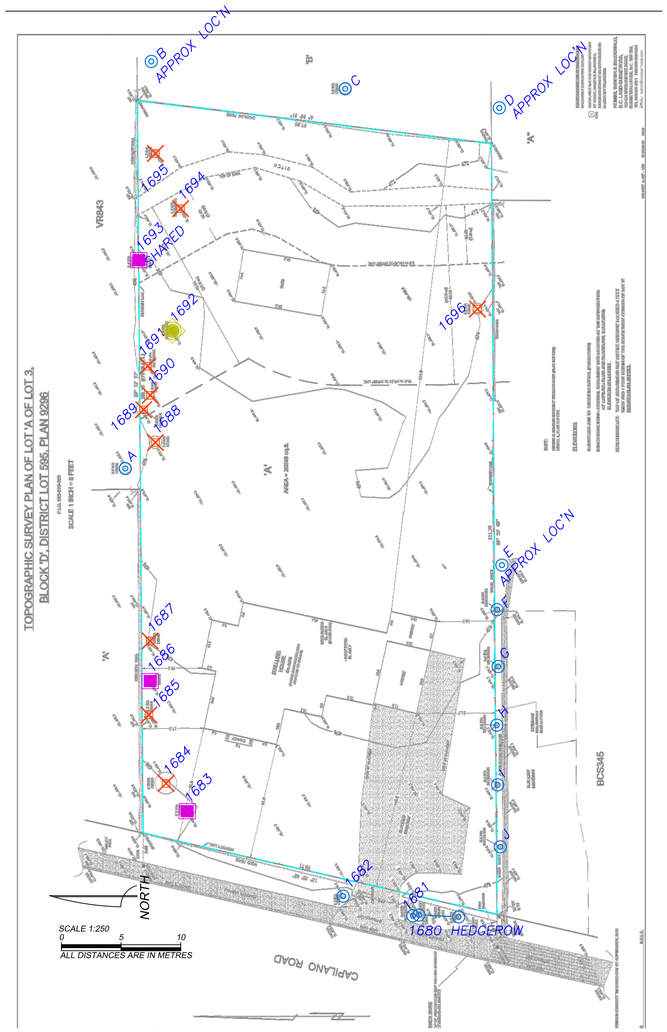
Action denotes the proposed treatment of the tree within the current development design. See report and drawing for details.
CPZ denotes the Crown Protection Zone setback (radius). If retained, this is the minimum setback for aerial encroachment of above ground structures toward a tree.
RPZ denotes the Root Protection Zone setback. If retained, this is the minimum setback for soil disturbance toward a tree. Additional working space setback (WSS) applies as per arborist.

Tag #	Ht	Dbh	Tree Type	Class	Cond	Loc	Additional Observations (based on VTA only)	Action	CPZ	RPZ
1680		21-24	Lawson cypress		VP	CITY	• **Hedgerow** consisting of **4** stems ranging 21-24cm DBH. • Historically topped and pruned for BC Hydro safety setback, resulting in decayed pruning wounds. • Multiple replacement leaders attach at the historic topping site and have developed a poor structural form. • Historically crown raise pruned to 3.0m above grade over sidewalk, resulting in an asymmetrical crown. • Conflicts with pedestrian access to the road frontage.	**REMOVE - REFER**	4	
1681		22	Walnut		VP	CITY	• Longitudinal crack in stem 1.5m above grade extending downwards to 1.0m. • Historic injury to stem at 0.5m above grade on the west side. • Historically topped and pruned via heading cuts for BC Hydro safety setback. • Conflicts with pedestrian access to the road frontage.	**REMOVE - REFER**	5	
1682		34	Lawson cypress		VP	CITY	• Historically topped at 6.0m above grade and pruned via heading cuts for BC Hydro, resulting in the development of a poor structural form. • Recent excavation within 1.0m north of the stem for sewer construction. • Conflicts with pedestrian access to the road frontage.	**REMOVE - REFER**		
1683		67	Western redcedar		M	ON	• Narrow, asymmetrical crown due to the proximity of adjacent tree and historic clearance pruning for BC Hydro. • Dependent on adjacent tree for stability. • Excessive impacts will result from land clearing and root loss from excavation for the new building foundation and this tree is proposed to be removed.	**REMOVE**	7	

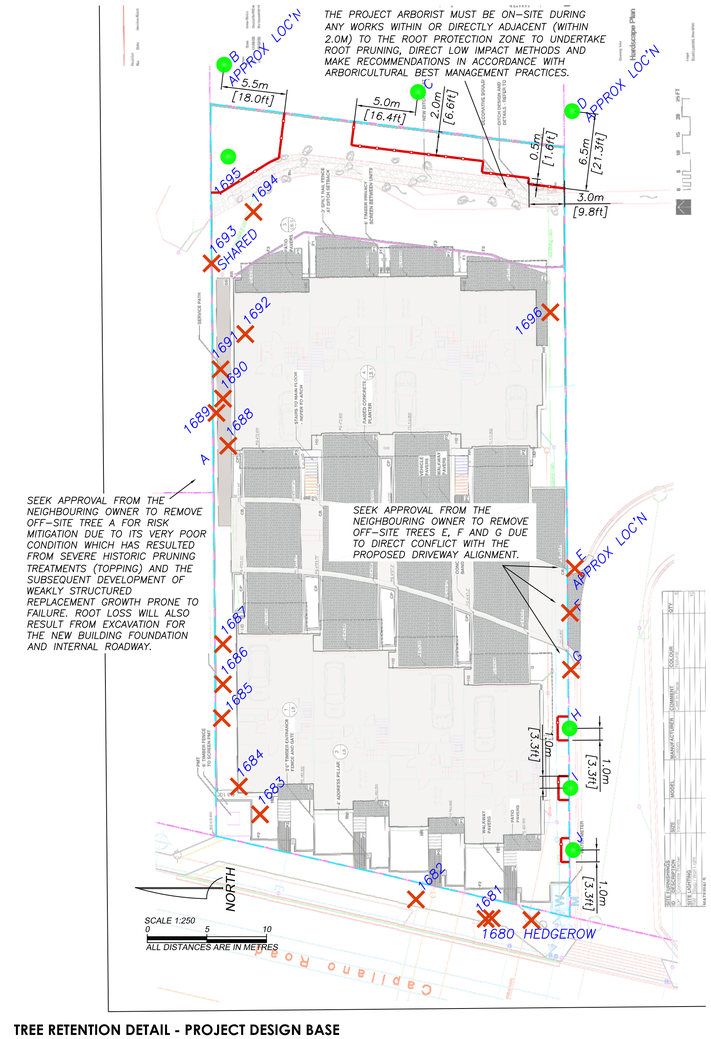
Tag #	Ht	Dbh	Tree Type	Class	Cond	Loc	Additional Observations (based on VTA only)	Action	CPZ	RPZ
1684		94+84+30	Western redcedar		U	ON	• Three coalescent stems attach at base with long bark inclusion extending upwards from 0.5m to 1.5m above grade. • Concrete retaining wall historicaly installed within 2.0m to the north of the stem. • Historically topped at 15m. • Multiple replacement leaders attach at historic topping sites and have developed a weak structural form prone to failure. • Direct conflict with new building foundation.	**REMOVE**		
1685		32	Lawson cypress		U	ON	• Embedded in the crown of the adjacent tree, resulting in an asymmetrical crown biased to the south and the development of a poorly tapered stem. • Dependent on adjacent trees for stability. • Root growth restricted from the north due to existing concrete retaining wall along the common property line. • Excessive and destabilizing root loss willresult from excavation for the new building foundation and this tree is proposed to be removed.	**REMOVE**	6	
1686		53	Lawson cypress		M	ON	• Subordinate leader narrowly attached at 6.0m with a long bark inclusion and embedded/entwined in the crown. • Merged crown with adjacent trees. • Co-dependent for stability with adjacent trees. • Root growth restricted from the north due to existing concrete retaining wall along the common property line. • Excessive and destabilizing root loss willresult from excavation for the new building foundation and this tree is proposed to be removed.	**REMOVE**	6	
1687		43	Lawson cypress		U	ON	• Asymmetrical crown with crown exposed interior due to the proximity and historic removal of adjacent tree to the east. • Historically topped at 6.0m above grade. • Multiple divergent replacement leaders weakly attach at the historic topping site and have developed a weak structural form wtih poor taper and narrow bifurcations - prone to failure. • Root growth restricted from the north due to existing concrete retaining wall along the common property line. • Excessive and destabilizing root loss willresult from excavation for the new building foundation and this tree is proposed to be removed.	**REMOVE**	5	
1688		97	Western redcedar		U	ON	• Historically topped at 15m above grade. • Multiple replacement leaders attach at the historic topping site and have developed a poor structural form (candelabra) with long lever arms, prone to failure. • Direct conflict with the new building foundation and hardscape features. Protection measures cannot be accommodated in the current site plan, and this tree is proposed to be removed.	**REMOVE**	6	

Tag #	Ht	Dbh	Tree Type	Class	Cond	Loc	Additional Observations (based on VTA only)	Action	CPZ	RPZ
1689		36	Lawson cypress		U	ON	• Embedded in the crown of adjacent tree, resulting in a narrow, asymmetrical crown biased to the north and poorly tapered stem. • Subordinate leader narrowly attached at 5.0m above grade with a long bark inclusion and embedded in the crown. • Excessive root loss will result from excavation for the new building foundation and this tree is proposed to be removed.	**REMOVE**		
1690		24	Lawson cypress		U	ON	• Embedded in the crown of the adjacent tree, resulting in the development of a poorly tapered stem and asymmetrical crown biased to the east. • Dependent on adjacent trees for stability. • Excessive impacts will result from land clearing and root loss from excavation for the new building foundation and this tree is proposed to be removed.	**REMOVE**		
1691		20	Mountain ash		U	ON	• Sweep and asymmetrical crown biased to the north due to proximity of adjacent trees. • Excessive impacts will result from land clearing and root loss from excavation for the new building foundation and this tree is proposed to be removed.	**REMOVE**		
1692		42	European beech		S	ON	• Asymmetrical crown heavily biased to the south. • Narrowly bifurcated at 6.0m with long bark inclusion and well limb-tied in the crown. • Conflicts directly with the new building foundation and protection measures cannot be accommodated in the current design.	**REMOVE**		
1693		42+34	Bigleaf maple		M	ON	• **Shared tree.** • Two co-dependent stems attach at the root crown. • Historically crown raise pruned to 8.0m, resulting in high end-weighted leaders. • Excessive root and crown loss will result from excavation for the new building foundation and pruning to mitigate aerial conflict with the structure and this tree is proposed to be removed.	**REMOVE**		
1694		28	Bitter cherry		U	ON	• Bow to the southwest due to proximity and shading of adjacent trees. • Dependent on adjacent trees for stability. • Excessive impacts will result from land clearing and this tree is proposed to be removed.	**REMOVE**		
1695		34+28+25	Bigleaf maple		U	ON	• Three stems attach at the root crown with a long bark inclusion and entwined in the crown. • Poor structural form and co-dependent with adjacent trees for stability. • Concrete retaining wall historically installed within 1.0m to the north. • Recommend re-assessment at the time of land clearing.	**RETAIN**		

Tag #	Ht	Dbh	Tree Type	Class	Cond	Loc	Additional Observations (based on VTA only)	Action	CPZ	RPZ
1696		91	Western redcedar		U	ON	• Two stems coalesce at base with long bark inclusion extending upwards to 3.0m above grade. • Historically topped at 8.0m above grade. • Multiple replacement leaders attach at the topping site and have developed a weak structural form with long lever arms and prone to failure. • Excessive root loss will result from excavation for the new building foundation, and protection measures cannot be accommodated in the current design.	**REMOVE**		
A		79	Western redcedar		P	OFF	• Historically topped at 15m above grade • Multiple replacement leaders attach at the historic topping site and have developed a poor structural form (candelabra) with long lever arms, prone to failure. • Excessisve root loss will result from excavation for the new building foundation and preparation installation of hardscape features and protection measures cannot be accommodated in the current site plan. Authorization from the neighbouring owner is required to remove this tree.	**REMOVE - REFER**		
B		Est. 80	Bigleaf maple		G	OFF	• Narrowly bifurcated at 12m above grade and well limb-tied in the crown.	**PROTECT**		5.5
C		Est. 70	Western redcedar		G	OFF		**PROTECT**		5
D		Est. 100	Western redcedar		P	OFF	• Growing on a decayed nurse stump, resulting in a one-sided root structure.	**PROTECT**		7
E		15	European beech -Dawyck		G	OFF	• Growing in conflict with the proposed driveway and protection measures cannot be accommodated in the current design. Authorization from the neighbouring owner is required to remove this tree.	**REMOVE - REFER**		
F		15	European beech -Dawyck		G	OFF	• Growing in conflict with the proposed driveway and protection measures cannot be accommodated in the current design. Authorization from the neighbouring owner is required to remove this tree.	**REMOVE - REFER**		
G		12	European beech -Dawyck		G	OFF	• Growing in conflict with the proposed driveway and protection measures cannot be accommodated in the current design. Authorization from the neighbouring owner is required to remove this tree.	**REMOVE - REFER**		
H		12	European beech -Dawyck		G	OFF		**PROTECT**		1
I		10	European beech -Dawyck		G	OFF		**PROTECT**		1
J		10	European beech -Dawyck		G	OFF		**PROTECT**		1



TREE ASSESSMENT DETAIL - SURVEY BASE



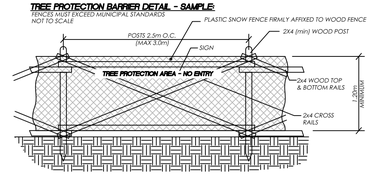
TREE RETENTION DETAIL - PROJECT DESIGN BASE

TREE PROTECTION ZONE RESTRICTIONS:

RESTRICTIONS IN TPZ:
See Arborist Report for further details. Any construction related work within a ***CPZ*** and/or within 1.0m of a ***RPZ*** requires advance approval from the project arborist, and may require on-site direction or supervision from the project arborist. General restrictions in the ***TPZ*** are as follows:

- No soil disturbance (surface or to any depth) including: trenching, stripping of over-burden, excavation, fill placement, etc.,
- No storage of soil, spoil, gravel, construction materials, waste materials, etc.,
- No waste or washing of concrete, stucco, drywall, paint, or other potentially harmful materials,
- No passage or operation of vehicles or equipment,
- No placement of temporary structures or services,
- No affixing lights, signs, cables or any other device to retained trees,
- No unauthorized pruning or cutting of retained trees.

