

DISTRICT OF WEST VANCOUVER
750 17TH STREET, WEST VANCOUVER BC V7V 3T3

5.

COUNCIL REPORT

Date:	April 22, 2024
From:	Erik Wilhelm, Senior Community Planner
Subject:	Proposed Official Community Plan Amendment, Rezoning and Development Permit for 14 Glenmore Drive (6-unit multifamily/duplex development)
File:	05.1010.20/23-100.2023

RECOMMENDATION

THAT opportunities for consultation on the proposed Official Community Plan amendment, with persons, organizations, and authorities, as outlined in the report dated April 22, 2024, be endorsed as sufficient consultation for purposes of section 475 of the Local Government Act.

RECOMMENDATION

THAT proposed “Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5335, 2024” be read a first time.

RECOMMENDATION

THAT proposed “Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5336, 2024” be read a first time.

RECOMMENDATION

THAT proposed “Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5335, 2024” and proposed “Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5336, 2024” be presented at a public hearing on June 3, 2024, at 7 p.m. in the Municipal Hall Council Chamber and via electronic communication facilities (Webex video conferencing software), and that notice be given of the scheduled public hearing.

RECOMMENDATION

THAT proposed “Development Permit 23-100” be presented at a public meeting scheduled for June 3, 2024 at 7:00 p.m. in the Municipal Hall Council Chamber, to be held concurrently with the public hearing scheduled for June 3, 2024 at 7:00 p.m. in the Municipal Hall Council Chamber, and that notice be given of the scheduled public meeting.

1.0 Purpose

To present to Council a proposed Official Community Plan (OCP) amendment, rezoning and associated development permit to facilitate a 6-unit multi-family/duplex development at 14 Glenmore Drive.

2.0 Legislation/Bylaw/Policy

Local Government Act

The Local Government Act requires that a Public Hearing be held on the proposed rezoning bylaw and OCP amendment bylaw, in accordance with Sections 464 through 470.

Zoning Bylaw

The site, 14 Glenmore Drive, is currently zoned Multiple Dwelling Zone 4 (RM4). An amendment to the Zoning Bylaw is required to facilitate the proposed 6-unit development proposal.

3.0 Council Strategic Objective(s)/Official Community Plan

2024-2025 Council Strategic Plan

The “2024-2025 Council Strategic Plan” generally aims to “Expand a diverse housing supply”. More specifically, objective 2.9 expects to “Expand opportunities for selective small scale infill developments in single family residential zones”.

Official Community Plan (OCP)

The Official Community Plan (OCP) includes policies to address the housing needs of present and future generations within the community. The OCP intends to regenerate neighbourhoods with an estimated 300–400 new infill units (e.g. coach house, duplex, secondary suite and infill subdivision) which can provide sensitive infill options that respect the scale and character of existing neighbourhoods. Policy 2.1.3 allows consideration of site-specific rezoning applications to allow duplex development. The proposed multifamily/duplex project would fall under OCP policy 2.1.3 (Figure 1).



Figure 1 – “Duplex” OCP Policy 2.1.3

4.0 Financial Implications

4.1 Community Amenity Contribution

New developments are to deliver community amenities related to the impacts of new development. The value of the amenity is proportional to the increased potential of land use in comparison with existing zoning and land uses onsite. District policy defines a range of appropriate amenities, including housing affordability and diversity, childcare and cultural facilities, heritage preservation, public art, and public space, parks and the environment.

Consistent with District policy, the applicant offers a voluntary Community Amenity Contribution (CAC) of \$205,776 in cash. District staff consulted with a third-party financial consultant regarding various types of low-density infill housing that the OCP encourages. Based on that high level review, and a comparison with the amenity unit calculation within the District’s ‘Ground-Oriented Dwelling Zones’ (recognizing applicable lane dedications and infrastructure upgrades), staff recommend acceptance of the CAC. The CAC would flow into the District’s amenity reserve account(s) to contribute to future amenity projects as determined by Council.

4.2 Infrastructure Upgrades

The Land Development Department confirmed that redevelopment of the site will require in-ground servicing infrastructure upgrades to service the site (to be paid for by the applicant). The proposal also includes a new separated sidewalk and boulevard along Glenmore Drive (which will create a safer pedestrian environment), along with a new half lane located along the northern edge of the property for vehicle access and a new lane at the rear of the property which are both proposed to be dedicated to the District (see Figure 5).¹ Development cost charges would also be applicable in compliance with the District's Development Cost Charges Bylaw.

5.0 Background

5.1 Previous Decisions

Not applicable.

6.0 Analysis

6.1 Site Context

The subject property is located at 14 Glenmore Drive (east of Collingwood School Morven Campus in the British Properties). The site is relatively flat, 1,830.1 m² (19,699 sq. ft.) in area and is zoned Multiple Dwelling Zone 4 (RM4). The site is near Capilano River Regional Park (Figure 2) and located within the Wildfire Hazard Development Permit Area (DPA) as outlined in the OCP.

As seen in Figure 3, there is currently a two-storey fourplex building (built in 1959) with mature ornamental landscaping. The neighbouring sites, located north and south of the site (on the west side of Glenmore Drive), are also developed with older fourplexes. The east side of Glenmore Drive in this area has been experiencing redevelopment with recent new single-family dwellings and duplexes permitted under existing Duplex Dwelling Zone 1 (RD1). This subarea east of Collingwood School is characterized by a mix of multiplex housing, with single family homes along Glenmore Drive. This mix of housing types differs from the surrounding areas of the British Properties which are predominantly single-family dwelling neighbourhoods.

¹ The newly dedicated lane at the rear of the property will facilitate rear vehicular access to future redevelopment proposals located north and south of the site (which will create a safer pedestrian environment along Glenmore Drive in the future).

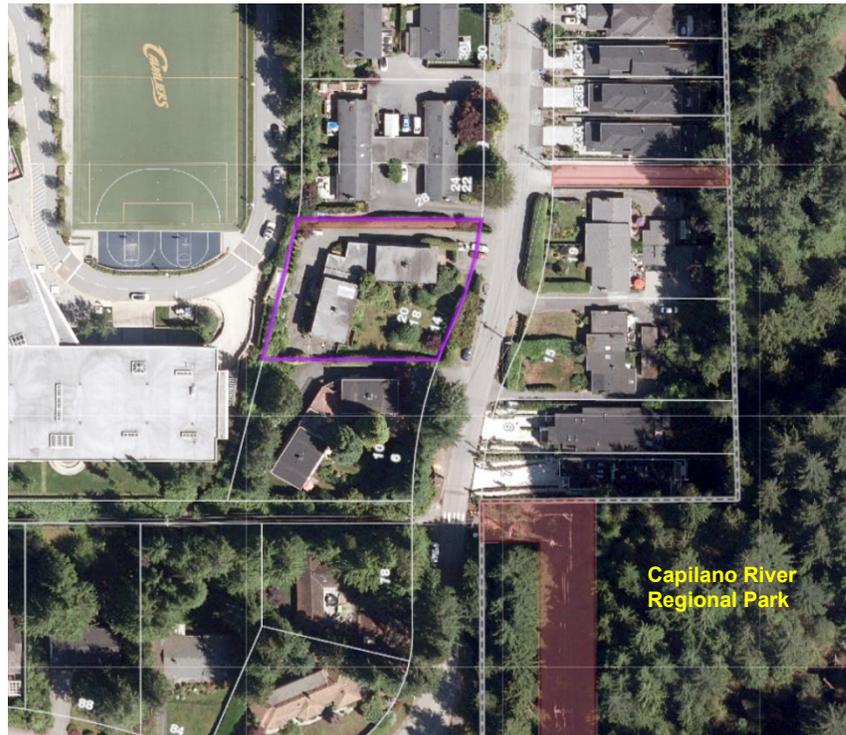


Figure 2 – Aerial image of 14 Glenmore Drive and Surrounding Neighbourhood

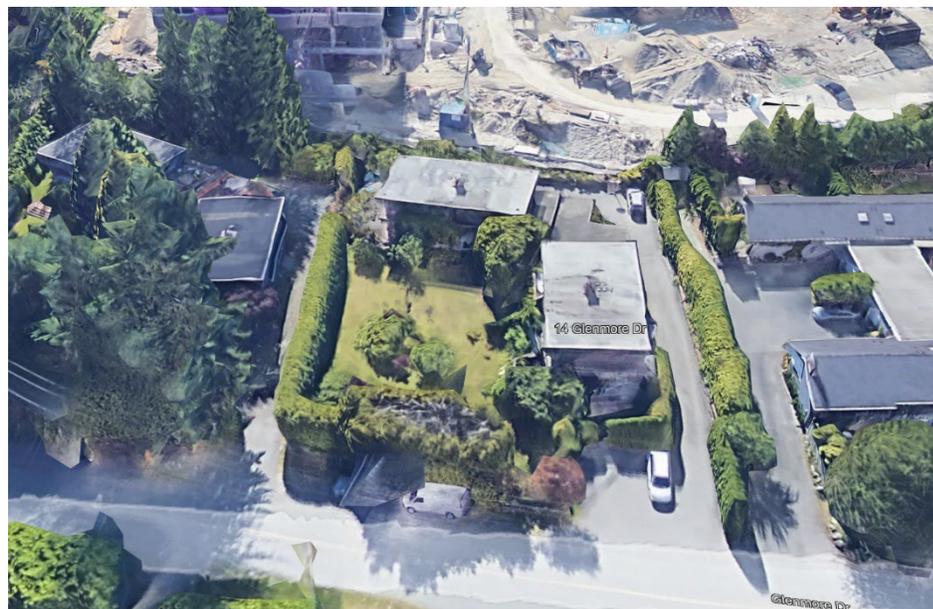


Figure 3 – Aerial image of 14 Glenmore Drive and adjacent sites (looking westward)
Note: construction seen at Morven Campus west of site is now completed

6.2 Proposal

The applicant, Sterling Pacific Development Inc., proposes to rezone the site to allow for a 6-unit multifamily/duplex development. The proposal consists of 3 separate duplex buildings that face towards Glenmore Drive (Figure 4).



Figure 4 – Rendering of Development Proposal (looking westward from Glenmore Drive)

The two-storey duplexes are slated to be part of one overall strata development accessed by a 3 m half lane on the northern side of the development which accesses a full 6 m wide lane at the rear of the site (Figure 5). The rear lane, to be dedicated to the District, allows for more street parking on Glenmore Drive and locates the on-site parking at the rear of the site which allows for a more pedestrian friendly frontage with only one driveway entrance on the northern portion of the side.

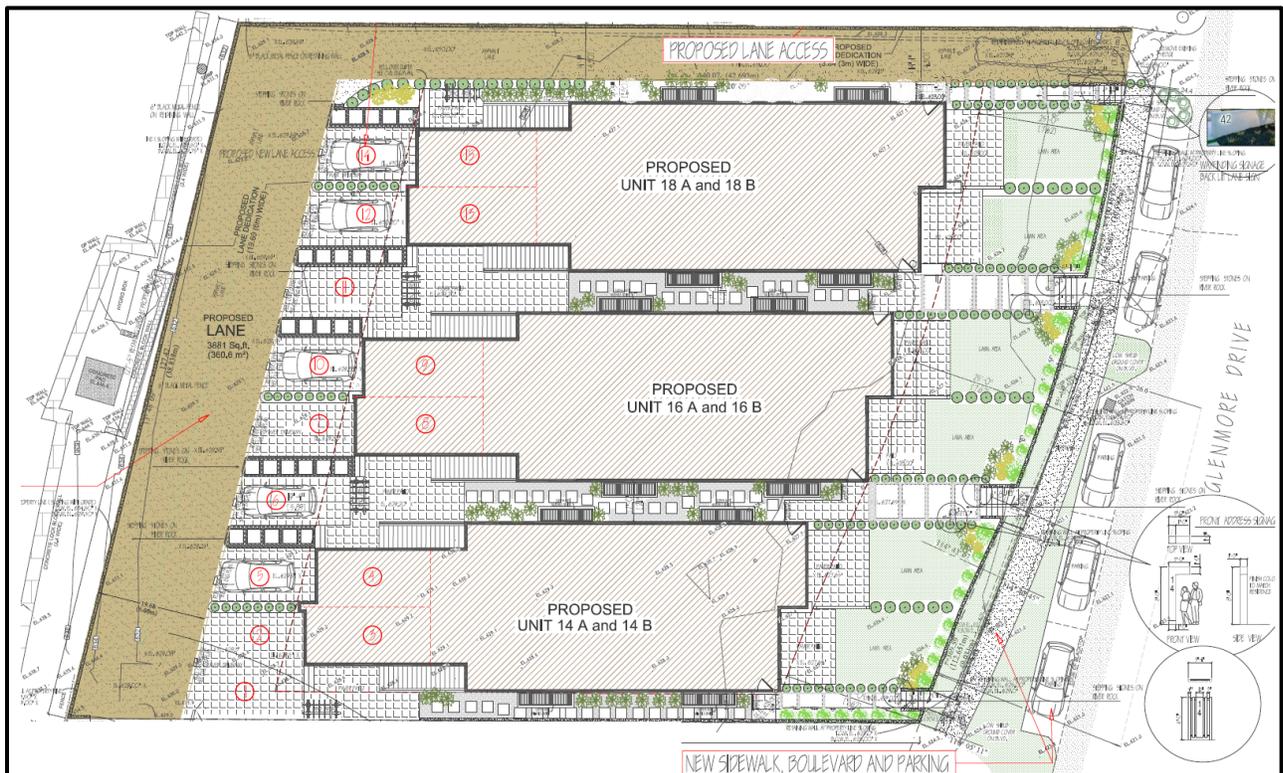


Figure 5 – Site Plan

The proposal presents the appearance of individual/separate duplex buildings while using complimentary colour and form to present as a coordinated development. The proposal includes extensive front yard landscaping, differentiated cementitious cladding, stone columns, aluminum cedar soffits, and flat roof structures which will complement the newer duplexes and single-family dwelling along Glenmore Drive in this immediate vicinity. The development incorporates non-combustible materials and roofing and new trees to be planted on site are planned to be 'fire safe' in alignment with wildfire hazard development permit area guidelines. As the duplexes are two storeys in height on a generally flat site, there is no impact on neighbouring view corridors.