TREE PROTECTION BARRIER DETAIL - SAMPLE:
TO/FROM MUST EXCEED MUNICIPAL STANDARDS
NOT TO SCALE



LEGEND:

denotes **SITE** or **STUDY AREA BOUNDARY**.

TREE DATA AND VIABILITY RATINGS (ON-SITE TREES ONLY):

- ### denotes **TAG NUMBER** or **ID REFERENCE**.
- denotes tree in **SUITABLE CONDITION** (retainable if design can accommodate it).
- denotes tree in **MARGINAL CONDTION** (possible candidate subject to design and other conditions).
- denotes tree in **UNSUITABLE CONDITION** (not viable for retention).

TREE MANAGEMENT IN PROJECT:

- denotes **RETENTION** tree (protection measures required).
- denotes **REMOVAL** tree (permit may be required).
- denotes **HIGH RISK REMOVAL** tree (permit may be required).
- denotes **OFF-SITE** tree (see report for treatment).
- denotes **NON-BYLAW** undersize tree (as measured by arborist).

TREE PROTECTION SPECIFICATIONS:

- denotes **CROWN PROTECTION ZONE – CPZ** (dripline extents)
- denotes **TREE ROOT PROTECITON ZONE - RPZ** alignment for **BARRIERS**. Street tree protection to 0.6m from curb, 0.3m from sidewalk and to dripline extents.
- denotes **WORKING SPACE SETBACK** (**WSS**) 1.5m offset from RPZ or as specified by project arborist for **MANAGED WORK ACTIVITIES** with Project Arborist coordination and supervision.

PLAN NOTES:
This plan is based on drawings supplied by the project Surveyor (BCLS), Engineer (P ENG) and/or Design Professionals and is provided for context only as it relates to the planning and implementing the management of existing trees. This plan does not warrant or certify the accuracy of locations of features or dimensions thereof. Refer to the original drawings from those professionals for those purposes.

REV #	DATE	COMMENTS
1	FEB 15, 2018	UPDATED SITE PLAN
0	OCT 17, 2016	INITIAL SUBMISSION

aclgroup.ca
ARBORTECH CONSULTING
SUITE 145 - 12051 HORSESHOE WAY, RICHMOND, BC V7A 4V4 p 604 275 3484

TREE MANAGEMENT DRAWING

PROJECT:	**PROPOSED TOWNHOUSE DEVELOPMENT**
ADDRESS:	**4670 CAPILANO ROAD, NORTH VAN**
CLIENT:	**WEDGEWOOD CAPILANO HOMES LTD**
ACL FILE:	**16109** **SHEET: 1 OF 1**

E3 ECO GROUP

#230 – 5589 Byrne Road

Burnaby BC

V5J 3J1

T: 604-874-3715

E:info@e3ecogroup.com

Feb 12, 2018

District of North Vancouver
355 West Queens Road
North Vancouver, BC
V7N 4N5

Attn: To Whom This May Concern
RE: 4670 Capilano to Meet BCBC 9.36.6 Step Code Level 3

Wedgewood Capilano Homes has contracted E3 Eco Group as the Energy Advisor consultant to review the energy efficiency of the Capilano townhome development located at 4670 Capilano Road in the District of North Vancouver. The intention is to ensure that all buildings will meet BCBC 9.36.6 Step Code Level 3 for Part 9 Buildings.

To meet Level 3 of the Step Code in the Lower Mainland all buildings must comply with the following:

Table 9.36.6.3.A. Requirements for Buildings Located Where the Degree-Days Below 18°C Value is Less than 3000 (Climate Zone 4)[1]

Forming Part of Sentence 9.36.6.3.(1)

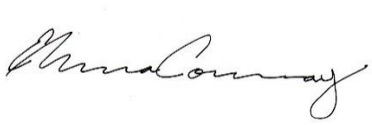
STEP	AIRTIGHTNESS (AIR CHANGES PER HOUR AT 50 PA PRESSURE DIFFERENTIAL)	PERFORMANCE REQUIREMENT OF BUILDING EQUIPMENT AND SYSTEMS	PERFORMANCE REQUIREMENT OF BUILDING ENVELOPE
1	N/A	EnerGuide Rating % lower than EnerGuide Reference House: not less than 0% lower energy consumption or Conform to Subsection 9.36.5.	
2	≤ 3.0	EnerGuide Rating % lower than EnerGuide Reference House: not less than 10% lower energy consumption **or** mechanical energy use intensity ≤ 60 kWh/m².year	Thermal energy demand intensity ≤ 45 kWh/m².year **or** Peak thermal load ≤ 35 W/m²
3	≤ 2.5	EnerGuide Rating % lower than EnerGuide Reference House: not less than 20% lower energy consumption **or** mechanical energy use intensity ≤ 45 kWh/m².year	Thermal energy demand intensity ≤ 40 kWh/m².year **or** Peak thermal load ≤ 30 W/m²
4	≤ 1.5	EnerGuide Rating % lower than EnerGuide Reference House: not less than 40% lower energy consumption **or** mechanical energy use intensity ≤ 35 kWh/m².year	Thermal energy demand intensity ≤ 25 kWh/m².year **or** Peak thermal load ≤ 25 W/m²
5	≤ 1.0	Mechanical energy use intensity ≤ 25 kWh/m².year	Thermal energy demand intensity ≤ 15 kWh/m².year **or** Peak thermal load ≤10 W/m²

For the Project to meet Step 3, E3 Eco Group will perform the following:

1) Complete HOT2000 V11.3 or newer computer modeling of each of the unique buildings to be constructed. In conjunction with the other design consultants, E3 will compare different construction assemblies and mechanical options to determine the design approach that best meets all three required performance targets of Step 3.
2) Pre-Drywall E3 will perform site visits to evaluate the effectiveness of the air barrier approach. This will include mid-construction air leakage testing.
3) At occupancy, E3 will complete final air leakage testing to determine the whole building airtightness. The HOT2000 energy models will be updated with the as built airtightness to confirm all buildings comply with Level 3 of the Step Code.

If you have any questions please contact the undersigned,

Kind Regards,



Emma Conway, Energy Advisor, B.A.
Senior Project Manager
E3 Eco Group Inc
604-874-3715
emma@e3ecogroup.com

E3 ECO GROUP Inc.

4670 Capilano Townhouses: Energy and Water Conservation and Greenhouse Gas Emission Reduction Development Permit Area Compliance Strategies

Prepared by Emma Conway For Wedgewood Capilano Homes
Feb 9, 2018

Executive Summary:

Wedgewood Capilano Homes has contracted E3 Eco Group Inc to evaluate the environmental sustainability of their proposed Capilano Townhouse Development in the District of North Vancouver's *'Energy and Water Conservation and Greenhouse Gas Emission Reduction Development Permit Area.'* This development is planned to consist of 8 units located at 4670 Capilano Road in North Vancouver.

The primary objectives of the District's Development Permit Area (DPA) are to promote energy conservation, water conservation and the reduction of greenhouse gas (GHG) emissions to create a more positive net impact on our environment and occupant health.

E3 Eco Group strives to offer practical, effective advice where sustainability is concerned. The recommendations provided must reduce environmental impact, but also must to be executable using available manpower and materials, must be cost-effective for the developer, and must not negatively impact housing affordability. The recommendations presented in this report were evaluated from this perspective, so that they will satisfy the District of North Vancouver's goals without placing an undue financial or maintenance burden on the homeowners who purchase these townhomes.

Practical solutions must also respect the District's ability to accommodate changes in construction measures and materials. If strategies are too aggressive or forward-reaching, the ability to approve and inspect the implementation of those strategies could be compromised.

The Capilano development by Wedgewood is intended to be a model of improved environmental sustainability by addressing the District's Energy and Water Conservation and GHG Emission Reduction Objectives in an achievable, practical, and economically feasible manner. In this report these objectives, as well as other sustainability practices, are evaluated in the context of this particular development.

In addition to these objectives, the Capilano Townhomes will also be designed and built to meet BC Building Code 9.36.6 Step Code Level 3 for Part 9 buildings. Some of the objectives below will help achieve the energy performance targets required of Step Code Level 3. These advanced performance targets will ultimately reduce the energy and hot water consumption, and in turn reduce the GHG emissions of the homes through enhanced envelope performance, increased airtightness, and efficient mechanical systems. In summary, Step Code Level 3 will ultimately support the District's Energy and Water Conservation and GHG Emission Reduction Objectives.

The purpose of this report is to create an opportunity for Wedgewood and the District of North Vancouver to work together to ensure that the project raises the bar on sustainable development in the area while remaining feasible and affordable to the new buyer.

Evaluation of Potential Measures Suggested by The District of North Vancouver:

A) Energy Conservation Guidelines

1.) An integrated design process should be utilized to identify opportunities to reduce a building's energy consumption.

An integrated design process between Wedgewood Capilano Homes, design consultants, general contractor, and E3 energy advisors has identified the following strategies to help reduce energy consumption:

a) Space and domestic hot water heating equipment with "best in class" efficiency ratings

The Capilano Townhome development will ensure high efficiency heating equipment is selected. In Step Code Level 3 the building and equipment systems must meet an EnerGuide Rating (less the EnerGuide baseloads) 20% lower energy consumption than the EnerGuide reference house *or* a mechanical energy use intensity <45kWh(m2.year) which the Capilano townhomes will meet once energy modeling has been completed to help inform design.

There are a variety of strategies to achieve this objective; high efficiency boilers and furnaces for space heating with 96% AFUE or electric baseboard heat which is 100% efficient at converting energy into space heat. High efficiency domestic hot water heaters or combination space and domestic hot water systems will also be considered.

b) Heat Recovery Ventilators

Heat Recovery Ventilators (HRV) work by exhausting warm stale air through a heat exchange core past incoming cold air where a heat exchange occurs. This effectively pre-heats the incoming fresh air before it enters the living space. Raising the temperature of the supply air means the space heating system will be active less often and for shorter periods, reducing energy consumption. It is very likely that with the performance targets of Step Code Level 3 that HRVs will be installed in each unit.

c) Low energy lighting and EnergyStar appliances

Low energy lighting (LED/CFL) and EnergyStar appliances are common practice. It will be recommended to Wedgewood to incorporate 100% low energy lighting and EnergyStar Certified appliances (fridge, dishwasher, clothes washer, clothes dryer) in all units.

d) Programmable thermostats

Programmable thermostats allow an occupant to choose what areas can be heated/cooled at different times of the day. For example, the temperature can be programmed to be lower the hours of the day the occupants are out, while warmer just in the mornings and evenings. Different desired temperatures can be set in different spaces to reflect their occupant demand. Programmable thermostats can reduce energy consumption as well as operating costs. If radiant in floor heating or baseboards are installed this objective will be met. If forced air is selected zoning different heating systems will be considered but ultimatley is a more cost intensive option for these townhomes.

2.) The effectiveness of the building envelope, including glazing, to reduce heat loss should be maximized.

E3 Eco Group considers improving the building envelope as the most direct and efficient way to achieve the objectives of reduced energy consumption and greenhouse gas emissions. In Step Code Level 3 the envelope performance must meet a thermal demand intensity of <40kWh/(m2.year) *or* a peak thermal load of <30W/m3 which the Capilano townhomes will meet once energy modeling has been completed to help inform design.

The first approach to comply with these objectives are to increase the building envelope's thermal resistance. Measures to improve the envelope can be evaluated using energy modeling software such as HOT2000 Version 11.3 or newer. This software, from Natural Resources Canada, allows for the comparison of numerous options for wall construction, attic insulation, floor slab insulation, window specifications, envelope air tightness, solar heat gain, and more. The software is used by Energy Advisors (EA), of which E3 Eco Group employs five, to model upgrades for single family houses, rowhouses (i.e. townhouses) and some low-rise apartment buildings. Using HOt2000 the design team will consider multiple iterations using beyond code minimum insulation values to best achieve the Step Code level 3 building envelope performance targets.

The second approach is to implement advanced envelope airtightness details during construction. Step Code Level 3 for Part 9 buildings sets the airtightness target at <2.5 air changes at 50 Pascals (Pa). This will be a challenging target for townhomes with shared party walls to achieve. E3 Eco Group will continue to work with the design consultants to come up with an air barrier approach and construction details that will help the builder meet this advanced airtightness target. During construction E3 will perform mid-construction blower door testing to help identify weaknesses so that at final the whole building airtightness target is <2.5 ACH @ 50 Pa to meet Step Code Level 3.

3.) Overall building performance and interior thermal comfort should be maximized through a combination of passive design strategies, including, but not limited to: natural ventilation, building orientation, solar shading overhangs, and building massing.

Passive solar design is a proven concept which offers tangible benefits under the ideal circumstances. Such circumstances can exist with individual custom homes where solar orientation, local shading and thermal mass elements can be optimized. However, when they are applied to a neighbourhood of townhomes the net benefit can be substantially less or can turn into a liability rather than an asset. A worthwhile amount of passive solar energy may be attainable but the design must address excessive heat gain, homeowner knowledge/ability to take advantage of passive solar heating, and the general lack of control of the incoming heat energy relative to the mechanical space heating system.

The ability of the glazing to accept additional solar heat energy while retaining a high effective insulation value, without incurring a large upcharge in the window package, is the challenge. Typically, double pane windows with a soft-coat low-e coating need to be upgraded to triple pane windows with hard-coat low-e coatings to provide both high solar heat gain coefficients and net reduction in energy consumption through conductive heat loss. This combination can incur high costs to the developer.

The biggest challenge of passive solar design is to not cause the house to overheat. Overheating of a home in summer is a commonly reported problem and is out of the control of a homeowner. This can lead to occupant discomfort and reliance on natural ventilation which is unreliable and does not provide whole house ventilation like an HRV does. E3 Eco Group does not consider optimizing passive solar heat gains the most effective way that Wedgewood can reduce energy consumption of the Capilano Development.

4.) Various measures should be utilized to reduce the heat island effect including: green roofs, EnergyStar rated or high-albedo roofing materials, or other appropriate measures.

Roofs with high solar reflectance help reduce heat island effect, therefore reducing the passive solar heat gain through a building's roof thus reducing cooling loads in the summer. There are products on the market with high solar reflectance index (SRI) available which will be considered.

5.) Opportunities for the distribution of natural daylight into interior spaces to reduce energy consumption should be considered.

As Capilano is a townhouse development there is less oppourtunity for the middle units to maximize incoming daylight then compared to the end units. The design team will keep this objective in mind while also considering the fact that increased window area (R value 3-4) will bring down the buildings overall envelope performance. The best outcome is maximizing daylighting while minimizing total window area.

6.) Solar thermal or solar electric technologies should be incorporated, but where it is not possible to do so, building should be designed to be solar ready.