A "Project Profile" is attached as **Appendix C** which provides an overview of project statistics and includes notes relating to each zoning aspect.

Design Review

The application was reviewed by the Design Review Committee (DRC) on December 6, 2023. The DRC provided the following resolution:

THAT the Design Review Committee require resubmission of the 14 Glenmore Drive application to address the following concerns:

- *Improve the streetscape appearance.*
- *Improve liveability of basement units and provide more light and size of lightwells and views.*
- *Improve the front yard landscaping for liveability of outdoor space, reducing width and hedge at the front.*
- *Design development of form and character, improve the materials and palette and form and composition of the buildings.*

Subsequently, the DRC was disbanded by Council on December 11, 2023. In lieu of resubmission, the applicant revised the project to address DRC and staff concerns and incorporated various improvements. Improvements included design development related to overall project cohesion, materiality, vehicular and pedestrian movements, privacy between units, landscaping, wayfinding, and light penetration (with wide window wells² providing further light penetration and improved livability for the basement level – See Figure 6).

² For a total of 6 m wide on the side of the building.



Figure 6 – Rendering of bedroom within basement level

Transportation and Parking

The applicant provided a traffic impact assessment (TIA) report for staff review. Given the low density proposed, the report focused on examining site access/egress and additional vehicle traffic potentially generated from the site.

As stated in the TIA, “The estimated two-way trips site trips for the proposed development are 7 vehicle trips in the AM peak hour and 9 vehicle trips in the PM peak hour”, and “These volumes can be adequately accommodated within the street network associated with the development.” Staff reviewed and accepted the findings of the TIA report.

Vehicle parking is accessed via the proposed new rear lane. Each duplex unit is provided one vehicle parking stall within an enclosed garage and an additional stall in tandem formation (see Figure 7). There are a total of 12 residential stalls and three visitor stalls included within the development in addition to parallel on-street parking available along Glenmore Drive within the new boulevard (with separated sidewalk and parking pockets).

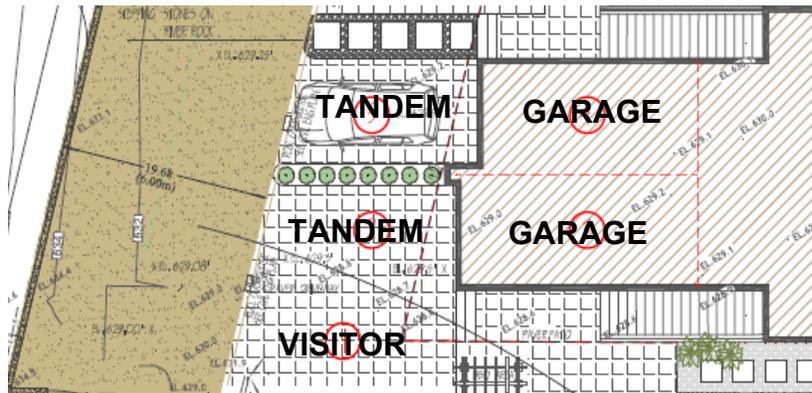


Figure 7 - Excerpt of Site Plan (showing rear parking configuration)

Development Permit (Form and Character and Wildfire Hazard)

Subject to Council consideration of the zoning amendment and the associated OCP amendment, proposed Development Permit 23-100 (**Appendix D**) addresses (1) “Duplex Areas” form and character development permit area guidelines; and (2) Wildfire Hazard development permit area guidelines. Staff have reviewed the development proposal against applicable guidelines and have concluded that the application is consistent with all relevant guidelines. Of note, with respect to wildfire hazard, the development includes measures such as fire safe landscaping/plantings and non-combustible building materials that will prevent spread of potential wildfire.

Zoning Bylaw

The site, 14 Glenmore Drive, is currently zoned Multiple Dwelling Zone 4 (RM4). The RM4 zone allows an assortment of uses such as single-family dwellings, duplex dwellings and apartment buildings up to a maximum floor area ratio (FAR) of 0.3 which is comparable to the maximum FAR allowable in single-family (RS) zones within the District. The RM4 also allows a maximum height of 8.5 m which is approximately 0.9 m higher than what is allowed within duplex and single-family (RD and RS) zones throughout the District.

An amendment to the Zoning Bylaw is proposed to rezone the site to Comprehensive Development Zone 87 (CD87) to facilitate the proposed 6-unit development proposal (**Appendix A**). The CD87 is a site-specific zone, written specifically for this multifamily/duplex project, which specifies the allowable uses and land use regulations applicable to the site³. The proposed CD87 zone limits the residential uses to duplex dwellings, permits a maximum FAR of 0.71, provides a two-storey (plus basement) restriction,

³ The CD87 would work in conjunction with DP23-100 to regulate land use.

limits the height to a maximum of 7.6 m and provides setbacks comparable to duplex and single-family zones within the District.

Official Community Plan Amendment

An OCP amendment (**Appendix B**) is proposed to amend a map within the OCP and expand the “Duplex Areas” Development Permit Area to include 14 Glenmore.

6.3 Sustainability

The proposed rezoning will facilitate an infill multifamily/duplex development recognized as a sustainable and efficient land use within the OCP. The proposed infill development allows for a modest increase in the number of allowable housing units while integrating within the existing neighbourhood and utilizing existing infrastructure such as roads, sewer, stormwater drainage and water.

In compliance with the District’s Building Bylaw No. 4400, 2004 and the Sustainable Buildings Policy, each duplex building will be required to obtain Step 5 of BC Energy Step Code or Step 4 at EL-3⁴ of the Zero Carbon Step Code. In addition, each vehicle parking stall located on the development site (except for the 3 visitor stalls) will be required to provide for Level 2 (240 volt) electric vehicle charging capabilities.

6.4 Public Engagement and Outreach

Public Information Meetings

Prior to formal submission⁵, the applicant held a preliminary public consultation meeting to gather feedback from the public. Subsequently, upon formal submission of the rezoning application, the applicant held another public information meeting in compliance with the Development Procedures Bylaw. A summary of that meeting and all feedback received by the developer is attached as **Appendix E**. The feedback from the public was primarily supportive of the proposed infill development yet concerns around the inclusion of secondary suites, parking, pedestrian safety along Glenmore Drive, traffic congestion during peak school times and speeding along Glenmore Drive in off-peak times were raised.

⁴ EL-3 is considered “Strong Carbon Performance” and in most cases will require decarbonization of both space heating and domestic hot water systems or potential full electrification of a building.

⁵ In compliance with the Preliminary Development Proposal and Public Consultation Policy.

In response, the proposed development provides for the following:

- *Secondary Suites:* Although basements are still included in the proposal, the applicant removed secondary suites from the development permit plans. Staff note that the draft CD87 zone permits secondary suites and subsequent owners could apply to the District for a secondary suite in the basement level.
- *Pedestrian Safety:* The development will provide for a new boulevard with separated sidewalk which will help improve the pedestrian realm along Glenmore Drive.
- *Parking:* A total of 15 parking stalls will be provided onsite (12 residential and 3 visitor) and this will be in addition to five on street parking stalls along Glenmore Drive in front of the development site.
- *Traffic:* As noted in the TIA report reviewed by staff, the development will not unduly impact traffic congestion or parking. Also, with respect to speeding, any potential implementation of speed bumps along Glenmore Drive could be subsequently reviewed by staff at a later date.

Public Hearing and Notification

In compliance with the *Local Government Act (LGA) and Development Procedures Bylaw No. 4940, 2017*, the proposed rezoning is subject to a public hearing. Notice of the public hearing will be given in accordance with LGA requirements and District procedures.

Signage

The applicant has already installed a development information sign in front of the property. Should the proposal advance, the applicant will be required to update the sign information with particulars about the required public hearing/public meeting.

Website

In alignment with current practise, a description of the proposal and current project plans are available online and should the proposal advance, applicable dates will updated.

6.5 Conditions Precedent to Adoption

Prior to adoption of the bylaws and approval of the development permit, the following requirements must be met:

- Payment of the community amenity contribution; and
- Registration of a development covenant (to ensure to ensure site servicing, lane dedications and boulevard upgrades along the frontage of the site).

7.0 Options

7.1 Recommended Option

Council give first reading to the proposed bylaws and set a date for a public hearing and a concurrent public meeting.

7.2 Considered Options

Council may:

- a) give first reading to the proposed bylaws and set an alternative date (to be specified) for a public hearing and concurrent public meeting; or
- b) defer consideration of the proposal pending the receipt of additional information (to be specified) to assist in the consideration of the application; or
- c) reject the application.

8.0 Conclusion

Staff assessment of this application has concluded that the proposal is appropriate and supportable based on relevant OCP policy. Specifically, the proposal is generally consistent with the “Duplex Areas” Development Permit Area guidelines, meets the intent of OCP policy 2.1.3, is supported by Council’s strategic plan to “expand a diverse housing supply” and the proposal will provide a suitable infill development within the existing Glenmore neighbourhood close to a school and parkland.

Subject to public input, staff recommends that the proposed bylaws be given first reading and a date for a public hearing and concurrent public meeting for Development Permit 23-100 be scheduled.

Author: 
Erik Wilhelm, Senior Community Planner

Concurrence: 
Michelle McGuire, Senior Manager of Current Planning and Urban Design

Appendices:

- A Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5336, 2024
- B Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5335, 2024
- C Project Profile
- D Proposed Development Permit 23-100
- E Public Engagement Summary



District of West Vancouver

**Zoning Bylaw No. 4662, 2010,
Amendment Bylaw No. 5336, 2024**
(14 Glenmore Drive)

Effective Date:

Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5336, 2024

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District of West Vancouver

Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5336, 2024

A bylaw to rezone 14 Glenmore Drive for a 6-unit multi-family development.

Previous amendments: Amendment bylaws 4672, 4677, 4678, 4679, 4689, 4701, 4680, 4710, 4697, 4716, 4712, 4737, 4726, 4736, 4757, 4752, 4767, 4787, 4788, 4784, 4772, 4791, 4805, 4809, 4828, 4854, 4873, 4866, 4895, 4839, 4898, 4927, 4944, 4905, 4974, 4967, 4982, 4962, 4928, 4992, 5001, 5021, 5024, 5028, 5009, 4938, 5044, 5055, 5051, 5068, 5065, 5087, 5069, 5110, 5106, 5132, 5161, 5160, 5013, 5122, 5155, 5169, 5192, 5175, 5171, 5201, 5230, 5081, 5223, and 5270.

WHEREAS the Council of The Corporation of the District of West Vancouver deems it expedient to provide for an amendment to the Zoning Bylaw;

NOW THEREFORE, the Council of The Corporation of the District of West Vancouver enacts as follows:

Part 1 Citation

- 1.1 This bylaw may be cited as Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5336, 2024.

Part 2 Severability

- 2.1 If a portion of this bylaw is held invalid by a Court of competent jurisdiction, then the invalid portion must be severed and the remainder of this bylaw is deemed to have been adopted without the severed section, subsection, paragraph, subparagraph, clause or phrase.

Part 3 Adds CD87 Zone & Rezones the Lands

- 3.1 Zoning Bylaw No. 4662, 2010, Schedule A, Section 600 (Comprehensive Development Zones) is hereby amended by adding Section 687 as the CD87 – Comprehensive Development Zone 62 (14 Glenmore Drive), as set out in **Schedule A** of this bylaw.

- 3.2 The Lands, as set out in **Schedule B** of this bylaw are rezoned from Multiple Dwelling Zone 4 (RM4) to Comprehensive Development Zone 87 (14 Glenmore Drive) (CD87).

Part 4 Amends the Table of Contents

- 4.1 Zoning Bylaw No. 4662, 2010, Schedule A, Section 100 Table of Contents is amended accordingly to insert Comprehensive Development Zone 87 (14 Glenmore Drive).

Part 5 Amends Zoning Map

- 5.1 Zoning Bylaw No. 4662, 2010, Schedule A, Section 852, Schedule 2, Zoning Maps is hereby amended by changing the zoning on the Lands as shown shaded on the map in **Schedule B** of this bylaw,

FROM: RM4 (Multiple Dwelling Zone 4)

TO: CD87 – Comprehensive Development Zone 87
(14 Glenmore Drive).

Schedules

Schedule A - CD87 - Comprehensive Development Zone 87 (14 Glenmore Drive)
Schedule B - Rezoning Map

READ A FIRST TIME on

PUBLICATION OF NOTICE OF PUBLIC HEARING on

PUBLIC HEARING HELD on

READ A SECOND TIME on

READ A THIRD TIME on

ADOPTED by the Council on

Mayor

Corporate Officer

Schedule A – CD87 - Comprehensive Development Zone 87 (14 Glenmore Drive)

687 CD87 (14 Glenmore Drive)

687.01 Permitted Uses

- (1) Duplex dwellings
- (2) Accessory buildings, structures and uses
- (3) Child care
- (4) Community care
- (5) Home based business
- (6) Lodgers
- (7) Secondary suites

687.02 Conditions of Use

- (1) No more than 2 lodgers can be kept within an individual/principal duplex dwelling unit
- (2) Access to onsite parking and garages must be provided from a laneway

687.03 Floor Area Ratio (FAR)

- (1) Total maximum of 0.71 FAR
- (2) For the purposes of calculating FAR, the site area is 1,830.1 square metres, being the area of the site prior to any required lane dedications
- (3) The floor area exemptions of Sections 130.08 shall not apply and the floor area is the sum of the overall floor areas of all buildings, structures, and enclosed areas, yet the following floor area exemptions shall apply:
 - Enclosed garage areas to a maximum of 123 square metres for the entire site; and
 - Basements areas to a maximum of 697 square metres for the entire site.

687.04 Density

A maximum of 3 duplex dwellings (for a maximum of 6 principal dwelling units)

687.05 Setbacks

Minimum:

Front (Glenmore Drive):	7.6 metres
Rear:	7.6 metres
Side (south):	1.52 metres
Side (north):	1.3 metres

687.06 Building Height

Building height is limited to a maximum height of 7.62 metres measured from average finished grade, yet notwithstanding the definition of finished grade within Section 100 of the Zoning Bylaw, shall exclude window wells with a clear distance measured out from the wall of less than 0.9 metres to a maximum of 6.0 metres in cumulative length along each building face.

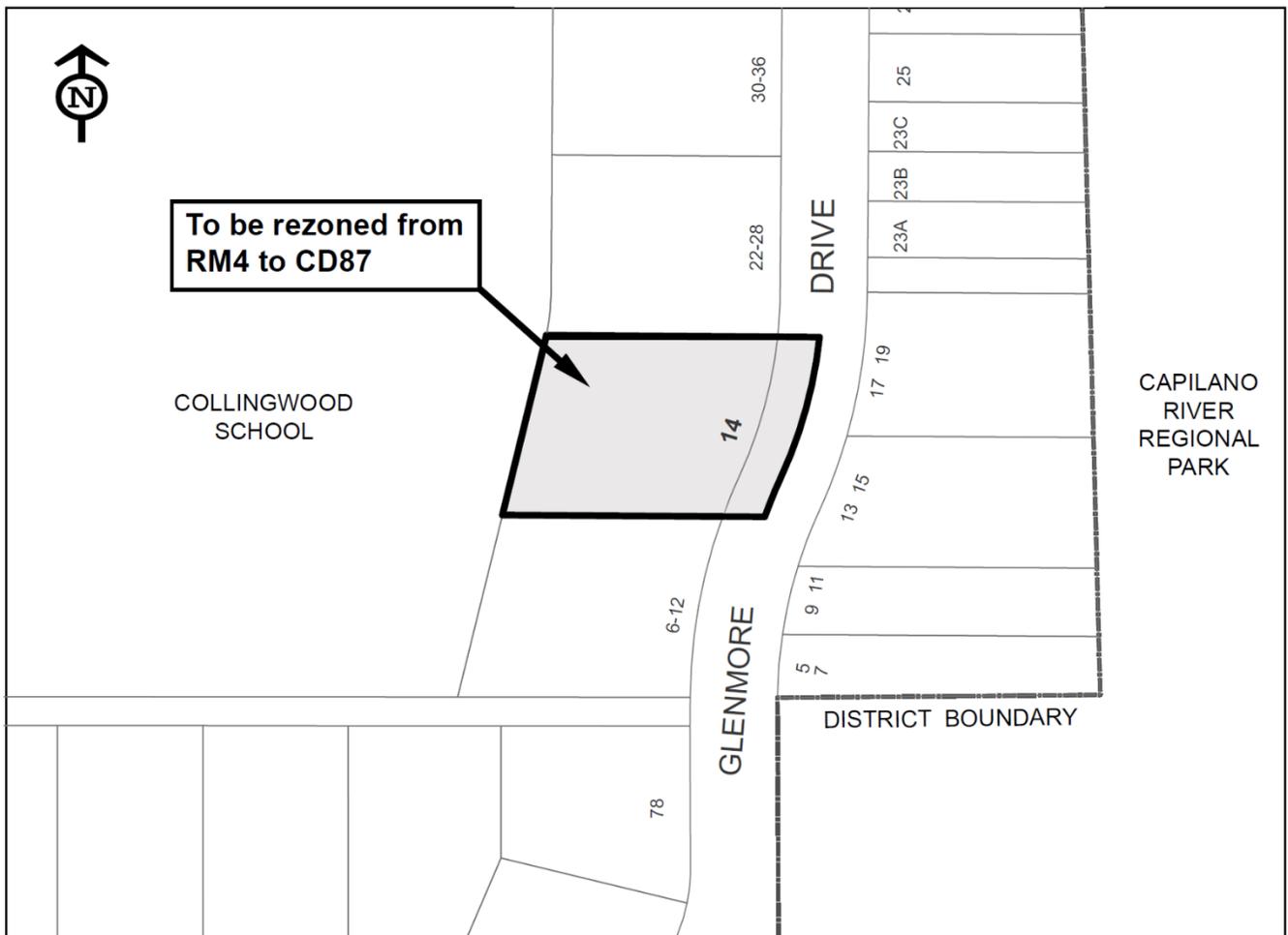
687.07 Number of Storeys

A maximum of 2 storeys plus basement

687.08 Off-Street Parking

- (1) Parking shall comply with Section 141.01 of the Zoning Bylaw; however:
- A minimum of 3 visitor vehicle parking stalls is required; and
 - All non-visitor vehicle parking stalls shall include an energized outlet capable of providing Level 2 charging for an electric vehicle.

Schedule B – Rezoning Map





District of West Vancouver

**Official Community Plan Bylaw No. 4985,
2018,
Amendment Bylaw No. 5335, 2024**

Effective Date:

**Official Community Plan Bylaw No. 4985,
2018,
Amendment Bylaw No. 5335, 2024**

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District of West Vancouver

Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5335, 2024

A bylaw to amend the Official Community Plan to include 14 Glenmore Drive within Development Permit Area BF-B 11 “Duplex Areas”.

Previous amendments: 5008, 5045, 5054, 5057, 5064, 5074, 5076, 5120, 5128, 5135, 5172, 5321, and 5222.

WHEREAS the Council of The Corporation of the District of West Vancouver deems it expedient to provide for an amendment to the Official Community Plan to allow for the appropriate development of lands at 14 Glenmore Drive and include the lands within the “Duplex Areas” development permit area;

NOW THEREFORE, the Council of The Corporation of the District of West Vancouver enacts as follows:

Part 1 Citation

- 1.1 This bylaw may be cited as Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5335, 2024.

Part 2 Severability

- 2.1 If a portion of this bylaw is held invalid by a Court of competent jurisdiction, then the invalid portion must be severed and the remainder of this bylaw is deemed to have been adopted without the severed section, subsection, paragraph, subparagraph, clause or phrase.

Part 3 Amends Area Specific Policy

3.1 Schedule ii of Official Community Plan Bylaw No. 4985, 2018 is amended by amending Policy BF-B 11 “Duplex Areas” as follows:

3.1.1 On page 31 of Schedule ii forming part of Official Community Plan Bylaw No. 4985, 2018 delete **Schedule A** and insert in its place **Schedule B**.

Schedules

Schedule A – Current “Duplex Area Development Permit Area Designation Map BF-B 11 (3 of 3)

Schedule B – Proposed “Duplex Area Development Permit Area Designation Map BF-B 11 (3 of 3)

READ A FIRST TIME on

READ A FIRST TIME (MAJORITY VOTE IN THE AFFIRMATIVE) on

PUBLICATION OF NOTICE OF PUBLIC HEARING on

PUBLIC HEARING HELD on

READ A SECOND TIME (MAJORITY VOTE IN THE AFFIRMATIVE) on

READ A THIRD TIME (MAJORITY VOTE IN THE AFFIRMATIVE) on

ADOPTED by the Council (MAJORITY VOTE IN THE AFFIRMATIVE) on

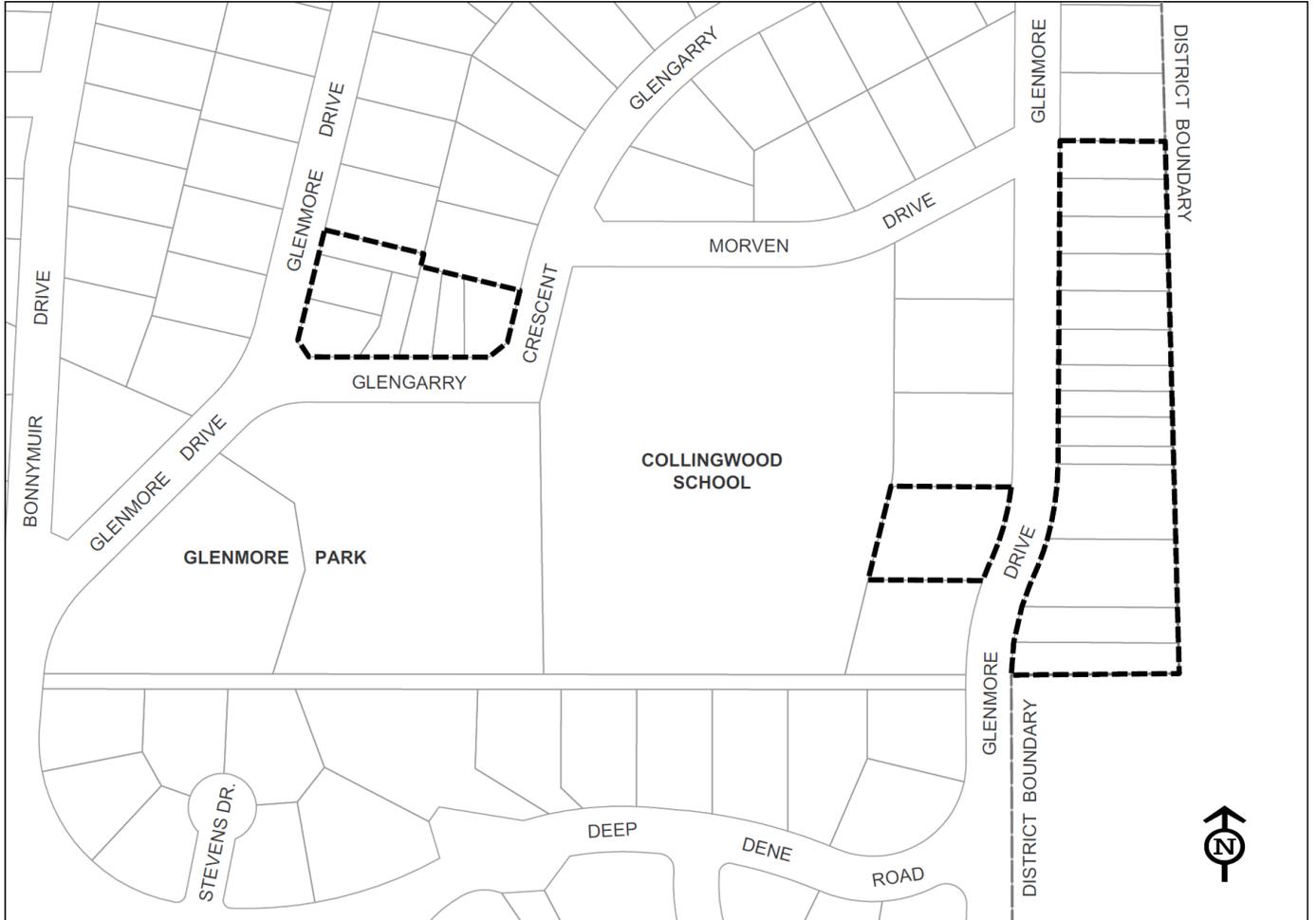
Mayor

Corporate Officer

Schedule A – Current “Duplex Area Development Permit Area Designation Map BF-B 11 (3 of 3)



Schedule B – Proposed “Duplex Area Development Permit Area Designation Map BF-B 11 (3 of 3)



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PROJECT PROFILE

Appendix C

Project:	14 Glenmore Drive
Application:	File No. 23-100
Applicant:	Sterling Pacific Developments Inc.
Designer:	Sterling Pacific Developments Inc.
Landscape Designer:	Sterling Pacific Developments Inc.
Property Address:	14 Glenmore Drive
Legal Description:	LOT 4 BLOCK 5 BLOCK C DISTRICT LOT 603 PLAN 9334
PID:	002-773-546
Existing Zoning:	RM4
Site Area:	1,830.1 m ² (19,699 sq ft.)
Primary OCP Policies:	2.1.3
Design Guidelines:	Duplex Areas
Zoning (Proposed):	CD87 (14 Glenmore Drive)
Proposal:	To rezone the site to allow for a 6-unit multifamily/duplex development. The proposal consists of 3, two-storey duplex buildings with lane parking

Particulars	Proposed	Notes
Floor Area Ratio (FAR)	0.70	Stated FAR is prior to required lane dedications of 360.6m ² (3,881.5 sq ft.). Final FAR at approximately 0.86.
Site Coverage	38.1%	Stated site coverage is prior to required lane dedications. Final site coverage at approximately 47.4%.
Building Height	7.62 m	Proposed height maximum is less than the maximum RM4 zone which allows a maximum height of 8.5m.
Number of Storeys	2	Same as original RM4 zoning.
Gross Floor Area (enclosed garages and basements levels included)	2,093.3 m ² (22,532.1 sq. ft.)	Enclosed garages and basement levels would be excluded from the FAR calculation (standard for duplexes within the District).
Number of "Market" Duplex Units	6	Total average floor area of each duplex unit at approximately 348.9 m ² (3,755.5 sq. ft.).
Setbacks		Stated minimum setbacks after lane dedications.
Front	7.6 m (25 ft.)	East lot line (Glenmore Drive).
Rear	7.6 m (25 ft.)	West lot line.
Side	1.52 m (5 ft.)	South lot line.
Side	1.3 m (4.27 ft.)	North lot line.
Parking		
Residential:	12	Tandem parking is proposed at the rear of the property via a lane.
Visitor	3	To be provided within the rear lane.
Total Parking:	15	Represents 2.5 vehicle stalls per unit
Bicycle Parking/Storage:	Within the single car garage	Conventional for duplexes within the District.
EV Charging	Level 2 Charging	All residential vehicle stalls will provide Level 2 (240 volt) charging facilities.

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District of West Vancouver Proposed Development Permit No. 23-100

Current Owner: 1397095 B.C. LTD., INC.NO. BC1397095

This Development Permit applies to “the Lands”:

Civic Address: 14 Glenmore Drive

Legal Description: LOT 4 BLOCK 5 BLOCK C DISTRICT LOT 603 PLAN 9334
(PID: 002-773-546)
(the ‘Lands’)

1. This Development Permit:
 - (a) imposes requirements and conditions for the development of the Lands, which are designated by the Official Community Plan within the “Duplex Areas” development permit area to promote development that reflects quality building design, materials and landscaping subject to guidelines specified in the Official Community Plan;
 - (b) imposes requirements and conditions for the development of the Lands, which are designated by the Official Community Plan within the “Wildfire Hazard” development permit area to promote safer neighbourhoods by reducing the risk of wildfire hazards to new buildings and minimizing the spread of fires into the community; and
 - (c) is issued subject to the Owner’s compliance with all of the Bylaws of the District applicable to the Lands, except as specifically varied or supplemented by this Permit.