Solar hot water, as well as solar photovoltaic (PV) are popular subjects which are expected to play an important role in energy generation in the future on our path to Net-Zero housing. Currently, the technology remains costly relative to envelope upgrades and relative to the current cost of energy. Generally speaking, the reasonable limits of envelope upgrades and energy recovery should be exhausted before solar generation is considered.

This is not to say that no attention should be paid to the use of solar PV; the best way to incorporate solar PV at this time is to reduce the buildings energy demand, provide suitably orientated and structured roofs for panel placement and allow for the easy addition/integration of solar PV in the future (ie. "solar ready" construction). The Capilano townhomes will be made 'Solar Ready' following the Canadian Solar Industries Association (CANSIA) guidelines. These guidelines include a number of criteria, such as a conduit system to connect the roof to a mechanical room and ensuring roof trusses can support the weight of a future solar hot water or solar PV system.

7.) On site renewable energy systems should be pursued where feasible.

Other renewable energy systems include on-site wind electrical generation. This is a technology that does not yield a good benefit to cost ratio. See item 6 in this section for explanation on solar renewable technologies.

8.) Mechanical systems should be designed to enable interconnection to future district energy systems in those areas identified by the District as having potential for such systems.

The effectiveness of a district energy system relies on leveraging multiple requirements for heating, or preferably, a combination of multiple heating loads, cooling loads and waste heat sources. Depending on the planned future development of the area (residential and limited commercial), there may or may not be the potential for any significant waste heat sources. The potential benefits of a district energy system must be weighed against the large up-front infrastructure cost, the inherent complexity of the system, the need for elevated levels of ongoing maintenance, and the presence (or not) of waste heat or cooling loads.

At this time Capilano is not preparing to have a 'hydronic ready' space heating and domestic hot water system as the development is not centrally located and is therefore not an ideal candidate for District Energy. Since the project is targeting Step Code Level 3 limiting the options for mechanical systems could be detrimental to the project reaching the energy performance targets of Step Code Level 3.

9.) On-site landscaping should be designed to promote opportunities for passive heating/cooling without negatively affecting the potential for solar thermal or solar electric systems on the site and on surrounding properties.

The Capilano Townhome site will have trees incorporated in the landscape design. These trees will offer some limited solar shading but in turn with not negatively affect the potential for future solar collection.

10.) The planting of appropriate trees within parking lots should be maximized to provide shade, store carbon, and reduce heat buildup.

The Capilano Townhomes have garages within each suite. The current Landscape Plans indicate once construction is complete where trees will be planted to provide shade, store carbon, and reduce heat buildup. Existing trees will be retained where possible.

11.) Daylight-responsive controls should be incorporated in all regularly occupied spaces adjacent to windows/skylights.

In all habitable rooms Wedgewood could consider the incorporation of permanent blinds that occupants could use to decrease solar heat gain when undesirable. Light activated blind sensors are also available on the market, but the upfront cost to the developer and ability of future homeowners to maintain this technology should be considered before implemented.

B) Water Conservation Guidelines

1.) An integrated design process should be utilized to identify opportunities to reduce a buildings water consumption and incorporate strategies for the capture and use of storm water for landscaping purposes.

An integrated design process between Wedgewood Capilano, design consultants, general contractor, and E3 energy advisors has identified the following strategies to help reduce water consumption. These will help reduce water consumption on a daily basis.

a) Low flow toilets and faucets
b) Water saving dishwasher and clothes washer

2.) The storm water and building water discharge should be managed on site to the extent possible. Measure could include: permeable paving materials, raingardens or bioswales, xeriscaping, topsoil.

A storm water management strategy is something that must be considered in this climate. With concentrated periods of intense rainfall, landscapes and developments must be designed to accommodate these events without flooding and avoiding erosion. Limiting the impermeability of the site, providing adequate drainage, or providing sufficient capacity for storm water detention are some of the available approaches to addressing these issues. Capilano townhomes has incorporated a raingarden into the landscape design. A bioswale is a detention area that allows storm water to naturally infiltrate back into the groundwater. The plants of this area will all be water tolerant.

Xeriscaping (drought resistant landscaping) is a great way to limit the amount of outdoor irrigation required. The landscape consultant has incorporated native species that are drought tolerant such as Western red cedar, kinnikinick, deer fern, salal, tall Oregon grape, snowberry, and huckleberry.

3.) Site adjacent to an open watercourse should have storm water infiltration redirected to that receiving environment if appropriate.

The Capilano development is unique as it is located across the street to the Capilano River Regional Park. The Capilano townhomes plans currently include the design of a bioswale along the East perimeter, which eventually is redirected to the river downstream.

4.) Automated control systems should be utilized where temporary or permanent mechanical irrigation systems are required.

Irrigation technologies include moisture sensors/rain delay control, drip heads, timer controls, high efficiency nozzles, customized water spray patterns. Capilano will utilize some of these technologies as designed by the landscape technology to increase outdoor water conservation. However, if Xeriscaping is prioritized under item 2 of this section, the need for irrigation can be greatly reduced.

C) Greenhouse Gas Emission Reduction Guidelines

1.) Building materials which are durable should be selected.

Durability is important to prioritize in new construction as extended product life reduces maintenance costs and keeps more materials out of the landfill. The less products that are manufactured and shipped to site reduces GHG emissions. The durable items incorporated into Capilano will consider the following:

a) Decking materials that will not require any maintenance for at least 5 years
b) 20 to 30-year roof manufacturer warranty
c) Fibre cement, brick, or metal siding products
d) Exterior finishes made from alternatives to wood
e) Durable hard surface flooring in high traffic areas
f) Lifetime finishes on all faucets and door hardware

2.) Locally or regionally sourced building materials should be used to reduce transportation energy costs.

Construction material selection is an important consideration when trying to lower our environmental impact and make a project sustainable in a more holistic way. Strategic construction materials can make a development more sustainable by using consumer purchasing power to buy products that reduce the amount of embodied energy or carbon footprint created during the construction process. Selecting locally sourced (within 800km) resources or manufactured materials reduces the amount of GHG produced in the transportation of materials. Locally sourced resources could include lumber, aggregate, stone countertops sourced within 800km. Locally manufactured materials could include drywall, insulation, windows, roofing, cabinetry, siding, paints, interior doors within 800km. Capilano will commit to selecting at least 6 products manufactured within 800km.

3.) Existing building materials should be used where practical.

In the case of the Capilano 8 unit townhome development, it is not practical to utilize materials from the existing building on site. These older materials could contain asbestos, high levels of VOCs , or could be structurally compromised.

4.) Building materials which may be used or recycled upon building demolition should be selected.

Purchasing products with recycled content diverts materials from the waste stream. A variety of materials now can have recycled content included to reduce the amount of material going into our landfills. Examples in the Capilano development will include: manufactured wood products, drywall, insulation, carpet padding, and MDF products.

5.) A construction waste management plan should be developed and recycling should be prioritized.

The construction waste management plan will include hiring a reputable waste hauling company that commits to having all waste hauled away sorted and then sent to recycling depots. It is not uncommon today to see waste diversion rates of 50% or higher. Having the construction waste sorted off site is preferable as on site sorting takes up too much space on site and requires continuous training and ongoing supervision of all trades on site.

6.) Building products which have low, or no-VOC off gassing potential should be selected.

Procuring materials with low volatile organic compound (VOC) concentrations can increase indoor air quality and in turn improve occupant health. The most common VOC used is formaldehyde which degrades respiratory health and has been linked to cancer. Formaldehyde is a colourless organic compound used as a binding agent in building materials. Over time it breaks down and is off-gassed into living space. Capilano will commit to low VOC or low formaldehyde insulation, sub floor sheathing, particleboard/MDF for cabinets or shelving, and interior paints.

DAVIES GEOTECHNICAL INC.

1520 Cliveden Avenue, Unit 2
Delta, B.C. Canada V3M 6J8

T: 604.395.2300
F: 604.395.2301

www.daviesgeotechnical.com

Foundation Design

Excavation & Shoring Design and Monitoring

Slope Stability

Retaining Wall Design

Earthquake Engineering

Liquefaction Assessment

Storm Water Management Design

Sediment & Erosion Control Design

Design Build

COMMERCIAL

RESIDENTIAL

INFRASTRUCTURE

Date: August 3, 2017
Project No: P091

C/O Wedgewood Ventures
4670 Capilano Road
North Vancouver, BC

Attn: **James Fox**
Re: **Geotechnical Report**
Proposed Residential Development
4670 Capilano Road, North Vancouver, BC

Dear Sir / Madam:

In response to your request, Davies Geotechnical Inc. has completed a review of the environmental subsurface investigation conducted by Keystone Environmental on October 1st 2015 for the site of the proposed residential development in North Vancouver, B.C.

The purpose of our work was to review the available geotechnical data to enable Davies Geotechnical Inc. to provide recommendations regarding the geotechnical aspects of the design and construction of the proposed residential development.

This geotechnical report provides a summary of the site conditions and soil stratigraphy encountered during the investigation and also presents recommendations regarding site preparation, foundation design, shoring recommendations, and seismic design.

The following background information was used for the preparation of this geotechnical report.

- Report produced by Keystone Environmental on October 1 2015 (Project 12677)
- Geologic Survey of Canada map 1484A.
- GIS Map provided by the City of North Vancouver.
- Seismic Hazard Map provided by National Resource Canada.

Attached to the end of this report are the following:

- Figure 1: Site Plan & Auger Hole Location Plan (prepared by Keystone)
- Figure 2: Basement Wall Pressure Diagram
- Auger Hole Logs (prepared by Keystone)

1.0 SITE DESCRIPTION

The subject property is currently occupied by a single family residential structure and is bounded to the west by Capilano road, to the north by single story residential structures, and to the east and south by townhome developments and single family residential structures.

The topographic survey information obtained from the Districts of North Vancouver "Geoweb Properties" and current survey drawings indicate that the site is relatively flat site with an elevation of 144 to 145 meters from west to east.

The District of North Vancouver's "GEOweb" indicates there is a creek that runs along the eastern edge of the site that connects underground to the storm water system. The site is located within the District of North Vancouver's DPA Streamside Protection Zone.

2.0 PROPOSED Development

It is our understanding that the proposed development will consist of three story residential townhomes with a basement buried approximately 0.7m to 1.7m below finished grade. The placement of approximately 0.6 meter to 1 meter of fill is expected to reach the proposed finished grade. No drawings were provided at the time of writing the report.

3.0 SITE INVESTIGATION

3.1 Subsurface Investigation

Davies Geotechnical Inc. completed a review of the sub surface investigation conducted by Keystone Environmental on October 1st 2015. This investigation involved the completion of one borehole and the installation of one groundwater monitoring well to a depth of 4 meters below grade.

The stratigraphy encountered in the boreholes are summarized on the borehole logs provided by the Keystone Environmental report, and attached to the end of this report.

4.0 SUBSURFACE CONDITIONS

4.1 Site Geology

Geologic Survey of Canada map 1486A indicates that the site is located where Capilano Sediments consisting of medium sand and cobble gravel can be expected. The results of the site investigation confirmed that conditions at the site generally conform to the known geology of the area and what was found in previous investigations in the area.

4.2 Soil Conditions

Based on the borehole information provided by Keystone Environmental site investigation, the following generalized soil profile has been prepared.

Thickness (m.)	Soil Description
1	Brown sand, moist, loose
1.2	Grey to brown sand and cobbles, moist, dense
1	Grey sand and gravel, wet, dense
To Depth of Investigation	Grey sand, wet.

4.2 Ground water

The Keystone Environmental Investigation encountered Ground water at 2.7 meters below the surface.

5.0 SEISMIC CONSIDERATIONS

The site is located in a seismically active area where the effects of a major earthquake must be considered for design. The BC Building Code (NBCC) (2015) specifies the design earthquake as a magnitude 7 earthquake with a 2% chance of exceedance in 50 years or a 2475 year return period. The peak hard ground acceleration (PGA) associated with the design earthquake is anticipated to be 0.342g. The peak hard ground acceleration parameters from The BC Building Code (NBCC) (2015) are Fa = 1.1 and Fv = 1.1. The peak surface acceleration (PSA) is estimated to be 0.414.

The soils encountered at the site are compact sands and gravels, not susceptible to strength or stiffness loss or liquefaction during cyclic loading. Based upon the anticipated soil conditions, the site is considered a Class “D” site as defined by BCBC (2012).

6.0 COMMENTS AND RECOMMENDATIONS

The site is located in an area where the District of North Vancouver prohibits the permanent pumping of groundwater. Observations at the site indicate that the water table is located approximately 2.7 m below grade. In order to comply with the District of North Vancouver bylaws the foundation and floor slab will need to be placed above the groundwater table. The current plan places the basement slab at approximately 1 meter below the existing grade which is above the water table.

6.1 Site Preparation

The first stage of site preparation will involve the clearing of the existing structures, removal of topsoil, fill, utilities and foundations. Bulk excavation to a depth of 1 meters below grade is expected to remove the loose soils. Additional excavation of to a depth of 1.4 meters below grade is expected to reach basement depth in some areas. At this depth the soils expected are compact to dense cobbely sands. The excavation may be sloped at 1V:1H where required in the compact sands and gravels.

6.2 Soil Permeability

Based on the information provided by Keystone Environmental borehole logs an absorption rate was calculated for the anticipated soils. The expected absorption rate ($K_{(fs)}$) is 0.1 cm/s in the compact to dense cobbely sands and compact to dense gravelly sands.

6.3 Temporary Dewatering

The proposed building is not expected to encounter groundwater. We anticipate that any groundwater encountered can be managed with a pumped sump at the base of the excavation.

6.4 Foundation Design

Based upon the geotechnical site investigation, we anticipate that the soils at the foundation grade will consist of compact to dense cobbely sand.

We recommend that foundations be designed as strip and pad footings. All footings should be placed on the compact gravelly sand, or compact silty sand. Footings should have a minimum depth of 0.45 meters and minimum width of 0.45 meters.

All loose fill and organic material should be removed prior to footing inspections.

The foundations for the proposed building should be placed on the compact to dense gravelly sand, or compact to dense cobbely sand. Foundations should be designed with a serviceability limit states bearing pressure not exceeding 150 kPa and a factored ultimate limit states bearing pressure not exceeding 225 kPa.

Once detailed information regarding foundation loading and sizing is available, Davies Geotechnical Inc. should complete a second stage of review to verify that foundation settlements will be within acceptable tolerances.

Prior to placing concrete, the geotechnical engineer should inspect and approve of all bearing surfaces.