2. The following requirements and conditions shall apply to the Lands:
 - 2.1 Buildings, structures, and site development shall take place in substantial compliance with the drawings from Sterling Pacific Development Inc. dated March 6, 2024 (Revision No. 1), attached as Schedule “A”.
 - 2.2 On-site landscaping works shall take place in substantial compliance with the drawings from Sterling Pacific Development Inc. dated March 6, 2024 (Revision No. 1), attached as Schedule “A”.
 - 2.4 Site development shall take place in compliance with the recommendations found within the “Wildfire Hazard DP Area Assessment Report” by Diamond Head, dated October 3, 2023, attached as Schedule “B”.
 - 2.5 Removal of Protected Tree #1895 is permitted, in accordance with Schedule “B”.

- 2.6 Tree work on public land, or boulevards, will require a Municipal Tree Cutting Permit at the Building Permit Stage.
3. Prior to commencing site work or Building Permit issuance, whichever occurs first, the Owner must:
 - 3.1 Provide and implement a plan for traffic management during construction to the satisfaction of the District's Manager of Development Engineering.
 - 3.2 Submit a "Sediment and Erosion Plan" to the District's Environmental Protection Officer for approval, which the Owner shall comply with and be responsible for maintaining, repairing and implementing the sediment control measures.
 - 3.3 Enter into a "Works and Services Agreement" (WSA) to ensure installation of *off-site works* to the satisfaction of the District's Manager of Development Engineering. The WSA will require engineering civil drawings detailing works, including but not limited to:
 - (a) storm water management measures;
 - (b) site service connections;
 - (c) new boulevard plan along the frontage of the site including curbs, sidewalk, grading plan, road markings and signage; and
 - (d) repaving along the frontage of the Lands,which must be submitted for acceptance, and security provided for the due and property completion of the engineering works, all to the satisfaction of the District's Manager of Land Development.
 - 3.4 Provide a letter to the Director of Planning and Development Services, or designate, that outlines how all aspects of the development covenant (required through rezoning of the site) have been achieved.
4. Prior to the issuance of a building permit and as security for the due and proper completion of the landscaping works ("Landscaping Works") as set forth in Section 2.2 of this Development Permit, the Owner shall:
 - 4.1 Provide, to the District's Manager of Land Development, a cost estimate ("Cost Estimate") for the on-site Landscaping Works to be installed.
 - 4.2 Provide, to the District's Manager of Land Development, a landscape deposit ("Landscape Deposit") in the amount determined by the Cost Estimate, in the form of cash or unconditional, irrevocable auto-renewing letter of credit issued by a Canadian chartered bank or credit union to ensure the due and proper completion of the Landscaping Works.

4.3 Release of the Landscape Deposit:

(a) Following installation of the Landscape Works and upon receipt of a letter or report by the developer to the District stating that:

- a. the Landscaping Works have been installed substantially in accordance with Schedule A; and
- b. any variations that may have been undertaken to the Landscaping Works are clearly identified, including but not limited to:
 - i. any adjustments to retaining walls,
 - ii. changes to the mixture or sizes of any plant materials or trees,
 - iii. completion of any off-site or boulevard works,
 - iv. any areas that received alternative treatment,
 - v. any paving changes, or
 - vi. any other additional or omitted plantings or alterations,

together with a clear rationale and explanation thereof and stating

- c. that a final review with the landscape contractor or consultant of record has been completed, including provision of the date when this final review was completed on,
- d. whether there are any outstanding Landscape Works which are outstanding or which need attention, and
- e. notwithstanding outstanding Landscape Works, that the Landscaping Works are complete,

then District will release 75% of the initial value of the Landscape Deposit. The remaining 25% of the initial value of the Landscape Deposit shall be retained by the District as a warranty deposit (the "Warranty Deposit") to ensure successful installation of the Landscaping Works.

(b) After a one-year period following certification that the Landscaping Works have been completed, and upon final certification by a Landscape Architect in good standing with the British Columbia Society of Landscape Architects that the Landscaping Works are successful, the District will release the Warranty Deposit.

5. Prior to Occupancy:

5.1 The applicant must submit documentation demonstrating that the "as-built" development complies with all requirements of this development permit. Any variations must be clearly identified with a rationale and explanation noting that planning staff review and approval may be needed for variations prior to final occupancy.

6. This Development Permit lapses if the work authorized herein is not commenced within 24 months of the date this permit is issued.

THE COUNCIL OF WEST VANCOUVER APPROVED THIS PERMIT BY RESOLUTION PASSED ON

MAYOR

CORPORATE OFFICER

THE REQUIREMENTS AND CONDITIONS UPON WHICH THIS PERMIT IS ISSUED ARE ACKNOWLEDGED AND AGREED TO BY THE CURRENT OWNER. IT IS UNDERSTOOD:

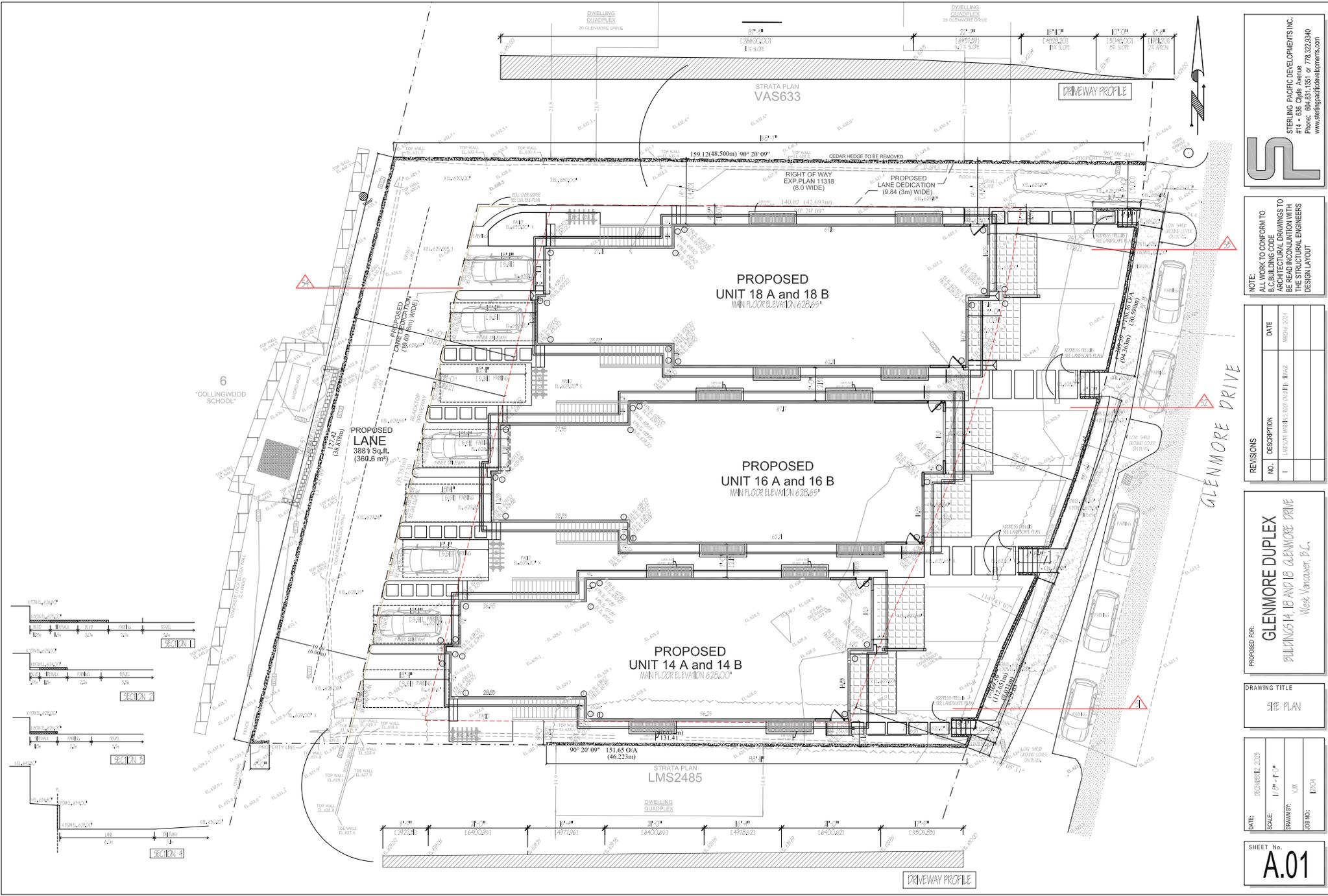
- THAT OTHER PERMITS / APPROVALS MAY BE REQUIRED INCLUDING PERMITS / APPROVALS FOR BUILDING CONSTRUCTION, SOIL AND ROCK REMOVAL OR DEPOSIT, BOULEVARD WORKS, AND SUBDIVISION; AND
- THE DEVELOPMENT MUST ATTAIN REQUIREMENTS OF THE BC BUILDING CODE AND ANY VARIANCES TO THE ZONING BYLAW ARE THE RESPONSIBILITY OF THE OWNER AND MUST BE RECTIFIED AT THE BUILDING PERMIT STAGE.

FOR THE PURPOSES OF SECTION 6, THIS PERMIT IS ISSUED ON

Schedules:

- A – Design drawings from Sterling Pacific Development Inc. dated March 6, 2024 (Revision No. 1)
B - "Wildfire Hazard DP Area Assessment Report" by Diamond Head, dated October 3, 2023

END OF DEVELOPMENT PERMIT 23-100



STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clough Avenue
 West Vancouver, BC V7V 1G5
 www.sterlingpacific.com



NOTE:
 ALL WORK TO CONFORM TO
 B.C. BUILDING CODE
 ARCHITECTURAL DRAWINGS TO
 BE READ IN CONJUNCTION WITH
 THE STRUCTURAL ENGINEERS
 DESIGN LAYOUT

REVISIONS	NO.	DESCRIPTION	DATE
	1	ISSUED FOR PERMIT	MAY 04 2024

PROPOSED FOR:
GLENMORE DUPLEX
 BUILDINGS 14, 16 AND 18 GLENMORE DRIVE
 West Vancouver, B.C.

DRAWING TITLE
SITE PLAN

DATE:	02/20/2024
SCALE:	1/8" = 1'-0"
DRAWN BY:	VUB
CHECKED BY:	EPCH

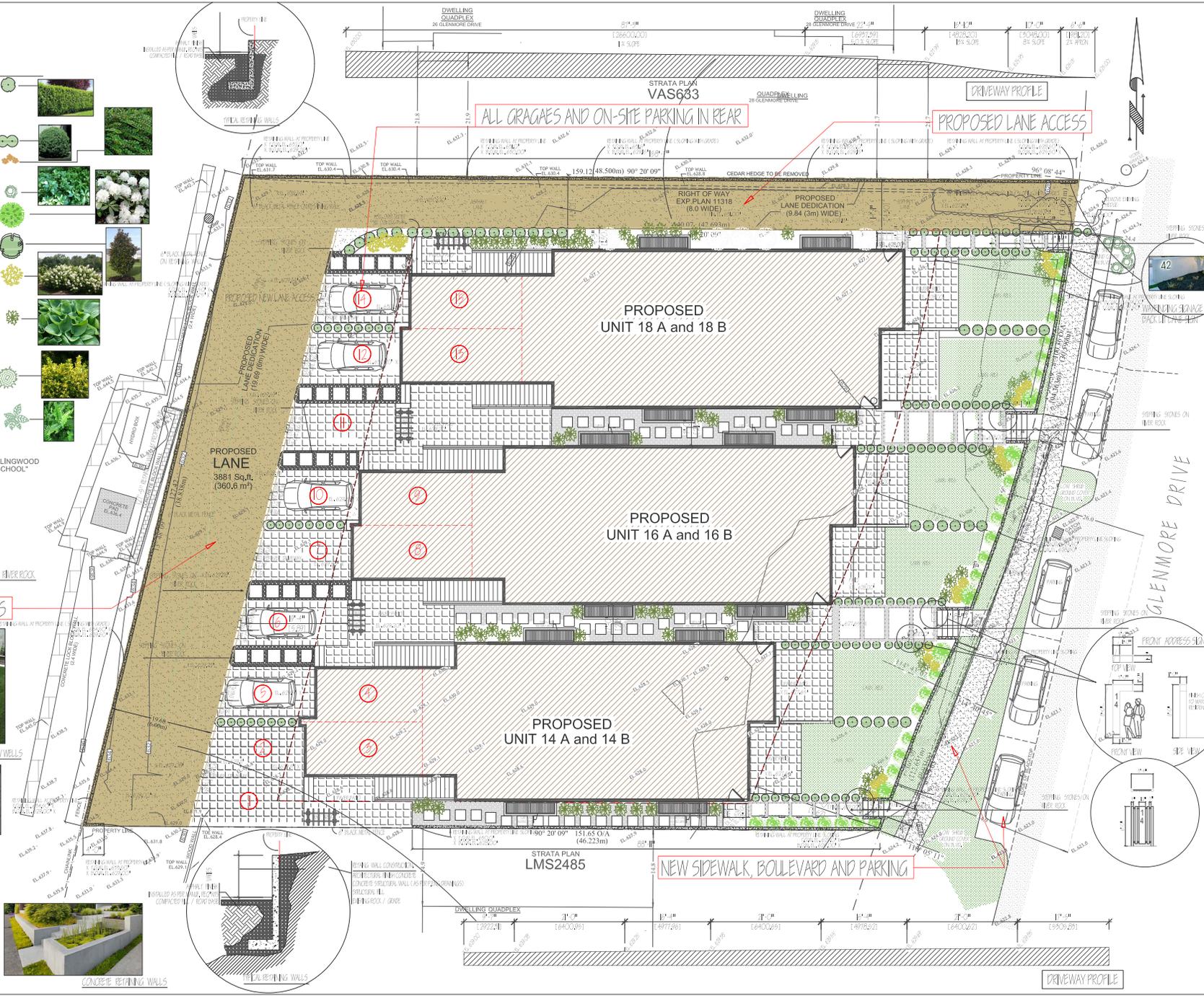
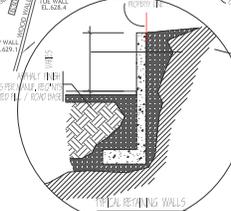
SHEET No.
A.01

LANDSCAPE LEGEND:

NAME	COUNT	PLANT IMAGE
PORTULACAE LAURAL	110	
BOXWOODS	68	
ROCK COTONEASTER	25	
PACHYRANDRA (GRAND COVER)	68	
RHODODENDRON (WHITE)	35	
MAGNOLIA	6	
HYDRANGEA - INCREDBALL	20	
HOSTAS	145	
GOLDEN EUCOMMIS SHRUB	70	
SNICOR FERN	65	



PROPOSED LANE ACCESS



STERLING PACIFIC DEVELOPMENTS INC.
 #14 - 636 Clive Avenue
 Phone: 604.251.1514 or 778.222.8840
 www.sterlingpacific.com

NOTE: ALL WORK TO CONFORM TO B.C. BUILDING CODE. ARCHITECTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH THE STRUCTURAL ENGINEER'S DESIGN LAYOUT.