6.5 Floor Slabs

We recommend the placement of a 0.15 meter thick drainage layer consisting of 19 mm clear crushed gravel beneath the floor slabs in order to create a capillary break.

Structural fill, if required, should consist of well graded sand and gravel with less than 5% passing the # 200 sieve (silt and clay content of less than 5%) and be compacted to at least 95% of the Modified Proctor Maximum dry density, in accordance with ASTM D 1557.

6.6 Basement Wall Design

The basement walls will have to be designed to resist the applicable lateral pressures associated with earth pressure, hydrostatic pressure (if any), surcharge loadings, compaction loadings and seismic loads.

We anticipate that the excavation for the proposed basement walls will be sloped, and consequently the soils within the active pressure wedge will be compact structural fill.

Davies Geotechnical Inc. completed analysis of the magnitude of lateral earth pressure against the basement walls, making the following assumptions:

- Grades adjacent to the proposed structure are relatively flat and level.
- The basements are provided with a perimeter drain system connected to a suitable discharge point.
- Shored walls will be installed with drainage and, therefore, there are no hydrostatic water pressures.
- The peak horizontal ground acceleration was estimated at 75% of the peak hard ground acceleration associated with the 1:2475 year return period earthquake.

The un-factored lateral earth pressure diagram for the design of basement walls has been provided in this report.

6.7 Building Perimeter Drainage and Perimeter Backfill

We recommend that all basement structures be provided with a perimeter drain system and drainage blanket against the perimeter below grade walls. This perimeter drain must be placed above the depth of 2.7 meters where the water table was encountered.

If the basement walls for the project are to be blind formed or constructed using shotcrete, we anticipate that the perimeter drain system will consist of Mira-Drain or an equivalent product, installed between the temporary shoring face and the basement walls. Weepholes through the foundation wall should be provided at 2.5 meter intervals to direct the water from the Mira-Drain to a perforated drain installed on the inside of the basement walls. These perimeter drains should consist of a perforated PVC pipe, surrounded by 150 mm of crushed rock and wrapped with filter fabric.

Where applicable, backfill adjacent to the basement walls should consist of clean draining sand and gravel with less that 5% passing the # 200 sieve. This backfill should be placed in 300 mm thick lifts and compacted to at least 95% of Modified Proctor maximum dry density. Backfill must comply with the District of North Vancouver's standard specifications for structural fill within city property.

7.0 CLOSURE

Davies Geotechnical Inc. has prepared a geotechnical report for the proposed residential development to be constructed at 4670 Capilano Rd., North Vancouver, B.C.

We recommend that, prior to tender, the geotechnical engineer review all design documents and specifications.

In order to satisfy the requirements of the building schedules, Davies Geotechnical Inc. will be required to complete field reviews during the construction process. These field reviews will include the following:

- Inspection of subgrade conditions beneath all fills and surfacing materials prior to the placement of fill or concrete footings
- Review of the compaction of subgrade fills and structural fills (if required)
- Review all temporary and permanent slopes

We trust that the information provided meets your current requirements. If you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

DAVIES GEOTECHNICAL INC.

Lindsey Mitchell, EIT
LM

☎ 604-395-2300
604-395-2301
✉ Lindsey@daviesgeotechnical.com

DAVIES GEOTECHNICAL INC.

Mr. Paul A. Davies, P.Eng., Principal
PD

☎ 604-395-2300
604-395-2301
✉ pauldavies@daviesgeotechnical.com

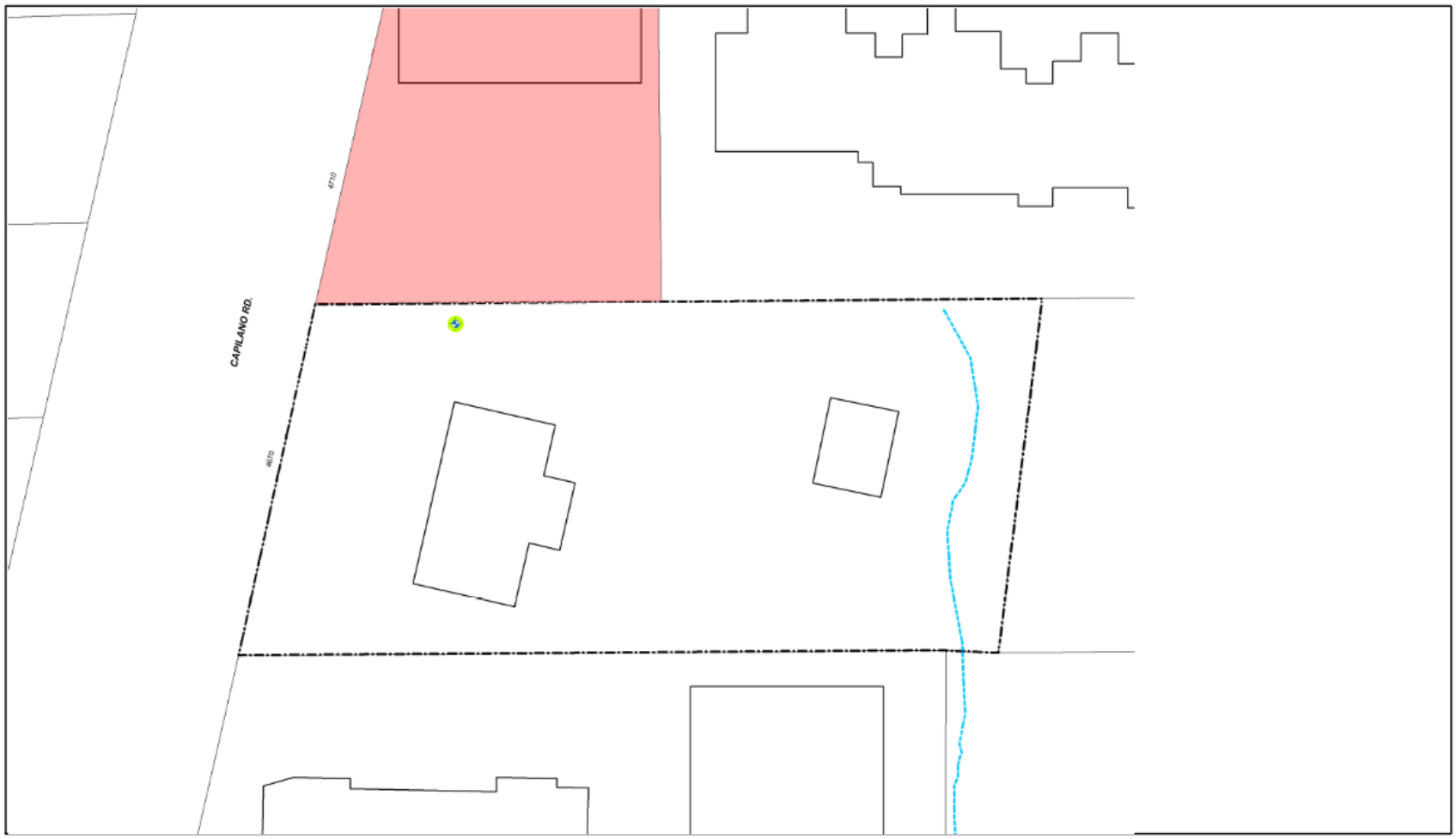
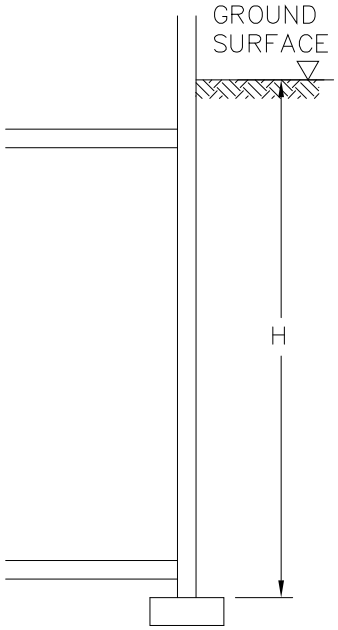
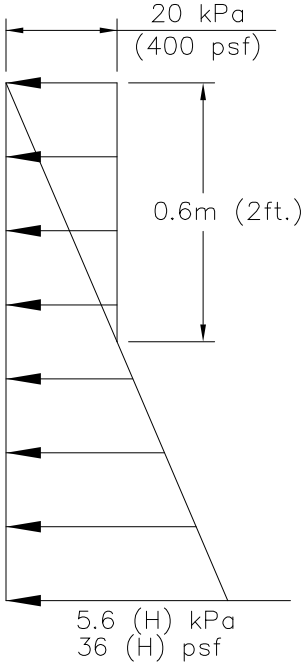


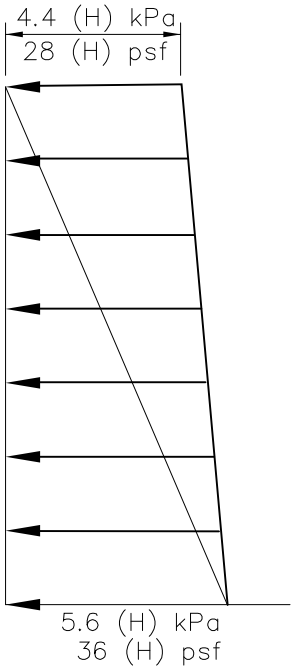
Figure 1
Site Plan – Provided by Keystone Environmental
Note: Test Pit locations are approximate.



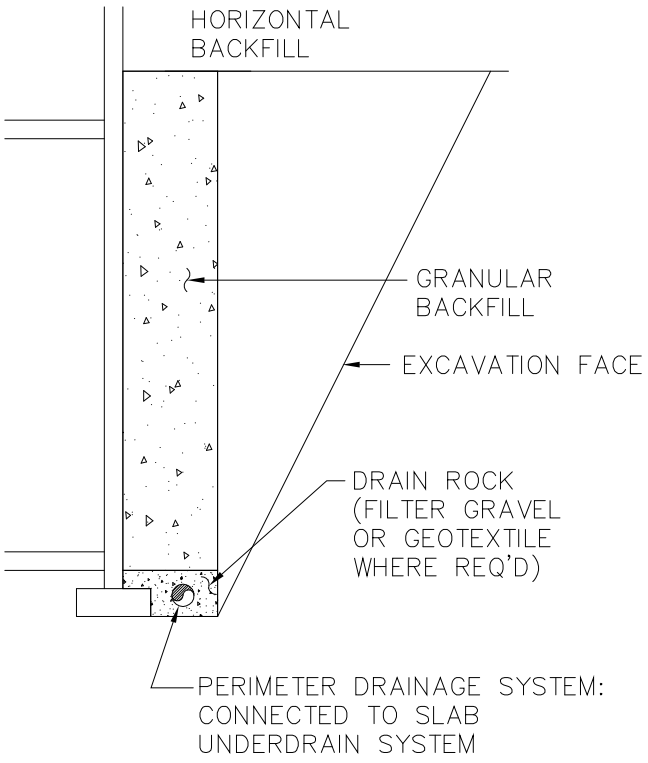
TYPICAL BASEMENT WALL



STATIC LOAD



SEISMIC+STATIC LOAD



NOTES: ASSUMPTIONS:

(1) Backfill is free draining, no hydrostatic pressure.

(2) Backfill and grade is flat and level adjacent to the building.

(3) Wall movements of 0.002 times H are possible at top of the wall.

(4) Peak surface acceleration =0.414

(5) Backfill and/or native soil have friction angle greater than 32 degrees.

(6) No surchange loads within a horizontal distance equivalent to 50% of wall height.

- ALL METRIC UNITS IN (m) AND (kPa)
- ALL IMPERIAL UNITS IN (ft.) AND (psf)
- ABOVE SKETCHES ARE NOT TO SCALE

James Fox	Davies Geotechnical Inc.	
4670 Capilano Rd North Vancouver, B.C.	LATERAL PRESSURE FOR BASEMENT WALL DESIGN	Dwg by: LM | Date: 27/07/17 Dwg: Fig 2

MONITORING WELL ID: MW15-1

Well Type: Monitoring Well
Project Location: 4670 Capilano Road North Vancouver, BC
Drilling Contractor: Uniwide Drilling Co Ltd.
Drilling Equipment/Method: Solid Stem/ ODEX
Well Location: North portion of Site

Project Name/No.: 12677-02
Client: Wedgewood Ventures Ltd.
Engineer/Geologist: RFM
Drill Date: September 14, 2015 **Page:** 1 of 1

Depth (ft/m)	Symbol	Soil / Sediment Description	Sample Type	% Recovery	Sample Analyzed	Sample ID	Headspace (PID) ppm	Well Construction	Remarks
ft m		Ground Surface							
0 0		***SAND*** Brown SAND. Loose, moist. Hydrocarbon odours and/or staining were not observed.							
				100%	N	MW15-1(0.5)	1.0		
1									
2									
3 1		***SAND and COBBLES*** Grey medium to coarse-grainedSAND and COBBLES. Dense, moist. Hydrocarbon odours and/or staining were not observed.							
				100%	N	MW15-1(1.2)	2.3		
4		***SAND and COBBLES*** Brown medium to coarse-grainedSAND and COBBLES. Dense, moist. Hydrocarbon odours and/or staining were not observed.							
5									
6									
				100%	N	MW15-1(1.8)	1.1		
7 2		***SAND and GRAVEL*** Grey coarse-grainedSAND and fine GRAVEL. Loose to dense, saturated. Hydrocarbon odours and/or staining were not observed.							
				100%	Y	MW15-1(2.3)	0.7		
8									
9									
10 3		***SAND*** Grey to medium-grained SAND. (further description unknown due to ODEX sampling)							
11									
12									
13 4		End of Hole							
14									
15									

Flushmount and Concrete
Soil Vapour Screen
Nylon Tubing
Bentonite
PVC Casing
Water Level 2.5 m (Sept 16, 2015)
Well Screen and 10/20 Silica Sand

Date of Water Level: September 16, 2015
Water Level (from TOC): 2.488 m

Well-Borehole Diameter: 0.15 m
Well Casing Diameter: 0.05 m
Well Casing Material: Schedule 40 PVC
Well Screen Slot Size: 0.025 cm

Depth of Well (TOC): 3.723 m

June 28, 2015

James Fox
Wedgewood Ventures
North Vancouver, B.C.

Re: Professional Opinion of Unnamed Drainage Channel at 4670 Capilano Road

Dear Mr. Fox,

Sartori Environmental Services (SES) has been retained to assess an unnamed open channel at the rear (East) of 4670 Capilano Road. It is our understanding that the subject property is for sale and that the District of North Vancouver (DNV) has the open channel shown on their mapping system. SES has assessed the channel and provides a professional opinion, possible environmental setbacks associated with this channel and other recommendations for future redevelopment of the site.