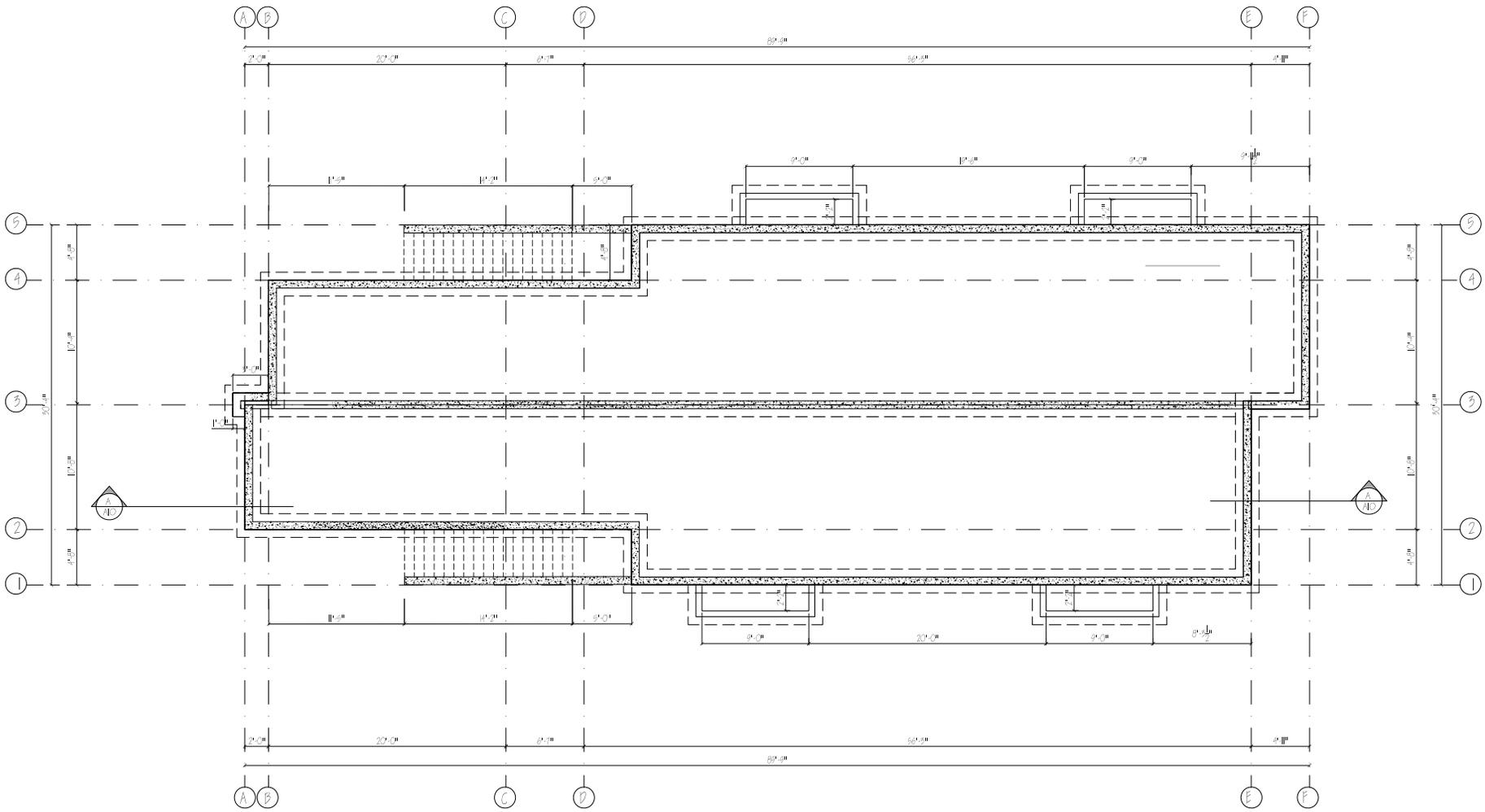
REVISIONS	NO.	DESCRIPTION	DATE
	1	ISSUED FOR PERMIT	APR 04 2024

PROCESS ENG: **GLENMORE DUPLEX**
 BUILDINGS 14, 16 AND 18 GLENMORE DRIVE
 West Vancouver, B.C.

DRAWING TITLE
 LANDSCAPE PLAN

DATE:	02/05/2024
SCALE:	1/8" = 1'-0"
DRAWN BY:	Y.J.H.
CHECKED BY:	Y.P.H.

SHEET No.
A.02



FOUNDATION PLAN



STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clough Avenue
 West Vancouver, BC V8V 2Z2
 www.spd@sterlingpacific.com

NOTE:
 ALL WORK TO CONFORM TO
 B.C. BUILDING CODE
 ARCHITECTURAL DRAWINGS TO
 BE READ IN CONJUNCTION WITH
 THE STRUCTURAL ENGINEERS
 DESIGN LAYOUT

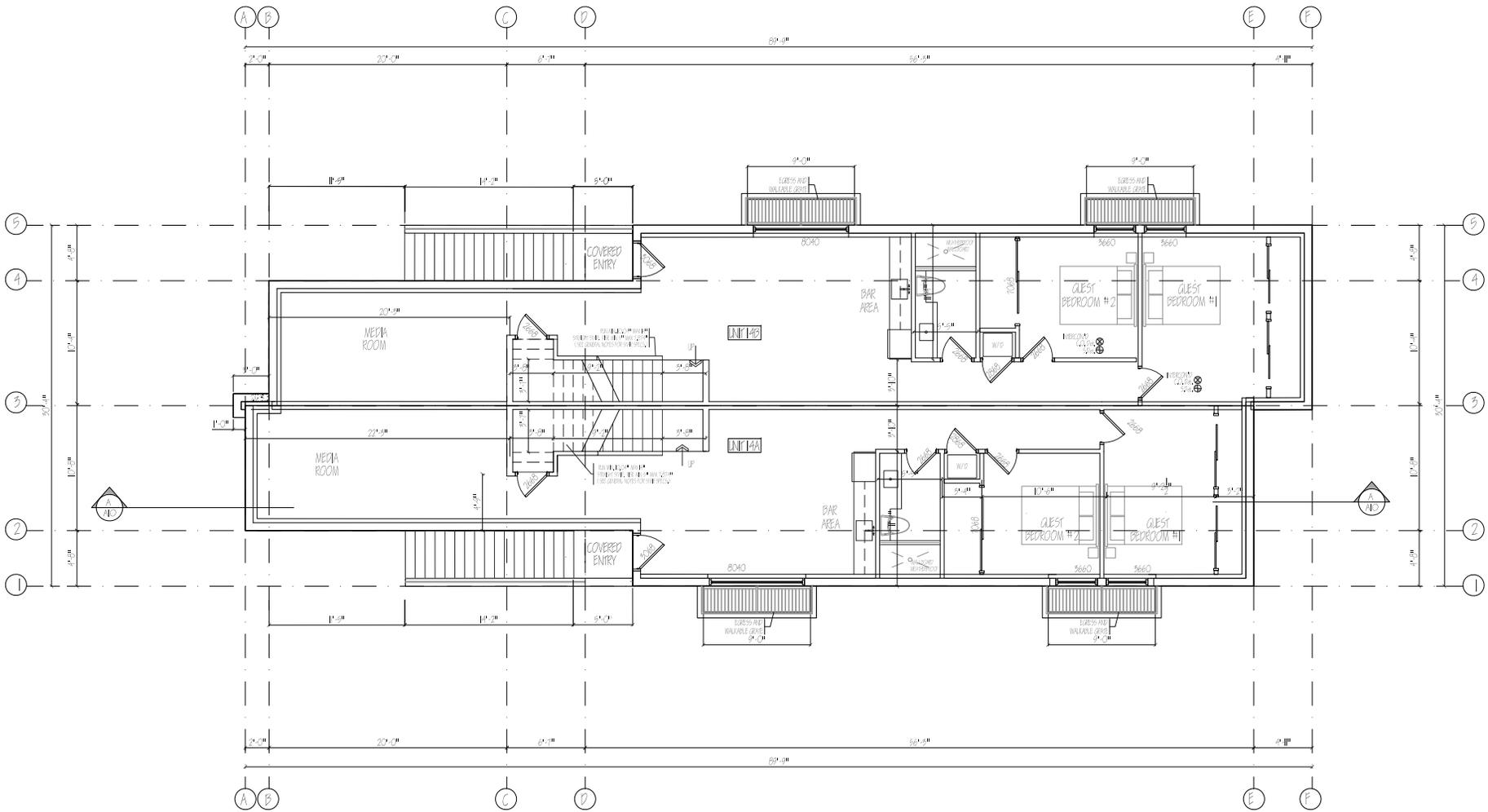
REVISIONS		DATE
NO.	DESCRIPTION	
1	SEE STAGING PERMITS	MAR 6, 2024

PROPOSED FOR:
GLENMORE DUPLEX
 144 and 143 Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 FOUNDATION PLAN

DATE:	08/08/24
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.03



PROPOSED BASEMENT LEVEL
 UNIT 14A
 AREA: 1157 SQFT
 UNIT 14B
 AREA: 1222 SQFT
 TOTAL FLOOR AREA: 2379 SQFT.



STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clough Avenue
 West Vancouver, BC V8V 2Z2
 www.spd@sterlingpacific.com

NOTE:
 ALL WORK TO CONFORM TO
 B.C. BUILDING CODE
 ARCHITECTURAL DRAWINGS TO
 BE READ IN CONJUNCTION WITH
 THE STRUCTURAL ENGINEERS
 DESIGN LAYOUT

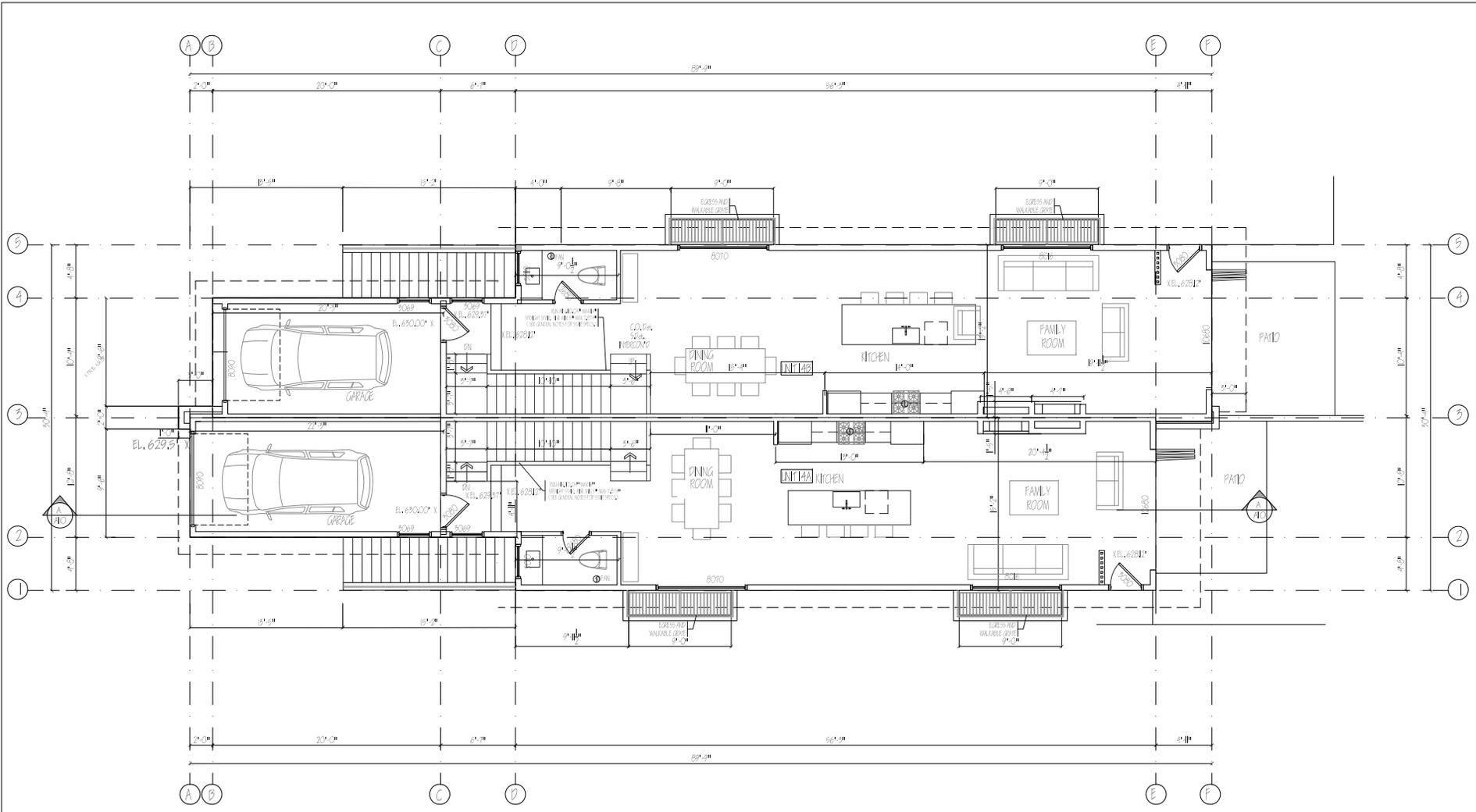
REVISIONS	NO.	DESCRIPTION	DATE
	1	SEE EXHIBIT 1 (REVISED)	MAR 16, 2024

PROPOSED FOR:
GLENMORE DUPLEX
 14A and 14B Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 BASEMENT LEVEL

DATE:	08/08/2024
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPD

SHEET No.
A.04



PROPOSED MAIN FLOOR
 UNIT 14A
 AREA: 925 SQFT
 PLUS GARAGE: 234 SQFT.
 UNIT 14B
 AREA: 1008 SQFT
 PLUS GARAGE: 214 SQFT.
 TOTAL FLOOR AREA: 2,379 SQFT.

STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clough Avenue
 West Vancouver, BC V8V 1G5
 778.322.8840
 www.sterlingpacific.com

NOTE:
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 B.C. BUILDING CODE
 ARCHITECTURAL DRAWINGS TO
 BE READ IN CONJUNCTION WITH
 THE STRUCTURAL ENGINEERS
 DESIGN LAYOUT

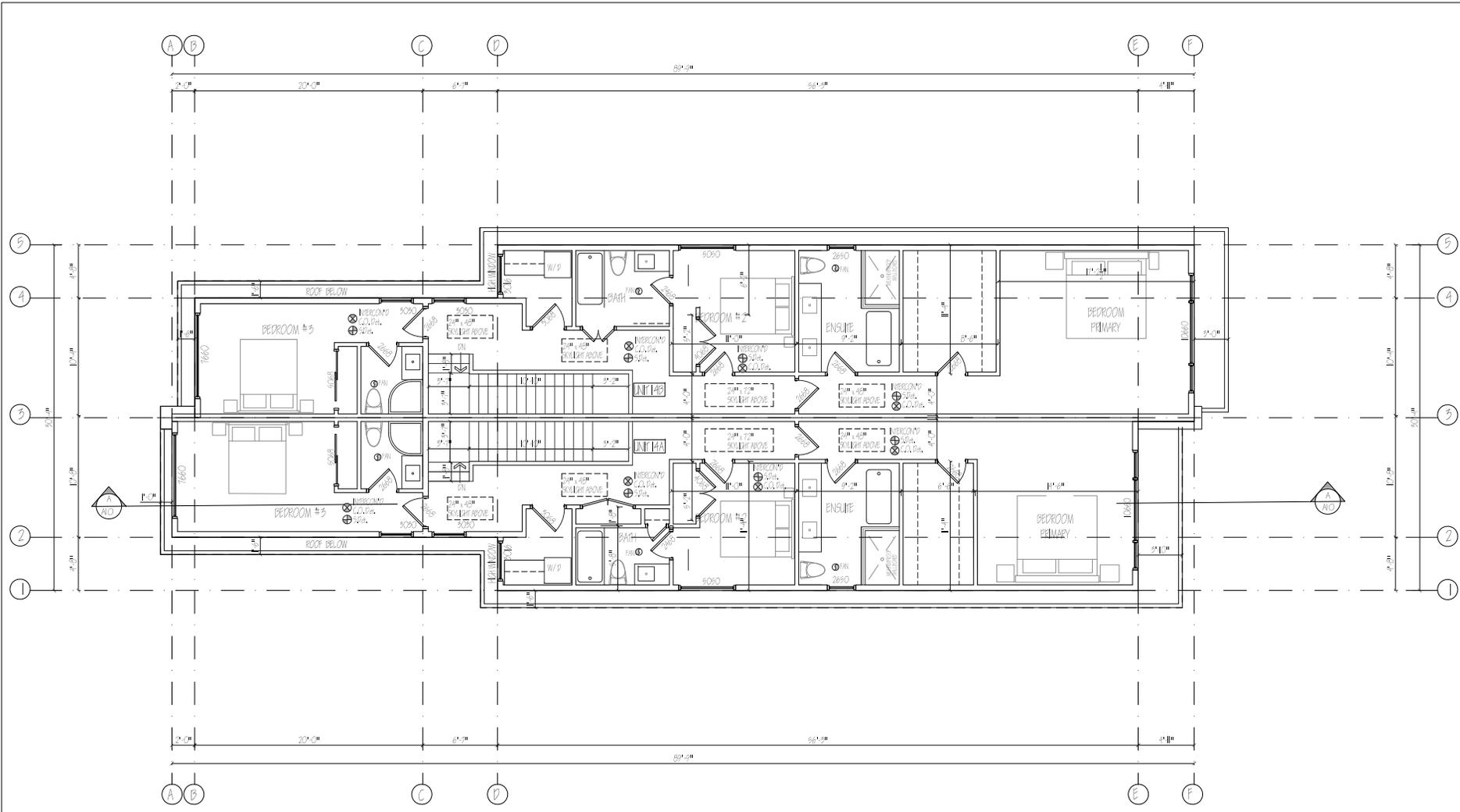
REVISIONS	NO.	DESCRIPTION	DATE
	1	SEE REVISIONS SHEETS	MAR 26, 2024

PROPOSED FOR:
GLENMORE DUPLEX
 14A and 14B Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 MAIN FLOOR

DATE:	02/08/2024
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.05



PROPOSED SECOND FLOOR	
UNIT #A	
AREA:	1157 SQFT
UNIT #B	
AREA:	1,222 SQFT
TOTAL AREA:	2,379 SQFT



STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clyde Avenue
 West Vancouver, BC V8V 1G5
 778.322.8840
 www.sterlingpacific.com

NOTE:
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 ARCHITECTURAL DRAWINGS TO
 BE READ IN CONJUNCTION WITH
 THE STRUCTURAL ENGINEERS
 DESIGN LAYOUT

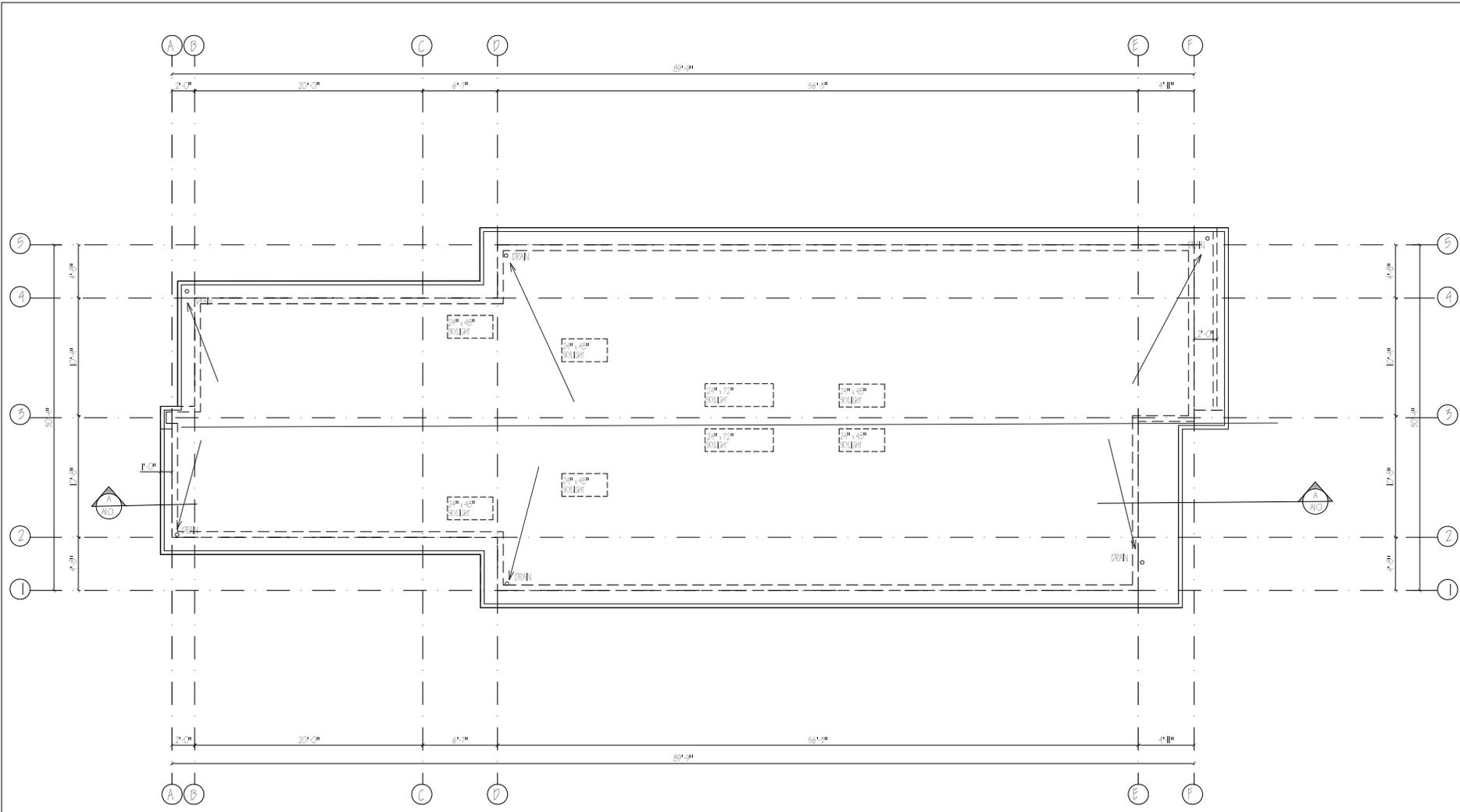
REVISONS	NO.	DESCRIPTION	DATE
	1	SUBMITTED PERMITS	MAR 6, 2021

PROPOSED FOR:
GLENMORE DUPLEX
 144 and 143 Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 SECOND FLOOR

DATE:	02/08/21
SCALE:	1/4" = 1'-0"
DRAWN BY:	VLM
CHECKED BY:	EPH

SHEET No.
A.06



ROOF PLAN

STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clyde Avenue
 West Vancouver, BC V8V 1G5
 www.spd.ca

NOTE:
 ALL WORK TO CONFORM TO
 B.C. BUILDING CODE
 ARCHITECTURAL DRAWINGS TO
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 DESIGN LAYOUT

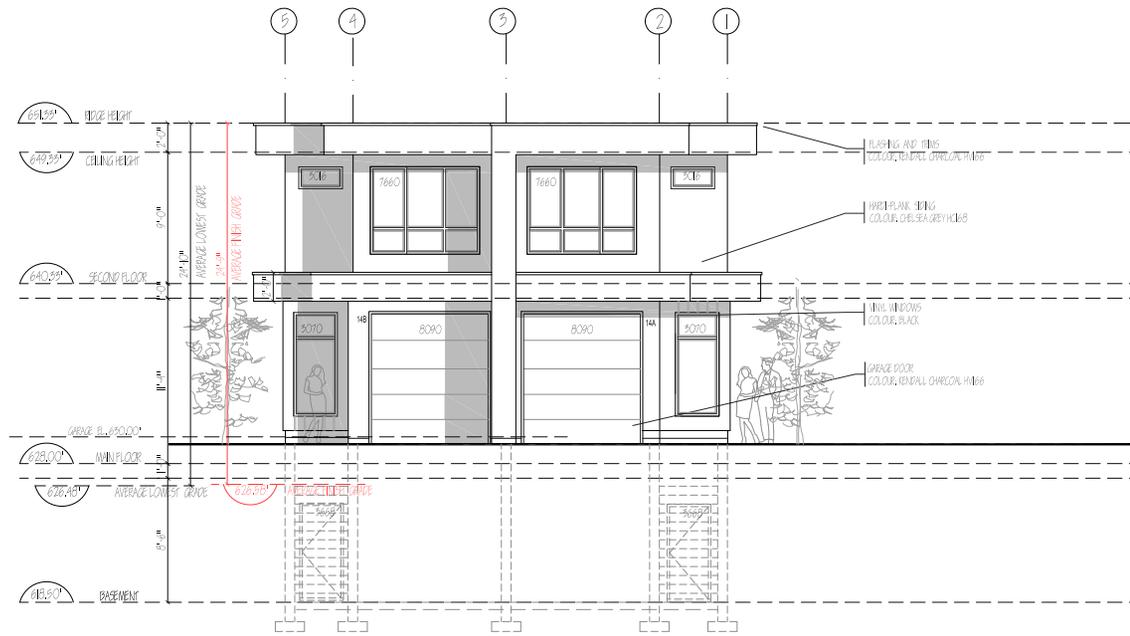
REVISIONS	NO.	DESCRIPTION	DATE
	1	REVISED PER COMMENTS	MAR 6, 2024

PROPOSED FOR:
GLENMORE DUPLEX
 144 and 143 Glenmore Drive,
 West Vancouver, B.C.