Existing Conditions

The subject property is approximately 1,860 m^2 in size and currently consists of a single-family home with associated semi-permeable walkways, driveway/parking surfaces, and a large rear yard which is vegetated with shrubs to the eastern property boundary. At the rear of the lot is an unnamed open channel that lies in a north – south alignment and flows southerly, within 2 m of the eastern fence line. It is our understanding from discussions with the existing owner that the channel was dug in the 1970's to drain the rear yard of the subject property.

The channel is generally straight in alignment, approximately 1.0 m in width and is characterized by sand/detritus substrates with almost no gravel or cobble. The base of the channel was free of vegetation, possibly indicating prolonged presence of standing water. The outflow from the feeder pipe had no features consistent with permanent or prolonged flow (i.e. scouring or a plunge pool). The drainage channel has almost no gradient and straight banks 0.2-0.4 m in height. Fluvial process is visible throughout, indicating that the channel does receive flow, likely only as a result of precipitation events.

The channel, which was completely dry at the time of the site assessment, emerges from a 600 mm concrete pipe on the neighboring multi-family property to the north and re-enters a culvert 29 m beyond the southern perimeter of the subject property, which flows into the municipal storm system. The channel is open for approximately 58 m in total length from the multi-family site to the inlet of the culvert on the property to the south. No significant headwaters were found to the north of the multi-family site and the channel is not mapped beyond the subject property on the DNV's Geographic Information System (GIS) website (http://www.geoweb.dnv.org).

The riparian area on both banks is heavily vegetated, with a mixture of coniferous and deciduous species and thick understory vegetation. Trees include:

- Ash (*Fraxinus excelcior*),
- Red alder (*Alnus rubra*),
- Mountain Ash (*Sorbus aucuparia*),
- Western hemlock (*Tsuga heterophylla*),
- Beech (*Fagus sylvatica*), and
- Western red cedar (*Thuja plicata*).

Shrub-layer vegetation includes:

- Sword Fern (*Polystichum munitum*),
- Red huckleberry (Vaccinium,
- Salmonberry (*Rubus spectabilis*), and
- Thimbleberry (*Rubus parviflorus*).

Much of the boundary areas are dominated by non-native floral species. Non-native/invasive vegetation identified within the riparian understory includes:

- Himalayan Blackberry (*Rubus discolor*),
- Ivy (*Hedera spp.),*
- Laurel (*Daphne laureola* and *Prunus laurocerasus*),
- Yellow archangel (*Lamium galeobdolon*), and
- English Holly (*Ilex aquifolium*).

Photos

Photo 1. 600mm culvert from property to north, where flow originates onto subject property.

Photo 2. Open channel within multi-family site to north.

Photo 3. Dry drainage channel looking downstream in neighbouring property.

Photo 4. Dry drainage channel showing sandy substrate and shallow banks.

Conclusions & Recommendations

In the opinion of SES, that the unnamed drainage is a remnant portion of the municipal storm system, be classified as a ditch and as such would be subject to a 2.0m setback as classified under the Provincial Riparian Areas Regulation (RAR). The ditch will likely also be subject to a minimum Municipal setback of 5m from top of bank. SES also proposed that the following recommendations be implemented if re-development were to occur on the subject property:

- Maintain the open channel, however bank heights should be increased to provide for greater channel capacity and flood capacity (An engineer should assess capacity requirements);
- Maintain a minimum 5.0 m from top of bank riparian setback along the open channel;
- The opportunity to relocate and improve the overall function of the channel should be discussed with DNV staff. Improvements could include creating a bioswale through the property where pollution generating surface runoff (driveways) can be directed to the bioswale; and,

- Provide stormwater controls for any new development that interconnects with the unnamed channel.

Please contact the undersigned if you require any additional information or clarification of the above.

Sincerely,

J. Alex Sartori R.P.Bio.

Sartori Environmental Services

Diamond Head Consulting Ltd. Wildfire Hazard DP Area Assessment Report

For:
4670 Capilano Rd
North Vancouver, BC

July 26, 2017
Rev - January 22, 2018 – site plan

Submitted to:
James Fox
Wedgewood Capilano Homes Ltd
450 East 21st Street
North Vancouver BC
V7L 3C2

Submitted by:

DIAMOND HEAD

3551 Commercial Street
Vancouver, BC
V5N 4E8

The following Diamond Head Consulting staff performed the site visit and prepared the report. All general and professional liability insurance and individual accreditations have been provided below for reference.

Mike Coulthard, R.P.Bio., R.P.F.
Senior Forester, Biologist
Certified Tree Risk Assessor (46)

Kristian Short
ISA Certified Arborist (PN 8029 A)
ISA Qualified Tree Risk Assessor (TRAQ)
BC Parks Wildlife / Danger Tree Assessor (P2229)

Contact Information

Phone: 604-733-4886
Fax: 604-733-4879
Email: mike@diamondheadconsulting.com, kristian@diamondheadconsulting.com
Website: www.diamondheadconsulting.com

Insurance Information

WCB: # 657906 AQ (003)
General Liability: Northbridge General Insurance Corporation - Policy #CBC1935506, $5,000,000 (Mar 2017)
Errors & Omissions: Lloyds Underwriters – Policy #1010615D, $1,000,000 (June 2017)

Table of Contents

1 Introduction

Diamond Head Consulting Ltd. (DHC) was retained to prepare an assessment of fire interface risks and mitigation measures for the following proposed development.

Civic address:	4670 Capilano Rd, District of North Vancouver
Legal Address:	LOT A OF LOT 3 BLOCK D DISTRICT LOT 595 PLAN 9296
Client name:	James Fox - Wedgewood Capilano Homes Ltd
Date of site visit:	July 25, 2017

This project includes one residential lot located within the District of North (DNV) Vancouver Wildfire Hazard Development Permit Area. The overall objective of this report is to assess the potential wildfire threat and provide recommendations and tools to reduce this threat to the development site. This preliminary assessment report is meant to be submitted as a part of the Wildfire Development Permit application. It must be prepared and signed by a qualified professional and recommend whether a more detailed assessment is required. Specific goals for this assessment are:

- To assess interface fuels determine the extent, location and presence of wildfire hazard;
- To recommend site-specific fuel treatments for adjacent high fuel hazards that will reduce the risk to structures, human lives, and critical natural features;
- To make recommendations for improving suppression capabilities in and around the proposed development, and;
- To make recommendations for access, building and landscape materials that will minimize wildfire threat.

1.1 Site Planning Documents Reviewed

Diamond Head Consulting was provided with the following documentation from the client that provides the basis for all comments and recommendations:

1. 4670 Capilano Rd – Preliminary Architectural Submission – Oct24, 2016 – Wedgewood Ventures Ltd
2. Tree Management Report – Oct 14, 2016 – ACL File 16109 - Proposed Townhouse Development 4670 Capilano Road, North Vancouver – Arbortech Consulting

Any changes to these site plans should be provided to Diamond Head Consulting so that this wildfire report can be updated accordingly.

1.2 Policy Considerations for Wildfire Threat Mitigation

The Districts Wildfire Hazard Report Master Requirement SPE 115 was developed based on the recommendations of the Community Wildfire Protection Plan. The guidelines were developed with the intent of using precautionary measures to protect property in areas that are at risk from potential wildfire. Standards for achieve these objectives are identified, and reference NFPA-1144 (Standard for Reducing Structure Ignition Hazards from Wildland Fire). In some cases, these standards can be difficult to achieve for developments, and can result in more stringent restrictions than intended.

This assessment report considers both NFPA standards and Canadian FireSmart standards to assess hazard and guide recommendations for the design and construction of buildings and structures located within the boundaries of the Wildfire Development Permit Area.

Figure 1. Location of the subject site- 4670 Capilano Rd

Figure 2. Development Permit Areas (Wildfire) as defined by the District of North Vancouver.

2 Methodology

This project falls within the DNV Wildfire Hazard Development Permit Wildfire Interface Area. One nearby stand of trees to the north of the site was identified as a potential risk in the Community Wildfire Protection Plan (CWPP, 2007). This stand was classified into fuel types. There are no fuel classifications specific to the coastal region in the Canadian Fire Behaviour Prediction System; instead, the site has been classified as the fuel type that best represents the fire behavior potential of the forest types most accurately. Fuel type interpretations can be reviewed in Appendix B. Figure 4 is an aerial image with the fuel types located in relation to the project site.

Detailed fuel hazard assessments were completed within 500m of the lot using the provincial assessment system, “Rating Interface Wildfire Threats in BC” (Morrow, Johnson, Davies, 2008). These plots are shown on figure 4. Data collected at each fuel plot included:

- Soil and humus characteristics;
- Slope, aspect and terrain classification;
- Forest stand composition by layer (species, density, age, diameter, height, etc.);
- Vertical and horizontal stand structure;
- Quantity and distribution of ladder fuels;
- Composition and coverage of understory brush, herbs and grasses; and
- Quantity and distribution of ground fuels by size class.

3 Project Overview

The subject site is a residential lot on Capilano Rd in the Handsworth neighborhood of North Vancouver. There is an existing house with an established garden. The lot is bordered by a mix of mature tree species. There are no topographical features of note on the subject site and currently access is from Capilano Rd. The proposed development is an eight unit townhouse development. The new access to the subdivision will be from an easement to the south of the lot that will connect to Capilano Rd. Recommendations from the Arborist report include the removal of all all on-site trees. There are several boulevard trees on Capilano Rd that will be retained but will require pruning to reduce the risk of wildfire.

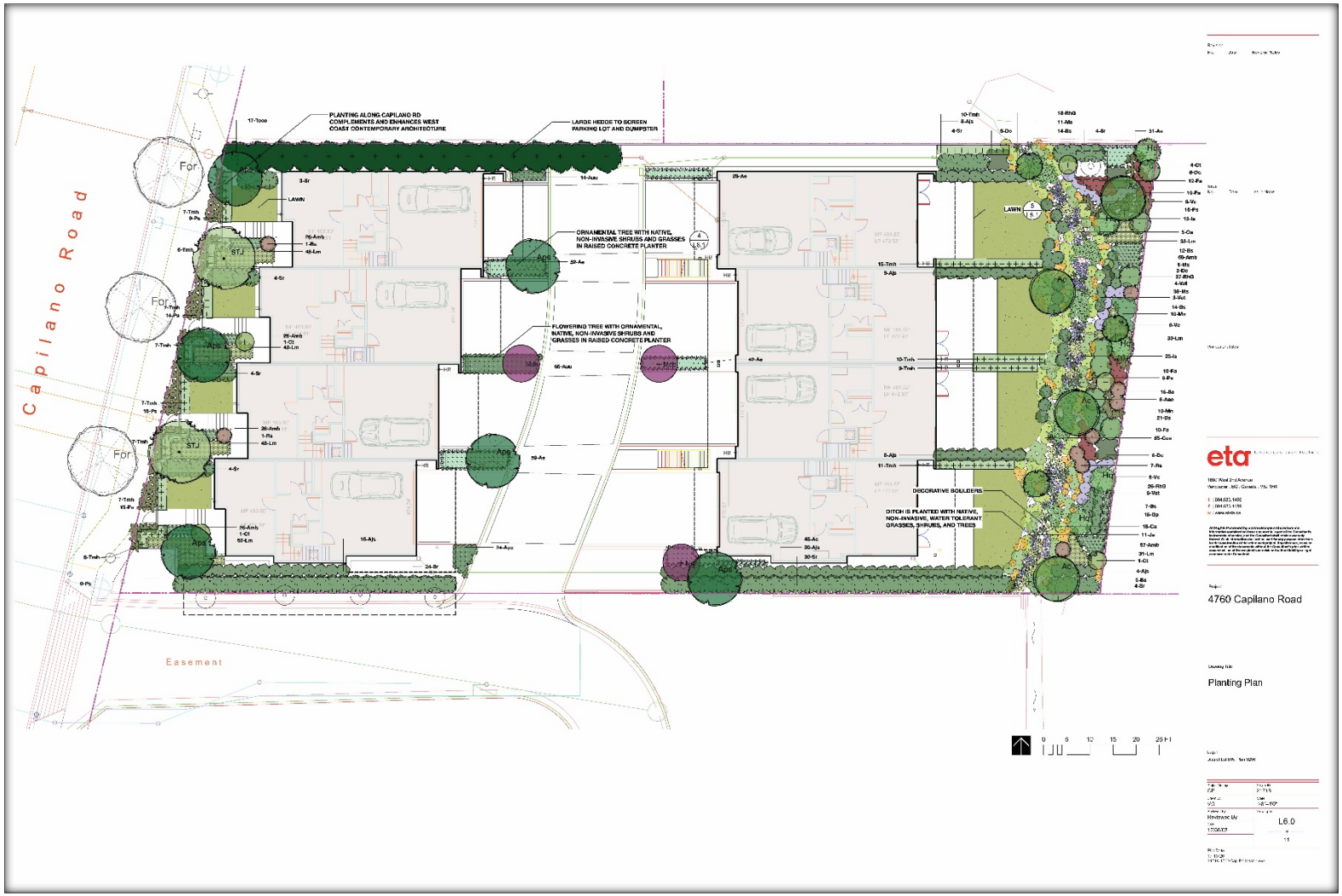


Figure 3. Development Concept plan for the site

4 Fuel Descriptions and Wildfire Threat Assessment

Summary of Fuel Types

Forested areas nearby the proposed development site were classified into the fuel types mapped in Figure 4. The fuels have been divided into classifications based on the sixteen national benchmark fuel types that are used by the Canadian Fire Behaviour Prediction System (Appendix C). Two fuel types were identified. Detailed descriptions of these forest areas are provided in Appendix B.

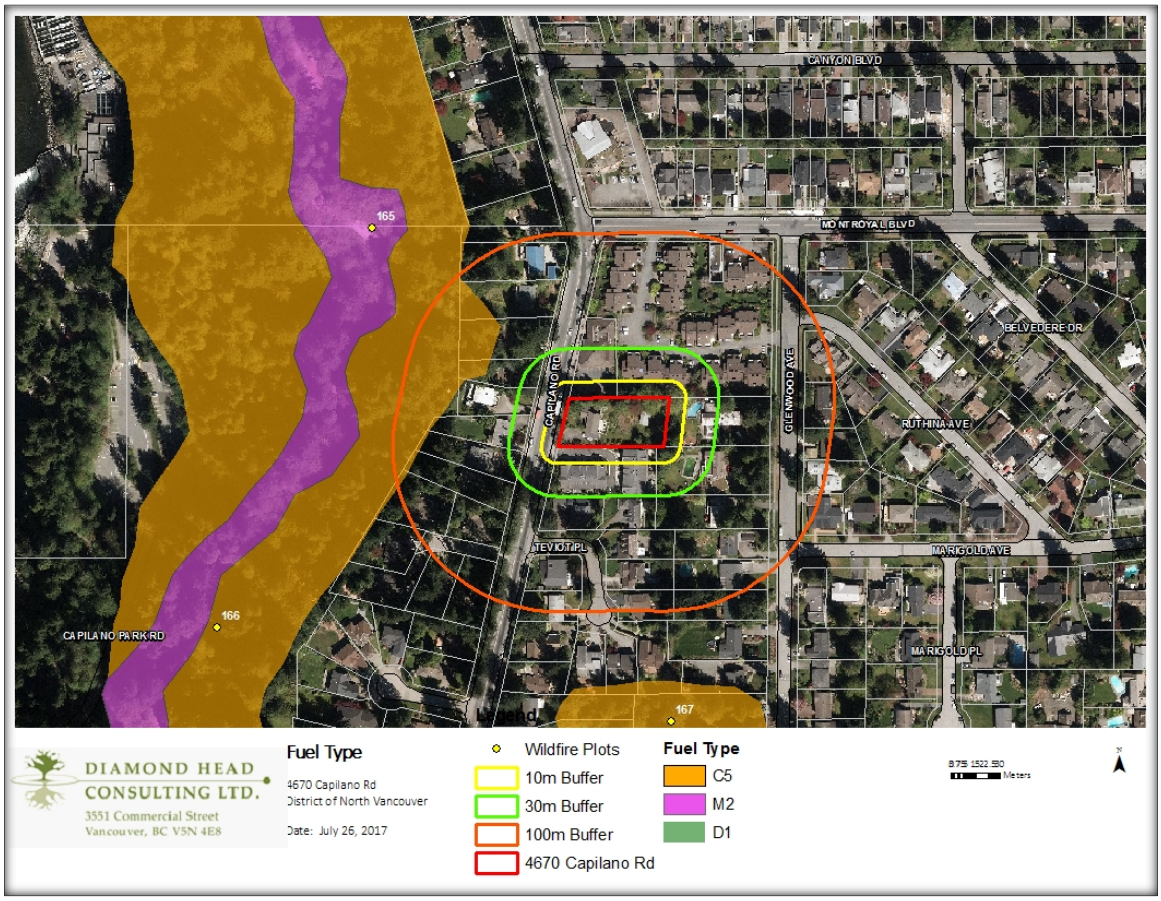


Figure 4. Location of the fuel types relative to project site

Summary of Wildfire Threat

Each fuel type and distinct stand was also assessed for wildfire threat using the Wildfire Urban Interface worksheet. Figure 5 outlines the wildfire threat and plot locations. The Wildfire Urban Interface (WUI) ratings and plot characteristics are summarized in Appendix A.

The subject site was assessed to have an overall moderate risk from wildfire. The greatest wildfire risk is from the intact forested area (C5 fuel type) located 75m west of the subject site. This stand is within the Capilano River Canyon and portions of this forested area have extremely steep slopes adding to the wildfire risk. The trees in this stand have high crown heights apart from edge trees to the stand. There is also a service road that runs north south and this road is bordered by deciduous species. The service road has been classified as a mixed stand and creates a small canopy gap in the dominant coniferous trees. A crown fire could generate in these stands however would likely require drought weather conditions combined with high winds.

The subject site is separated from this stand by residential lots and Capilano Rd. This reduces the wildfire threat to the subject lot. The highest wildfire risk is from embers spotting from a crown fire and igniting the structure. On-site conifer trees are proposed removals to accommodate the development and neighboring conifer trees should have their crowns raised to at least 5m off the ground.

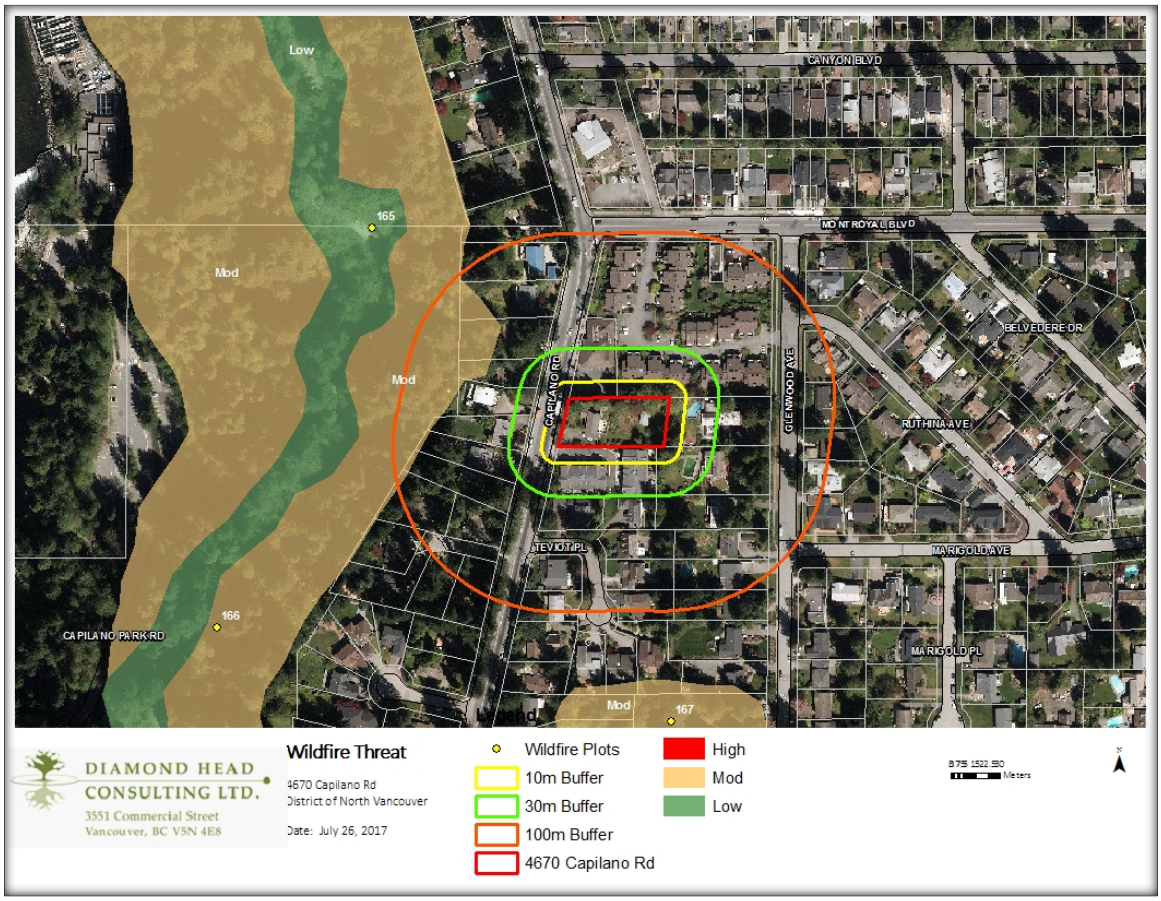


Figure 5. Wildfire threat mapping

Photo 1: View of C5 stand to the west of the subject site.

Photo 2: View of service road bordered by deciduous species.

Wildfire Threat Mitigation Recommendations

The following are recommendations to mitigate risk to the development. Community and design recommendations focus on siting of structures, construction materials, access, water sources and utilities. These are factors that provide long term mitigation against a wildfire event. Vegetation fuels on and adjacent to the development will change over time and require maintenance. Recommendations are made for on-site landscaping as well as treatments and required maintenance for forest areas adjacent to the property.

Buildings setback from hazardous fuels

Firesmart recommends that a 10m fuel free zone be established and maintained between structures and hazardous fuels. The proposed building will be approximately 80m from the nearest intact forest edge. There are conifer trees in isolated stands closer to the subject site but these are not considered a high risk and several trees within 30m of the subject site can be treated to lower their risk.

Buildings and Construction

Generally, during a wildfire, homes are ignited as a result of embers landing and accumulating on vulnerable surfaces such as roofs, verandas, eaves and openings. Embers can also land on or in nearby flammable materials such as bushes, trees or woodpiles and, if the resulting fire is near the home, it could create enough radiant heat to ignite the walls of the home. Small fires in the yard can also spread towards the structures, beneath porches or under homes. Therefore, the building material and construction techniques are a paramount concern for homes in the interface. Construction standards and requirements for roofs, chimneys, balconies, decks and porches apply to all new houses that are built within the wildfire DP area. These are outlined in

Schedule B of the District of North Vancouver's Official Community Plan, which can be found at the District website (http://www.dnv.org/sites/default/files/edocs/wildfire-hazard-DPA-details-schedule-B-OCP.pdf). The DNV building standards along with additional recommendations are summarized in Table 1. Building specifications have not been finalized but should follow recommendations from Table 1 below.

Table 1. Recommendations for community design and construction.

Feature	Recommendations for building materials
Roofing	• Class A or B rated roofing material* should be used, and asphalt or metal roofing should be given preference. • Any spaces between roof decking and covering should be blocked. • Screen or enclose rain gutters to prevent accumulation of plant debris.
Siding	• Exterior vertical walls should be sheathed with non-combustible materials*. Preference should be given to stucco, metal, brick and concrete cladding. • Ensure that fire resistant materials extend from the foundation to the roof.
Vents, openings, eaves, attics, overhanging projections, soffits	• Vents should be screened using 3mm, non-combustible wire mesh, and vent assemblies should use fire shutters or baffles. • Eaves, soffits, attics, overhanging projections and underfloor openings should be protected with non-combustible covers.
Exterior windows and doors	• All windows should be multi-paned, or of glass block. Radiant faces exposed to the forest edge should be multi-paned with one pane glazed with annealed or tempered insulating glass. • Limit the size and number of windows that face large areas of vegetation. • Window screens should be non-combustible. • Exterior doors on radiant faces exposed to the forest edge should be of fire resistant materials.
Decks, porches, balconies	• Decks, porches and balconies should be sheathed with fire-resistant or non-combustible materials. • Slotted deck surface allow needle litter to accumulate beneath the deck. Provide access to this space to allow for removal of this debris. • Any covers should be built of the same ignition-resistant materials as a roof.
Chimney	• All chimneys and wood-burning appliances should have approved spark arrestors (securely attached and made of 12-gauge welded or woven wire mess screen with mesh opening of less than 12 mm);
Exterior sprinklers	• While exterior wall or roof sprinklers were considered, they are not presently recommended because of the lack of accepted standards for design and installation, and the uncertainty regarding maintenance and triggering of sprinklers during a wildfire event when homes are evacuated. • Irrigation sprinklers should be installed on private property and in landscaped parks to keep plants healthy and fire-resistant. The switch for these should be made accessible to turn on in the case of a wildfire.
Fences	• Where fencing is within 10 m of the building or accessory buildings, use fire-resistant or non-combustible materials.
Feature	**Recommendations during construction**
Combustible materials	• During construction of houses, all waste construction materials including brush and land clearing debris; needs to be cleaned up on a regular basis, to minimize the potential risk. No combustible materials should be left at the completion of construction.
Hydrants	• Prior to construction of any wood frame buildings, there must be fire hydrants within operating range.
Fire Suppression	• The contractor should be familiar with the BC Wildfire Act and the current provincial standards for wildfire suppression and have the appropriate tools on-site for the duration of the project.

* **Non-combustible materials:** means that a material meets the acceptance criteria of CAN/ULC S114, (Standard Method of test for determination of non-combustibility in Building Materials)
Fire-resistant materials: means that a material meets the acceptance criteria of CAN/ULC-S101, (Fire Endurance Tests of Building Construction and Materials)
Rated roofing materials: Class A, B or C is a measure of the external spread of flame on a roof surface. Tests are conducted using CAN/ULC S107M methods of fire tests of roof coverings, or equivalent. The best rating achieved is Class A, which may be described as effective against severe fire exposure.

Firesmart Landscaping and Fuel Mitigation

Landscaping and maintenance for the site should follow FireSmart principals (Ministry of Forests Wildfire Management Branch, Firesmart Program. For single residential lots the enitre lot is generally wihtin 10m of the structure and will be landscaped. Planning and maintenance of this area should follow the requirements of priorty zone 1 (<10m from strucures) outlines in the Firesmart program. The goal in this zone is to remove hazardous fuels and convert vegetation to fire resistance species to produce an environment that does not support combustion. These recommendations include strategic selection of fire resistant replacement trees as well as landscaping and maintenance standards are summarised in Table 2.

Table 2. Recommendations for Landscaping

Feature	Recommendations
Planting	• Remove all highly flammable vegetation and other combustibles from around the building. • No conifer trees should be planted within 10m of any buildings. • Landscaping should incorporate species that are fire resistant. These types of plants tend to have moist, supple leaves with low amounts of sap or resin. They also have a tendency not to accumulate dead material. A list of fire resistant plants and trees can be found at the Firesmart Canada website[1]. • Ensure that vegetation will not grow to touch or overhang buildings. • No vegetation should be placed within 10 m of glazed openings unless there are solid shutters to cover the glazing. • Irrigation sprinklers should be installed in landscaping.
Maintenance	• Annual grasses within 10 meters of buildings should be kept mowed to 10 centimeters or less and watered regularly during the summer months; • Ground litter and downed trees should be removed regularly and prior to the fire season.

Recommendations for Onsite and Neighboring Trees

There are numerous conifer trees located within a 100m distance of the subject site. These trees are all located in isolated stands and do not significantly contribute to the wildfire risk rating. The arborist report for the property shows all on-site trees being removed to accommodate the proposed plans. There are several District owned coniferous trees to the west of the property along Capilano Rd. These are recommended to be retained and pruning to raise the crown height.

Table 3 outlines tree attributes and recommendations for individual trees. Recommended lift pruning and recommended heights are specified. All woody and crown debris from tree removals and pruning must be removed and disposed of off-site. No debris should remain on the subject site during construction.

Photo 3: View of cypress hedge on north PL. This hedge will be removed to accommodate the development.

Photo 4: View of tree 1688. This tree will be removed to accommodate the development plans.