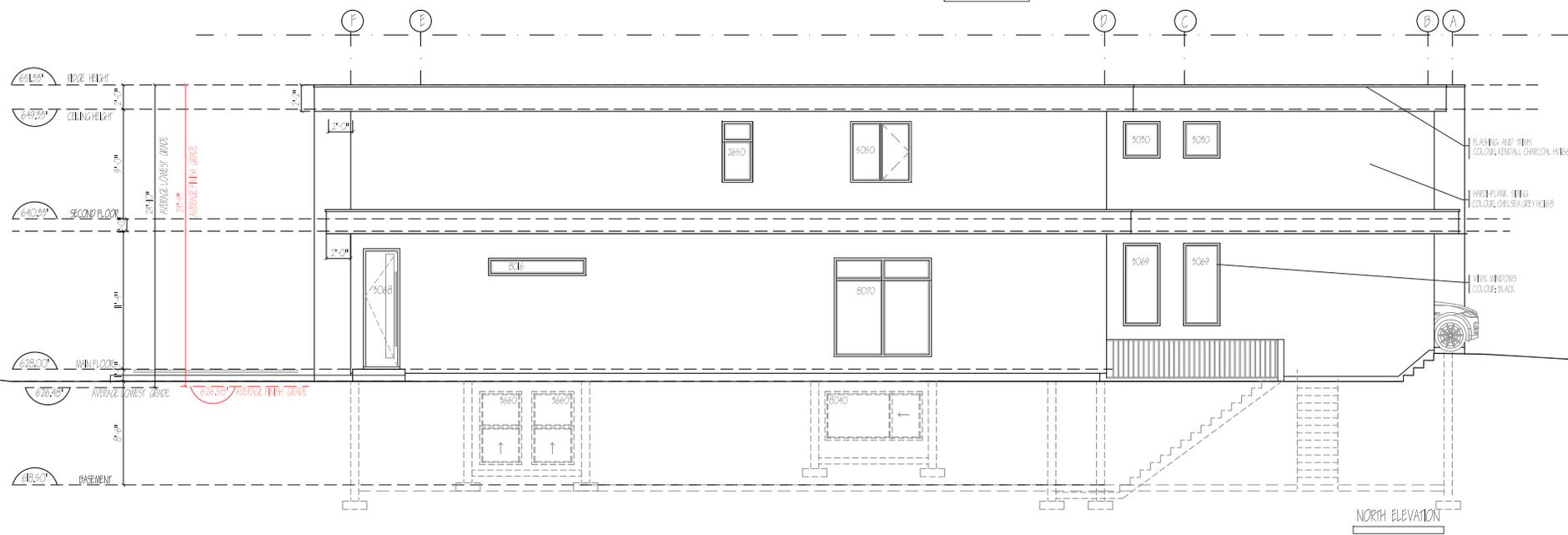
DRAWING TITLE
 ROOF PLAN

DATE:	02/08/24
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.07



WEST ELEVATION



NORTH ELEVATION

STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 638, Clough Avenue
 West Vancouver, BC V8V 1G5
 www.sterlingpacific.com

NOTE:
 ALL WORK TO CONFORM TO
 B.C. BUILDING CODE
 ARCHITECTURAL DRAWINGS TO
 BE READ IN CONJUNCTION WITH
 THE STRUCTURAL ENGINEERS
 DESIGN LAYOUT

REVISIONS	NO.	DESCRIPTION	DATE
	1	SUBMITTED FOR PERMITS	MAY 16, 2024

PROPOSED FOR:
GLENMORE DUPLEX
 144 and 143 Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 NORTH AND WEST
 ELEVATIONS

DATE:	02/28/24
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.08



West Elevation
14 Glenmore



North Elevation
14 Glenmore

EXTERIOR FINISHES

EXTERIOR SIDING
FINISH: HARD SIDING SMOOTH FINISH
COLOUR: CHELSEA GREY



WINDOWS/ FRAMES:
TYPE: VINYL
COLOUR: BLACK



SOFFITS:
TYPE: CEDAR
COLOUR: NATURAL



TRIM:
FINISH: METAL
COLOUR: RENDALL CHARCOAL HV166



SOFFIT LIGHTING:
TYPE: LED POT LIGHT
WARM WHITE
COLOUR: BLACK TRIM



SM.

STERLING PACIFIC DEVELOPMENTS INC.
#4 - 636 Clegg Avenue, 754.322.8940
www.sterlingpacificdevelopments.com

NOTE:
ALL WORK TO CONFORM TO
B.C. BUILDING CODE
ARCHITECTURAL DRAWINGS TO
BE READ IN CONJUNCTION WITH
THE STRUCTURAL ENGINEERS
DESIGN LAYOUT

REVISIONS	NO.	DESCRIPTION	DATE
	1	ISSUED FOR PERMITS	MAR 26, 2024

PROPOSED FOR:
GLENMORE DUPLEX
14A and 14B Glenmore Drive,
West Vancouver, B.C.

DRAWING TITLE
NORTH AND WEST
ELEVATION RENDERINGS

DATE:	10/06/2023
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPD

SHEET No.
A.08b



SOUTH ELEVATION



EAST ELEVATION

STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 638 Clapp Avenue
 West Vancouver, BC V8V 1K5
 www.sterlingpacific.com

NOTE:
 ALL WORK TO CONFORM TO
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 DESIGN LAYOUT

REVISIONS	NO.	DESCRIPTION	DATE
	1	REVISED PERMITS	MAR 6, 2024

PROPOSED FOR:
GLENMORE DUPLEX
 14A and 14B Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 SOUTH AND EAST
 ELEVATIONS

DATE:	DECEMBER 11, 2023
SCALE:	1/4" = 1'-0"
DRAWN BY:	VLM
CHECKED BY:	EPCH

SHEET No.
A.09



South Elevation
14 Glenmore



East Elevation
14 Glenmore

EXTERIOR FINISHES

EXTERIOR SIDING
FINISH: HARD SIDING SMOOTH FINISH
COLOUR: CHELSEA GREY



WINDOWS/ FRAMES:
TYPE: VINYL
COLOUR: BLACK



SOFFITS:
TYPE: CEDAR
COLOUR: NATURAL



TRIM:
FINISH: METAL
COLOUR: RENDALL CHARCOAL HV166



SOFFIT LIGHTING:
TYPE: LED POTLIGHT
WARM WHITE
COLOUR: BLACK TRIM



S.M.

STERLING PACIFIC DEVELOPMENTS INC.
#4 - 636 Clegg Avenue
West Vancouver, BC V8V 2Z2
www.spd@sterlingpacificdevelopments.com

NOTE:
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B.C. BUILDING CODE
ARCHITECTURAL DRAWINGS TO
BE READ IN CONJUNCTION WITH
THE STRUCTURAL ENGINEERS
DESIGN LAYOUT

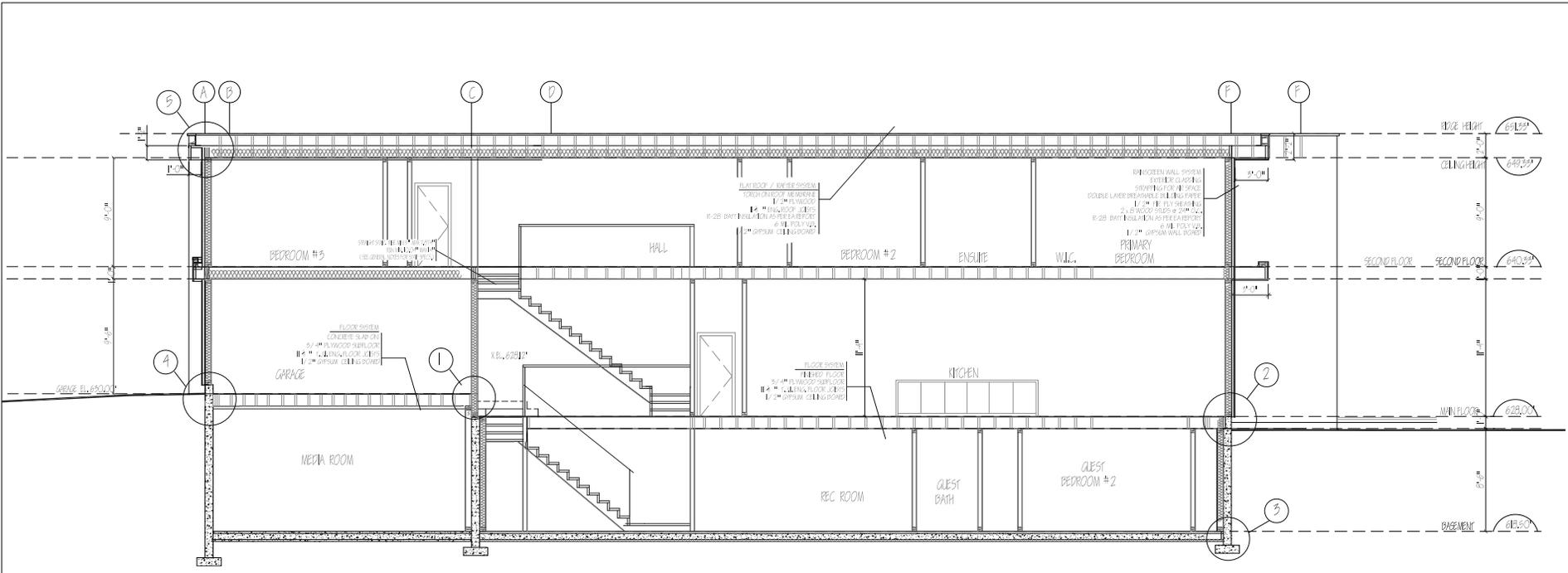
REVISIONS	NO.	DESCRIPTION	DATE
	1	ISSUED FOR PERMITS	

PROPOSED FOR:
GLENMORE DUPLEX
14A and 14B Glenmore Drive,
West Vancouver, B.C.

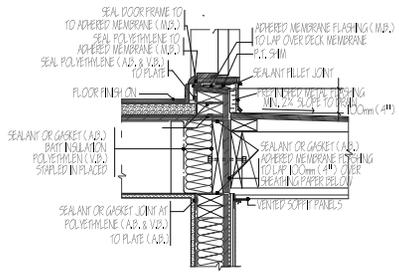
DRAWING TITLE
SOUTH AND EAST
ELEVATION RENDERINGS

DATE:	10/06/2022
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
JOB NO.:	1704

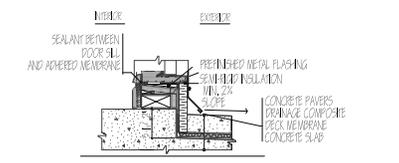
SHEET No.
A.09b



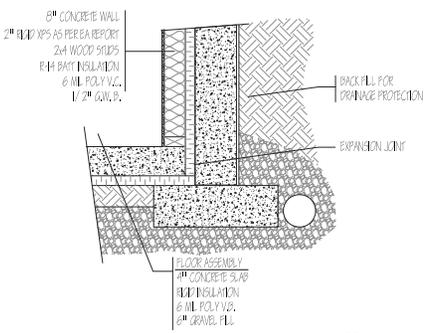
SECTION A-A



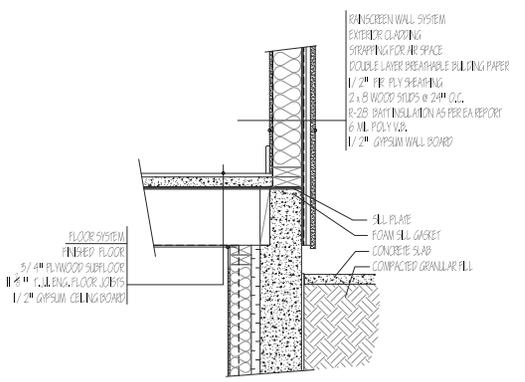
DOOR SILL AT DECK ①



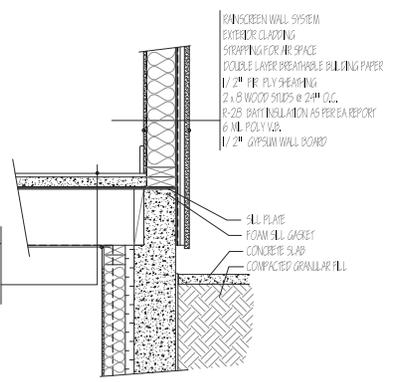
BASE WALL AT DOOR SILL ②



FOUNDATION DETAIL ③



FLOOR DETAIL ④



TYPICAL FLAT ROOF ⑤

STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Ohio Avenue
 West Vancouver, B.C. V8V 2G2
 www.sterlingpacific.com

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 DESIGN LAYOUT

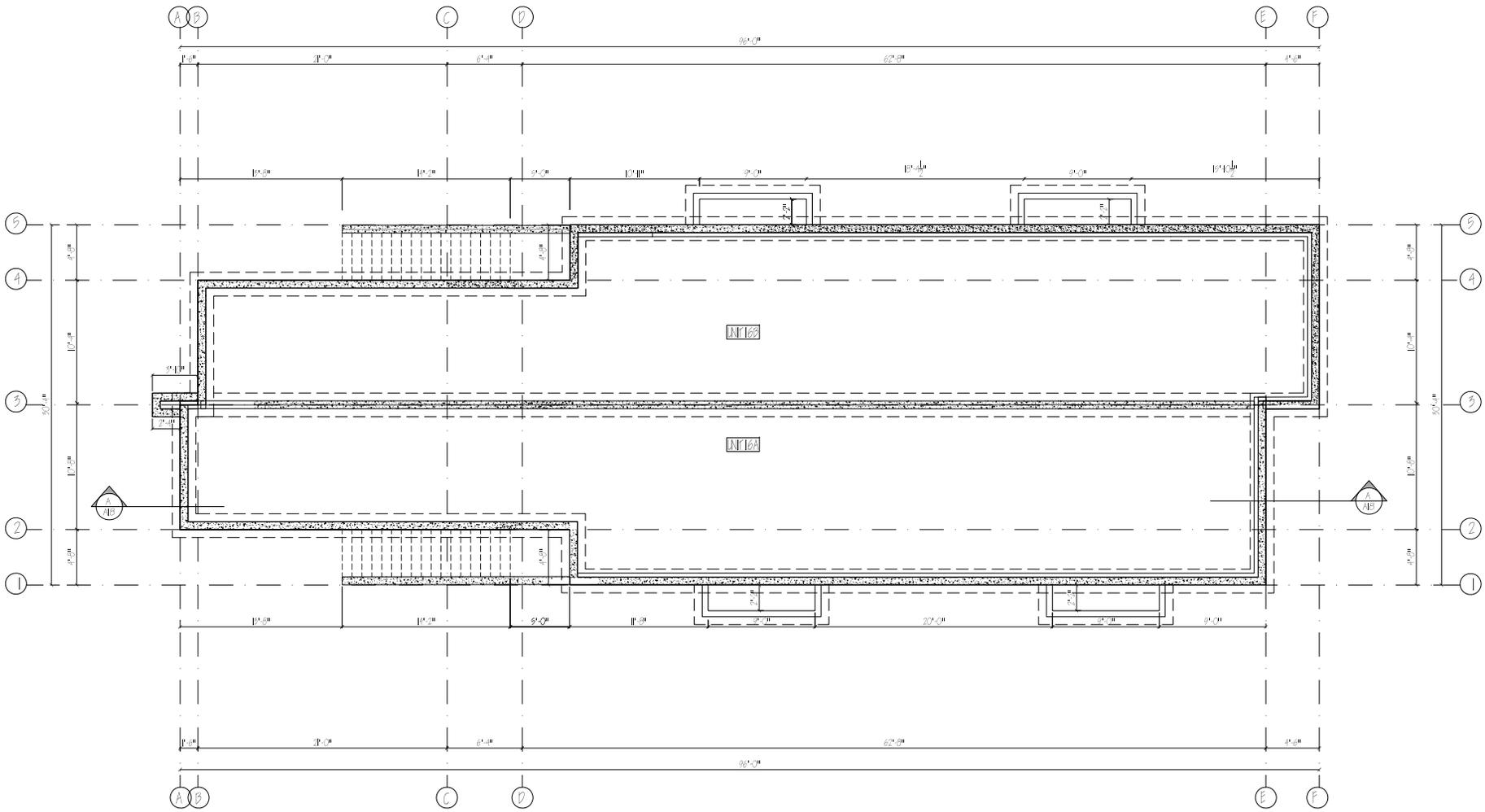
REVISIONS	NO.	DESCRIPTION	DATE
	1	SUBMITTED FOR PERMITS	MAY 16, 2021