Table 3. Tree Inventory of on site and neighboring trees

Tag #	Common Name	DBH (cm)	Ht (m)	Overall Condition	Comments	Retain/ Remove	Tree Retention Comments
1680	Lawson cypress	25	10	Moderate	DNV tree.	Remove	Crown raise to 5m+ above grade on subject site.
1682	Lawson cypress	35	10	Moderate	DNV tree.	Remove	Crown raise to 5m+ above grade on subject site.
1683	Western redcedar	70	30	Normal	Mature cedar tree growing on NW corner of subject site.	Remove	This tree is a proposed removal in the arborist report for the property.
1684	Western redcedar	140	30	Normal	Mature cedar tree growing on NW corner of subject site. Multi stemmed tree from 1.5m, acute union with minor inclusion.	Remove	This tree is a proposed removal in the arborist report for the property.
1685	Lawson cypress	30	25	Moderate	Growing on North PL along fence. Crown has been raised off-site to the N to 6m.	Remove	This tree is a proposed removal in the arborist report for the property
1686	Lawson cypress	48	25	Moderate	Growing on North PL along fence. Crown has been raised off-site to the N to 6m.	Remove	This tree is a proposed removal in the arborist report for the property
1687	Lawson cypress	38	25	Moderate	Growing on North PL along fence. Crown has been raised off-site to the N to 6m.	Remove	This tree is a proposed removal in the arborist report for the property
1688	Western redcedar	85	30	Normal	Growing on north PL. Dominant tree. Crown is full and reaches to ground level.	Remove	This tree is a proposed removal in the arborist report for the property.
1696	Western redcedar	100	14	Moderate	Tree has been topped and has a tree house built in main stem.	Remove	This tree is a proposed removal in the arborist report for the property

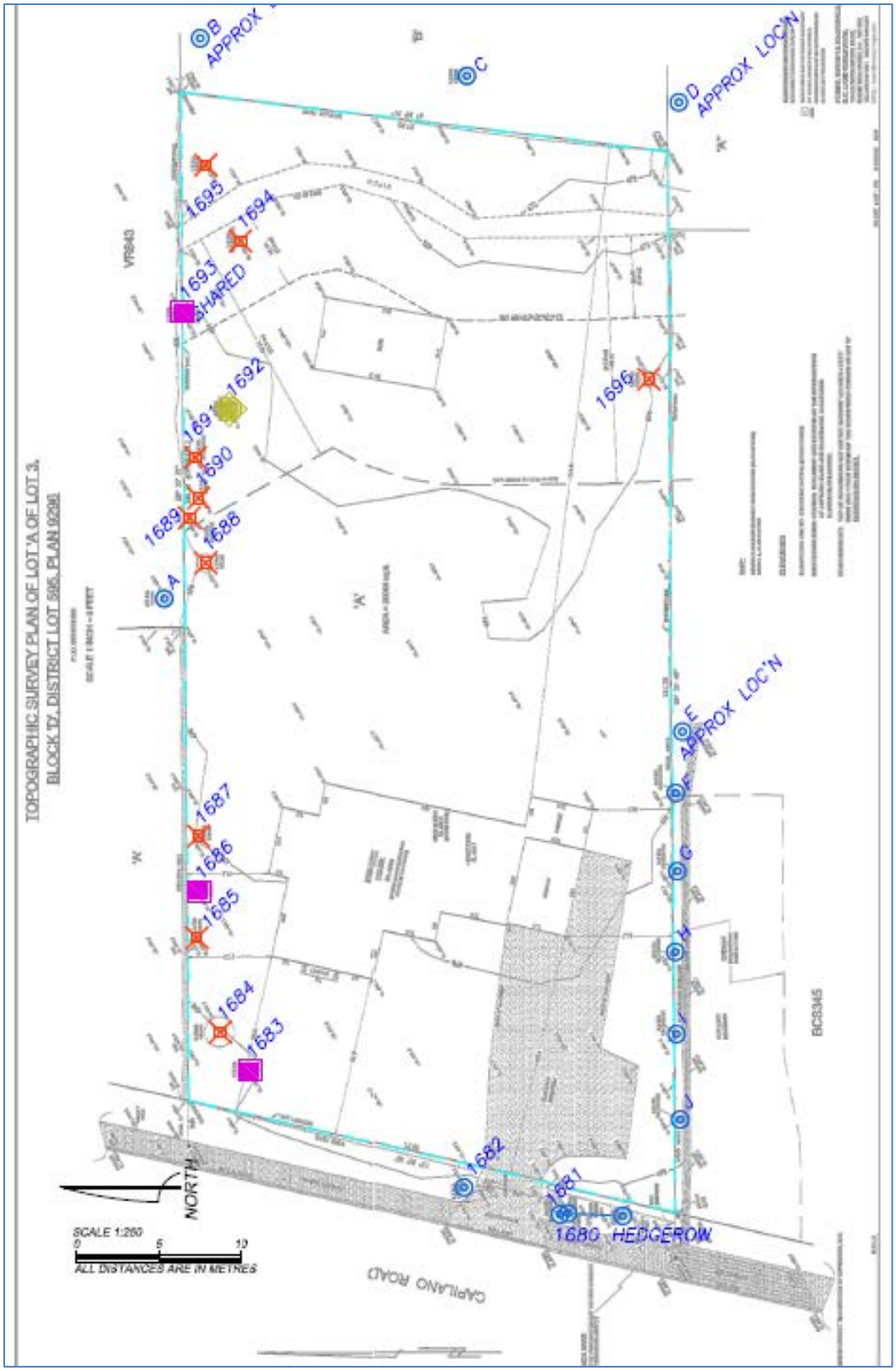


Figure 6. Tree retention and removal map

Ongoing Maintenance

To ensure that FireSmart standards are maintained, periodic re-treatment or maintenance is recommended in Table 4.

Table 4. Recommendations for ongoing maintenance

Owner	Recommendation
Homeowners	• Regularly remove debris from roofs, gutters and beneath overhanging projections. • Grass and landscaping should be kept mowed to 10 cm or less and watered regularly during the summer months. • Landscape sprinkler systems should be installed and maintained by the homeowner. • Remove any local accumulations of woody or combustible material (e.g., no woodpile or yard waste accumulations). • Remove any over mature, dead or dying shrubs and trees. • Plant only fire resistant trees and shrubs. A list of fire resistant plants and trees can be found at the fire smart canada website (*https://www.firesmartcanada.ca/images/uploads/resources/FireSmart-Guide-to-Lanscaping.pdf*).
City	• Grass and landscaping should be kept mowed to 10 cm or less and watered regularly during the summer months. • Any local accumulations of woody material should be removed from the site or scattered so that they are discontinuous. Larger decayed logs do not pose a significant wildfire risk and should be retained for ecological value. • Remove any over mature, dead or dying shrubs and trees. • Conifer trees within the sub-canopy layer and understory (generally shorter than ~10m) should be removed. • Retained conifer trees should have lower branches pruned up to 2 - 4 metres but retain at least 50% live crown. • Plant only fire resistant trees and shrubs. A list of fire resistant plants and trees can be found at the fire smart canada website (*https://www.firesmartcanada.ca/images/uploads/resources/FireSmart-Guide-to-Lanscaping.pdf*).

1 Future Condition FireSmart Structure and Hazard Assessment

The form below provides an assessment of the proposed development using the FireSmart Structure and Hazard Assessment form. Assessment ratings are made assuming that the recommendations outlined in this report are adhered to.

Table 5. FireSmart Structure and Hazard Assessment Form

ZONE 1			
Home/10 m	Criteria	Rating Options	RATING
What type of roofing material do you have?	Metal, clay tile, asphalt shingle or ULC rated shakes (may be affected by the condition of your roof)	0	**0**
	Unrated Wood Shakes	30	
How clean is your roof?	No needles, leaves or other combustible materials	0	**0**
	A scattering of needles and leaves	2	
	Clogged gutters and extensive leaves	3	
What is the exterior of your home built of?	Non-combustible material, stucco, metal siding or brick	0	**0/NA***
	Logs of heavy timbers	1	
	Wood, vinyl siding or wood shakes	6	
How fire-resistant are your windows and doors?	Tempered glass in all doors/windows	0	**2**
	Double-pane glass - small/medium (smaller than 1 metre x 1 metre)	1	
	Double-pane glass - large (greater than 1 metre x 1 metre)	2	
	Single-pane glass - small/medium (smaller than 1 metre x 1 metre)	2	
	Single-pane glass - large (greater than 1 metre x 1 metre)	4	
Are your eaves closed up and your vents screened?	Closed eaves, vents screened with 3-millimetre wire mesh	0	**0**
	Closed eaves, vents without mesh	1	
	Open eaves, vents not screened	6	
Have you sheathed-in the underside of your balcony, deck, porch or open foundation?	Sheathed with fire-resistant materials	0	**0**
	Sheathed with combustible materials	2	
	Not sheathed	6	
Is your home set back from the edge of a slope?	Building is located on the bottom or lower portion of a hill	0	**0**
	Building is located on the mid to upper portion of a hill or the crest of a hill	6	
	ZONE 1 HOME SCORE		**2**

ZONE 1			
YARD/within 10 m	Criteria	Rating Options	**RATING**
Where are your outbuildings (or adjacent buildings) located	More than 10 metres from home	0	**0**
	Less than 10 metres from home	6	
Where is your woodpile located?	More than 10 metres from any building	0	**0**
	Less than 10 metres away from any building	6	
What type of forest grows within 10 metres of your home?	Deciduous trees	0	**0**
	Mixed wood trees (deciduous and conifer)	30	
	Conifer trees	30	
What kind of surface vegetation and combustible materials are within 10 metres of your home and outbuildings?	Well-drained lawn or non-combustible landscaping material	0	**0**
	Uncut grass or shrubs	30	
	Twigs, branches and tree needles on the ground	30	
	ZONE 1 YARD SCORE		**0**
ZONE 2			
YARD/10 - 30 m	Criteria	Rating Options	RATING
What type of forest surrounds your home?	Deciduous trees	0	**10**
	Mixed wood trees (deciduous and conifer)	10	
	Conifer trees separated	10	
	Conifer trees continuous	30	
What kind of surface vegetation grows within 10-30 metres of your home and around your buildings?	Well-drained lawn or non-combustible landscaping material	0	**0**
	Uncut grass or shrubs	5	
	Scattered twigs, branches and tree needles on the ground	5	
	Abundant twigs, branches and tree needles on the ground	30	
Are there shrubs and low branches (within 2 metres of the ground) in the surrounding forest?	None within 10-30 metres	0	**0**
	Scattered within 10- 30 metres of buildings	5	
	Abundant within 10-30 metres of buildings	30	
	ZONE 1 YARD SCORE		**10**

TOTAL SCORE		Rating
ZONE 1/ Home and Yard	Home	**2**
	10 metres from home	**0**
ZONE 2 / Yard		**10**
	TOTAL	**12 - Low**

HAZARD SCORE: Low: <21 Moderate: 21-29 High: 30 – 35 Extreme: >35

Following the recommendations in this report will achieve a FireSmart hazard score of low.

Final Remarks

The District of North Vancouver requires that the proposed development is consistent with the Wildfire Development Permit Guidelines. Planners, engineers, and landscape architects should refer to this report and the FireSmart manual during the design phase of this development. The District will require that an inspection be done following construction to ensure that the structure and landscaping meet these requirements. All construction operations should be conducted according to the Wildfire Act and the regulations. Following these regulations will help reduce liability and protect the development as an investment.

If the recommendations made within this report and the requirements outlined by the District of North Vancouver are complied with, wildfire risk to life and property will be substantially mitigated and the development will meet FireSmart standards to a reasonable extent within the limitations of zoning and ownership. If there are any questions or concerns as to the contents of this report, please contact us at any time.

Sincerely,

Supervisor:

Mike Coulthard, R.P.Bio., R.P.F.
Senior Forester, Biologist
Certified Tree Risk Assessor (46)

Project Staff:

Kristian Short
ISA Certified Arborist (PN-8029 A)
ISA Qualified Tree Risk Assessor (TRAQ)
BC Parks Wildlife and Danger Tree Assessor

Appendix A – Wildland Urban Interface Plots

Plot	164	165	166
Fuel			
Duff depth and moisture regime	6	6	6
Surface Fuels Continuity	3	0	2
Vegetation Fuel Composition	2	2	2
Fine Woody Debris Continuity (<7cm)	7	5	7
Large Woody Debris Continuity (>7cm)	2	1	2
Conifer Crown Closures	10	2	10
Deciduous Crown Closure	5	3	5
Conifer Crown Base Height (m)	0	0	0
Suppressed Understory Conifers (Stems/ha)	2	2	2
Coniferous Forest Health	5	0	0
Continuous Forest (ha)	3	5	5
Fuel Assessment sub-score (-/155) **Proceed if >29**	**45**	**26**	**41**
Weather			
BEC Zone	3	N/A	3
History	8	N/A	8
Weather sub-score (-/30)	**11**	N/A	**11**
Topography			
Aspects	12	N/A	12
Slope	10	N/A	5
Terrain	10	N/A	7
Landscape/ topo limitations to wildfire spread	1	N/A	1
Topography sub-score (-/55)	**34**	N/A	**25**
Wildfire Behaviour Threat Score (-/240) **Proceed if >95**	**90**	N/A	**77**
Wildfire Behaviour Threat Class	**Moderate**	Low	**Moderate**
Structural			
Position of Structure	N/A	N/A	N/A
Type of Development	N/A	N/A	N/A
Position of Assessment Area relative to values	N/A	N/A	N/A
Structural sub-score (-/55)	N/A	N/A	N/A
Wildland Urban Interface Wildfire Threat Score (-/295)	N/A	N/A	N/A
Wildfire Behaviour Threat Class	N/A	N/A	N/A
Comments			

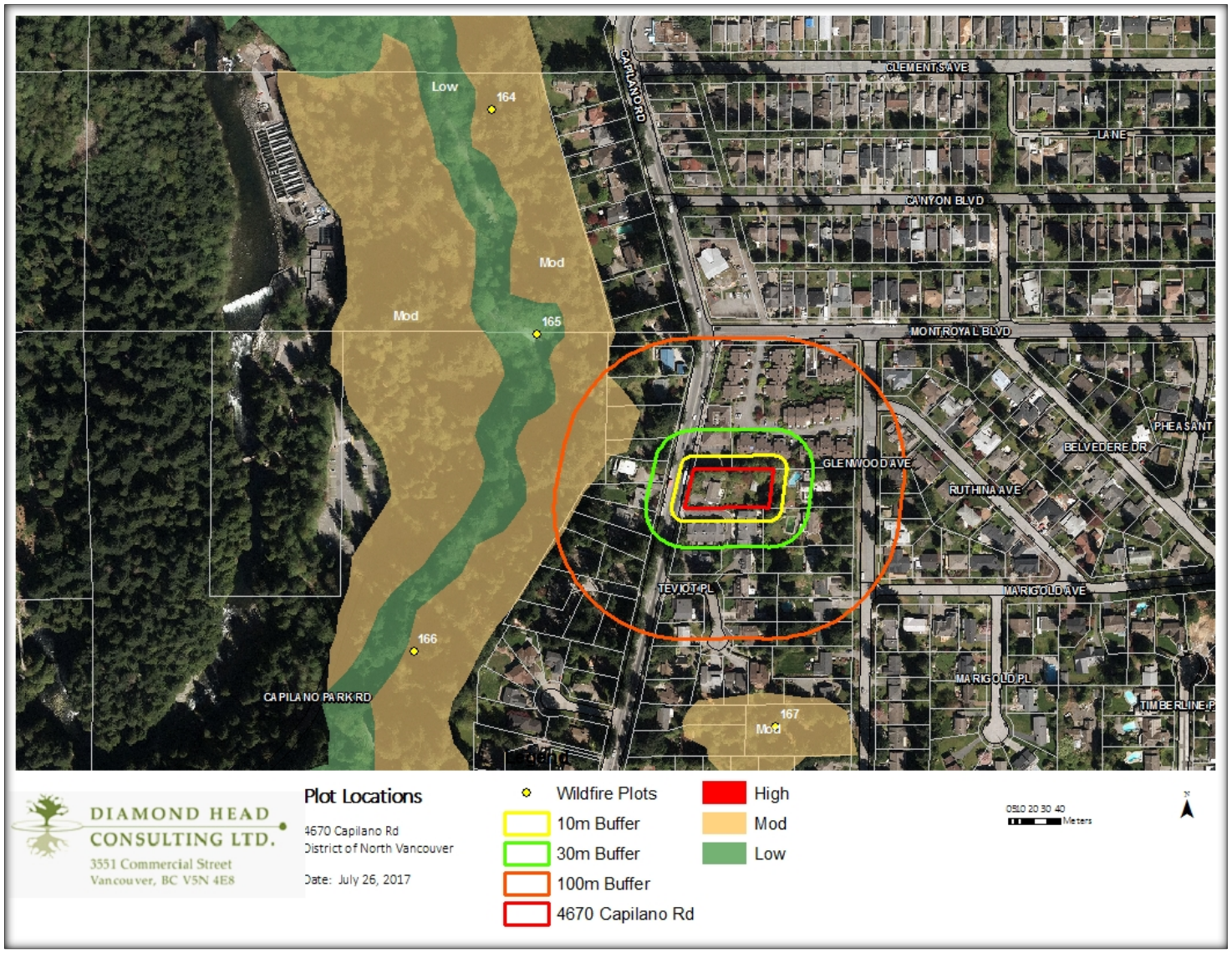


Figure 7. Plot locations

Appendix B – Description of Forest Fuel Types adjacent to the property

Fuel Type C5 – Coniferous dominated stand

The fuel type within the Capilano River Canyon is dominated by coniferous trees and has been classified as C5. The C5 fuel type consists of a mature second growth canopy of even aged, moderately stocked (500 – 800 stems per hectare) conifers. The stand is dominated by Douglas-fir (*Pseudotsuga menziesii*), Western Hemlock (*Tsuga heterophylla*), and Western Redcedar (*Thuja plicata*). This fuel type potentially poses a moderate wildfire threat. It takes a large amount of energy to create a crown fire in this fuel type. In order for a crown fire to generate it would likely require extreme fire weather conditions brought on by higher degrees Celsius than relative humidity (Rh) described as "crossover" in fire weather. There are very steep sections within this stand that significantly contribute to the wildfire risk rating. There is an extensive network of walking trails throughout the canyon that could be considered 'high use' trails. The amount of people in this area increases the risk of human caused ignition but also increases the chances of early detection if a surface fire was to start. Table 6 outlines the general stand characteristics of a C5 stand.

Table 6 C5 general stand characteristics

Characteristic	Risk Level	Description
Surface fuel continuity (% cover)	Low	20-40 % cover
Vegetation fuel composition	Low	Herbs and deciduous shrubs
Fine woody debris continuity (<=7cm) (% cover)	Med	10-25% coverage
Large woody debris Continuity (>=7cm) (% cover)	Low	<10% coverage
Live conifer canopy closure (%)	Med	41-60% crown closure
Live deciduous canopy closure (%)	High	<20% crown closure
Live and dead conifer crown height (m)	Low	3-5m
Live and dead suppressed and understory conifer (stems/ha)	Low	<500 stems/ha

Fuel Type M2 – Mixed conifer and deciduous stand

There is a service road running north south within the canyon that is bordered by deciduous trees. This road and edge trees have been classified as a mixed stand. The road and deciduous trees create a small canopy gap in the continuous coniferous stand and would likely slow the spread rate of an aggressive surface fire. These areas consist mostly of Red alder, Bigleaf maple and Douglas-fir. Stand density is variable ranging from 600 to more than 1,000 stems per hectare.

The fire behavior potential in these stands varies depending on the percentage content of coniferous species. Most of the stands adjacent to the site have a coniferous component of approximately 50% and pose a moderate risk to the site. There are isolated groups of conifers that pose a moderate risk. The M2 stand poses a moderate wildfire risk to the subject site, but if a surface fire did start it would be unlikely to become a crown fire. Table 8 outlines general stand characteristics.

Table 7 M2 general stand characteristics

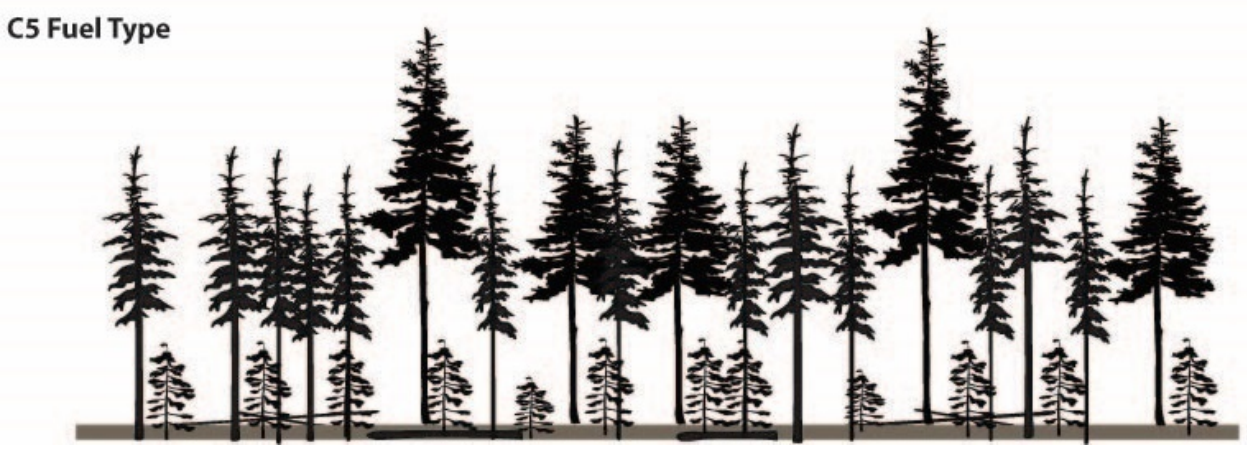
Characteristic	Risk Level	Description
Surface fuel continuity (% cover)	Low	20-40 % cover
Vegetation fuel composition	Low	Herbs and deciduous shrubs
Fine woody debris continuity (<=7cm) (% cover)	Low	Scattered, <10% coverage
Large woody debris Continuity (>=7cm) (% cover)	Low-Med	10-25% coverage
Live conifer canopy closure (%)	Low-Med	20-40% crown closure
Live deciduous closure (%)	Med	20-40% crown closure
Live and dead conifer crown height (m)	Med	2-<3 m
Live and dead suppressed and understory conifer (stems/ha)	Very Low	0-500 stems/ha

Appendix C – Generic Description of Coastal Fuel Types

The current Canadian Forest Fire Behavior Prediction (FBP) System does not include coastal forests in their fuel type descriptions. These fuel types reflect stand conditions that were modeled to predict fire behavior potential. On the coast the fuel type that most closely represents forest stand structure and conditions has been used. The following fuel types are the most common interpretations used on the coast.

C5 – Uniform Second Growth Conifer Stand – Moderate Risk

This fuel type is characterized by mature second growth stands dominated by Western Red Cedar (*Thuja plicata*) and Western Hemlock (*Tsuga heterophylla*). There can be small component of dominant Douglas-fir (*Pseudotsuga menziesii*) in the overstory. This fuel type is moderately dense (500-1000 stems per ha) and has a high crown base height of 10 to 15m. The understory is of moderate density, usually consisting of Western Redcedar and Western Hemlock regeneration. The ground fuel component consists of moderately dense fine fuel layer (>7cm) and a low percent cover of large woody debris (>7cm). It takes a large amount of energy to create a crown fire.



C3 – Multistoried Second Growth Conifer Stand – High Risk

This fuel type is characterized by a uniform mature second growth conifer dominated stand. This stand consists of mature Western Red Cedar (*Thuja plicata*) and Western Hemlock (*Tsuga heterophylla*). There is also a minor component of dominant Douglas-fir (*Pseudotsuga menziesii*) in the stand. Compared to a C5 stand, a C3 stand is more densely stocked (1000-2000 stems per ha) and there is a lower crown base height (usually 4-8 m). The understory is more densely stocked with Western Redcedar and Western Hemlock. The ground fuel component consists of moderately dense fine fuel layer (>7cm) and a low percent cover of large woody debris (>7cm). A crown fire in a C3 stand takes less energy to create than a C5 stand.

M2 - Mature Stands Consisting of a mix of Conifer and Deciduous Trees – Low to Moderate Risk

This fuel type consists of a mixed conifer and deciduous tree type. This stand is not uniform in structure and is composed of a wide variety of species. These may include and not limited to:
Western Red Cedar (*Thuja plicata*), Western Hemlock (*Tsuga heterophylla*), Douglas-fir (*Pseudotsuga menziesii*), Red Alder (*Alnus rubra*), Bigleaf Maple (*Acer macrophyllum*), and Paper Birch (*Betula papyrifera*).
These stands usually consist of less than a 70% of conifer trees, reducing the wildfire risk. There is usually a low crown height (5m) and a high percentage of ladder fuels. There is a high percent cover of suppressed trees, but they are usually composed of deciduous species.

D1 - Deciduous Dominated Stands – Low Risk

This fuel type is dominated by deciduous trees consisting mostly of Red Alder (*Alnus rubra*), Bigleaf Maple (*Acer macrophyllum*), and Paper Birch (*Betula papyrifera*). D1 stand structure is not uniform with a wide variety of tree ages. There is a well-developed shrub layer, but is mostly composed of low-flammable species. Crown fires are not expected because of the deciduous fuel type. D1 stands on the coast can be used as fuel buffers as they present a low wildfire risk.

C4 - Uniform Densely Stocked Conifer Stand

This fuel type is rare within the lower mainland as it is mostly defined by densely stocked Lodgepole pine (*Pinus contorta*). This fuel type can be found more towards Squamish and Pemberton. Some small densely stocked Western Red Cedar (*Thuja plicata*), Western Hemlock (*Tsuga heterophylla*), and Sitka Spruce (*Picea sitchensis*) can be found in the Lower Mainland, but these stands are often isolated and small. Stands are densely stocked, (approximately 10,000-30,000 stems/ha) with a large quantity of fine and large woody debris. These stands are characterized as having vertical and horizontal fuel continuity. The shrub community in this stand is of very low density.

Appendix D - Resources and Links

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Appendix E – Description of Terminology

Term	Definition
Co-dominant Trees	Defines trees with crowns forming the general level of the main canopy in even-aged groups of trees, receiving full light from above and partial light from the sides.
Coarse fuels (coarse woody debris)	Combustible material over 7cm in diameter
Crown base height	The height, above ground, where the live crown of coniferous trees begins. Measured in meters (m).
Crown Closure	An assessment of the degree to which the crowns of trees are nearing general contact with one another. The percentage of the ground surface that would be considered by a downward vertical projection of foliage in the crowns of trees.
Diameter at Breast Height	The diameter of a tree measured at 1.3m above the point of germination.
Dominant Trees	Defines trees with crowns extending above the general level of the main canopy of even-aged groups of trees, receiving full light from above and comparatively little from the sides.
Fire-resistant materials	These meet the acceptance criteria of CAN/ULC-S101, (Fire Endurance Tests of Building Construction and Materials)
Fuel Break	An area of non-combustible materials that inhibits the continuous burning of fuels.
Fuel Load	The mass of combustible materials expressed as a weight of fuel per unit area.
Fuel Moisture	Percent water content of vegetation. This is an important factor in rate of spread.
Fuel Types	Classification of forested stands as described by Canadian Forest Fire Behavior Prediction (FBP) System. There are currently no fuel type classifications specific to coastal fuels.
Fine fuels (fine woody debris)	Combustible woody debris under 7cm in diameter.
Fire Behaviour	The manner in which a fire reacts to the influences of fuel, weather, and topography.
Intermediate Trees	Defines trees with crowns extending into the lower portion of the main canopy of even-aged groups of trees, but shorter in height than the co-dominants. These receive little direct light from above and none from the sides, and usually have small crowns that are crowded on the sides.
Ladder Fuels	Live or dead vegetation that allows a fire to burn into the canopy (crown) of a forested stand.
Lift Pruned	The removal of ladder fuels to increase the crown base height.
Litter Layer	Surface buildup of leaves and woody material.
Live Crown Ratio	Is the percentage of the total stem length covered with living branches. It provides a rough but convenient index of the ability of a tree's crown to nourish the remaining part of the tree. Trees with less than 30 percent live crown ratio are typically weak, lack vigor, and have low diameter growth, although this depends very much on the tree's age and species.

Non-combustible materials	Means that a material meets the acceptance criteria of CAN/ULC S114, (Standard Method of test for determination of non-combustibility in Building Materials)
Open Grown	Defines trees with crowns receiving full light from all sides due to the openness of the canopy.
Rated roofing materials	Class A, B or C is a measure of the external spread of flame on a roof surface. Tests are conducted using CAN/ULC S107M methods of fire tests of roof coverings, or equivalent. The best rating achieved is Class A, which may be described as effective against severe fire exposure.
Spotting	Fire producing sparks or embers that are carried by the wind and start new fires.
Stems Per Hectare	The number or size of a population (trees) in relation to some unit of space (one hectare). It is measured as the amount of tree biomass per unit area of land.
Suppressed Trees	Defines trees with entirely below the general level of the canopy of even-aged groups of trees, receiving no direct light either from above or from the sides.
Wildfire	An unplanned, unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, lightning strikes, downed power lines, and all other wildland fires where the objective is to put the fire out.

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