PROPOSED FOR:
GLENMORE DUPLEX
 144 and 145 Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 SECTIONS AND DETAILS

DATE:	DECEMBER 11, 2020
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.10



STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clough Avenue
 West Vancouver, BC V8V 1G5
 www.spd@sterlingpacific.com

NOTE:
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 DESIGN LAYOUT

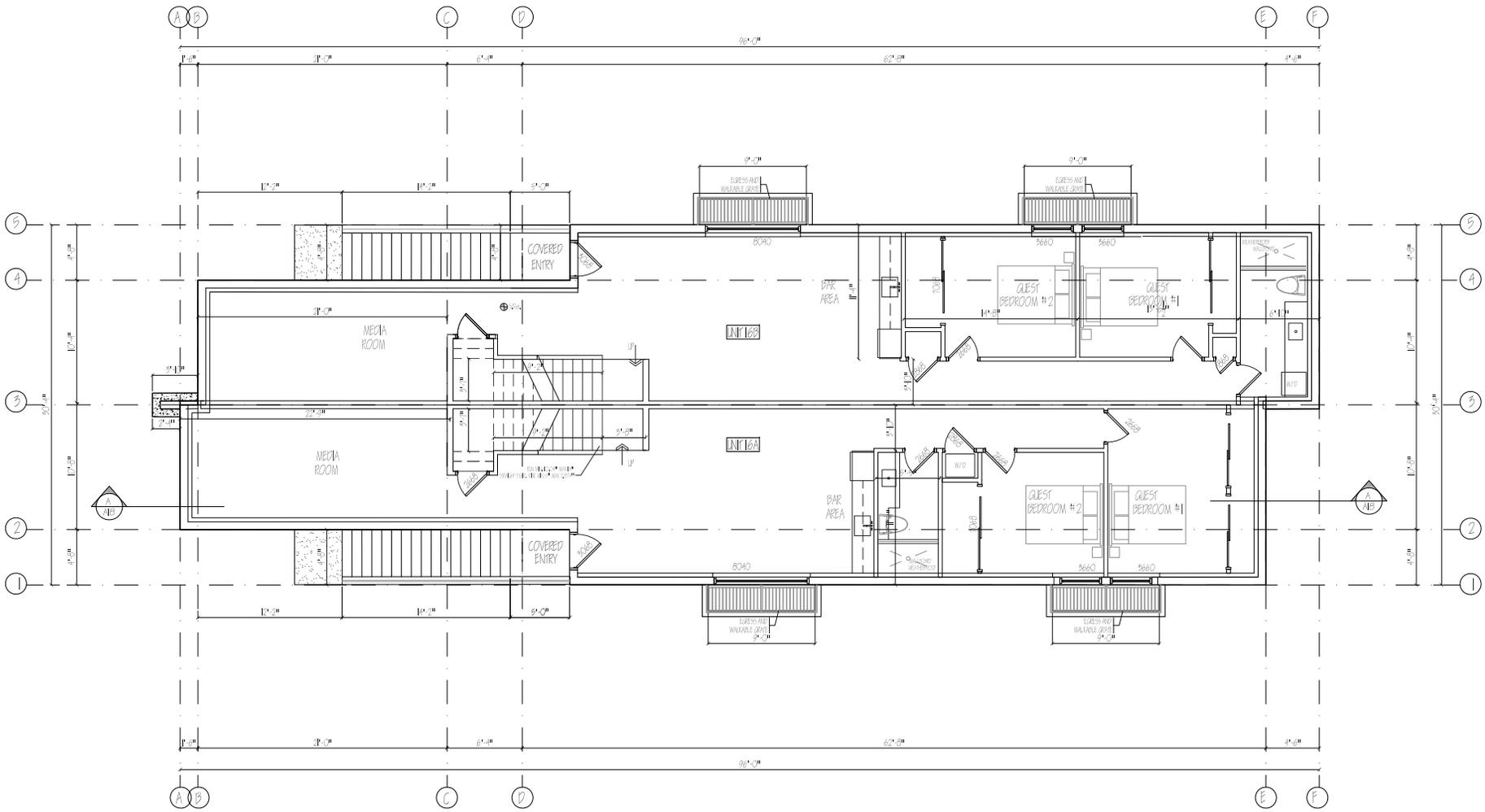
REVISIONS		NO.	DESCRIPTION	DATE
1	REVISED PER COMMENTS			MAR 6, 2024

PROPOSED FOR:
GLENMORE DUPLEX
 Lot B
 16A and 16B Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 FOUNDATION PLAN

DATE:	08/08/24
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.11



PROPOSED BASEMENT LEVEL
 UNIT 16A
 AREA, 1,252 SQFT
 UNIT 16B
 AREA, 1,310 SQFT
 TOTAL FLOOR AREA, 2,562 SQFT.



STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clough Avenue
 West Vancouver, BC V8V 1G5
 778.322.8840
 www.spd@sterlingpacific.com

NOTE:
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 B.C. BUILDING CODE
 ARCHITECTURAL DRAWINGS TO
 BE READ IN CONJUNCTION WITH
 THE STRUCTURAL ENGINEERS
 DESIGN LAYOUT

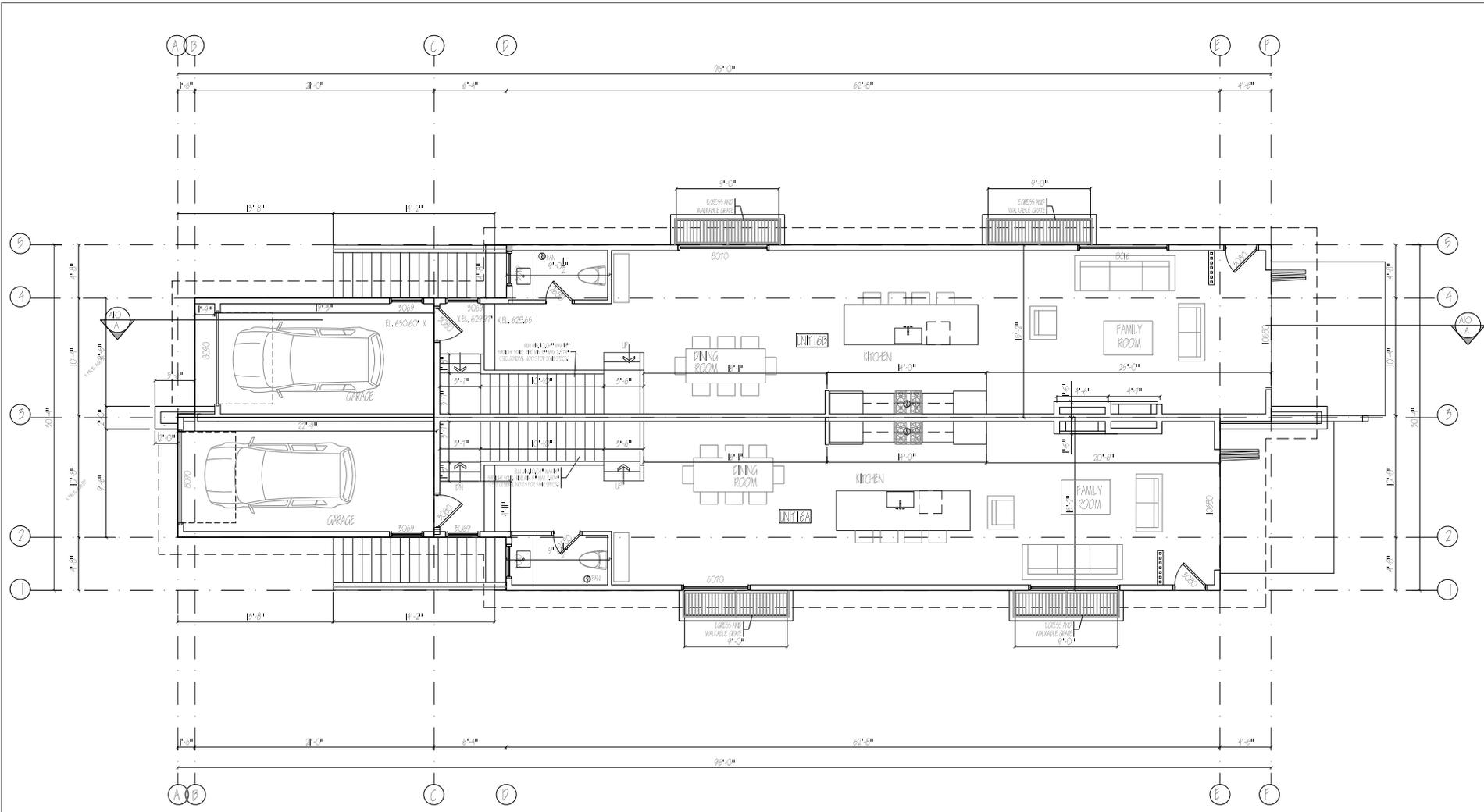
REVISIONS	NO.	DESCRIPTION	DATE
	1	SUBMITTED PERMITS	MAR 6, 2024

PROPOSED FOR:
GLENMORE DUPLEX
 LOT B
 16A and 16B Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 BASEMENT LEVEL

DATE:	08/08/2023
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.12



PROPOSED MAIN FLOOR
 UNIT 16A
 AREA: 1,018 SQ.FT.
 PLUS GARAGE: 236 SQ.FT.
 UNIT 16B
 AREA: 1,086 SQ.FT.
 PLUS GARAGE: 222 SQ.FT.
 TOTAL FLOOR AREA: 2,561 SQ.FT.

STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clyde Avenue
 West Vancouver, B.C. V8V 1G5
 www.spd@sterlingpacific.com

NOTE:
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 B.C. BUILDING CODE
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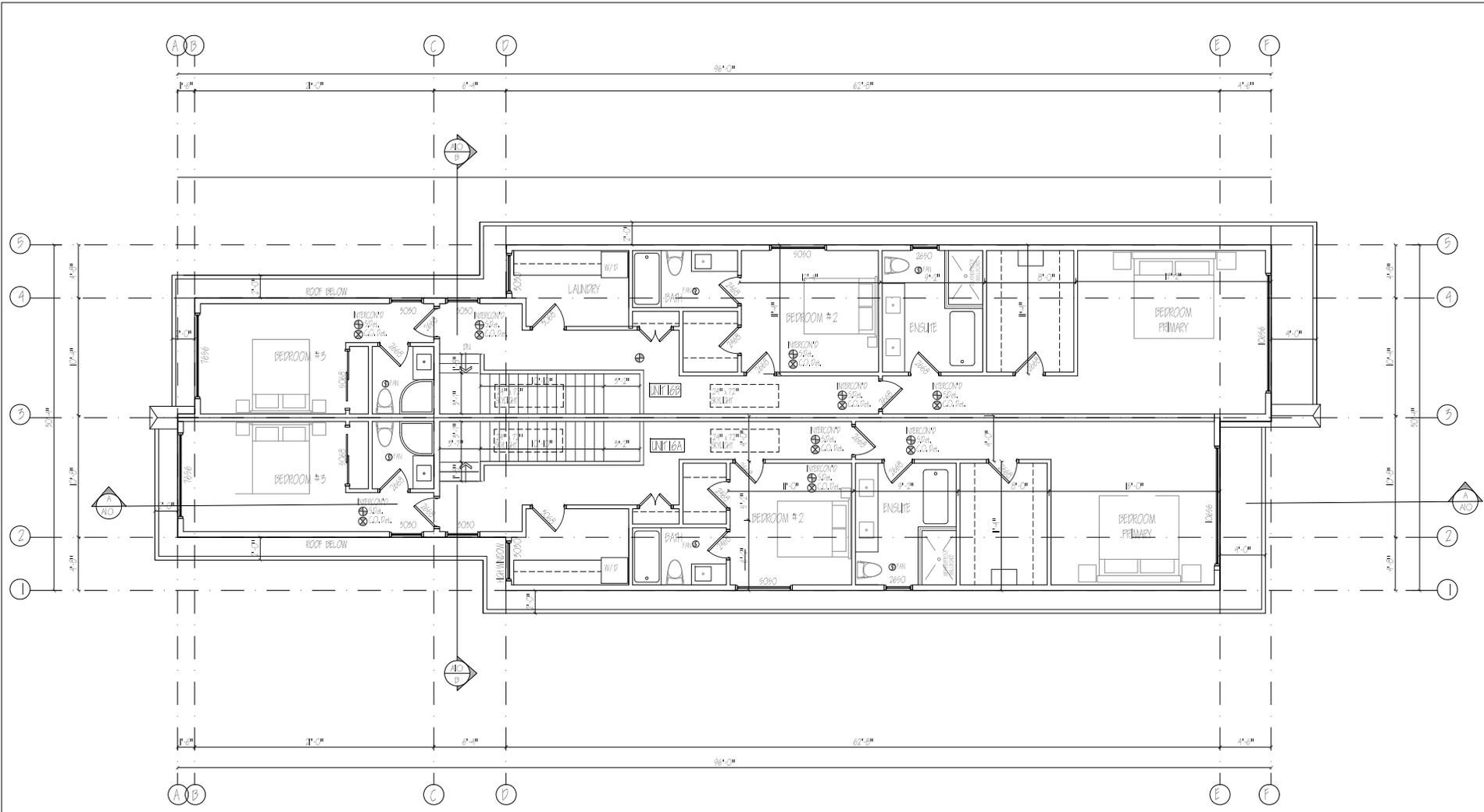
REVISIONS	NO.	DESCRIPTION	DATE
	1	REVISED LINES	MAR 6, 2021

PROPOSED FOR:
GLENMORE DUPLEX
 16A and 16B Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 MAIN FLOOR

DATE:	02/08/21
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.13



PROPOSED SECOND FLOOR	
UNIT 16A	
AREA:	1,252 SQFT
UNIT 16B	
AREA:	1,410 SQFT
TOTAL AREA:	2,662 SQFT

STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clyde Avenue
 West Vancouver, BC V8V 1G5
 778.322.8840
 www.sterlingpacific.com

NOTE:
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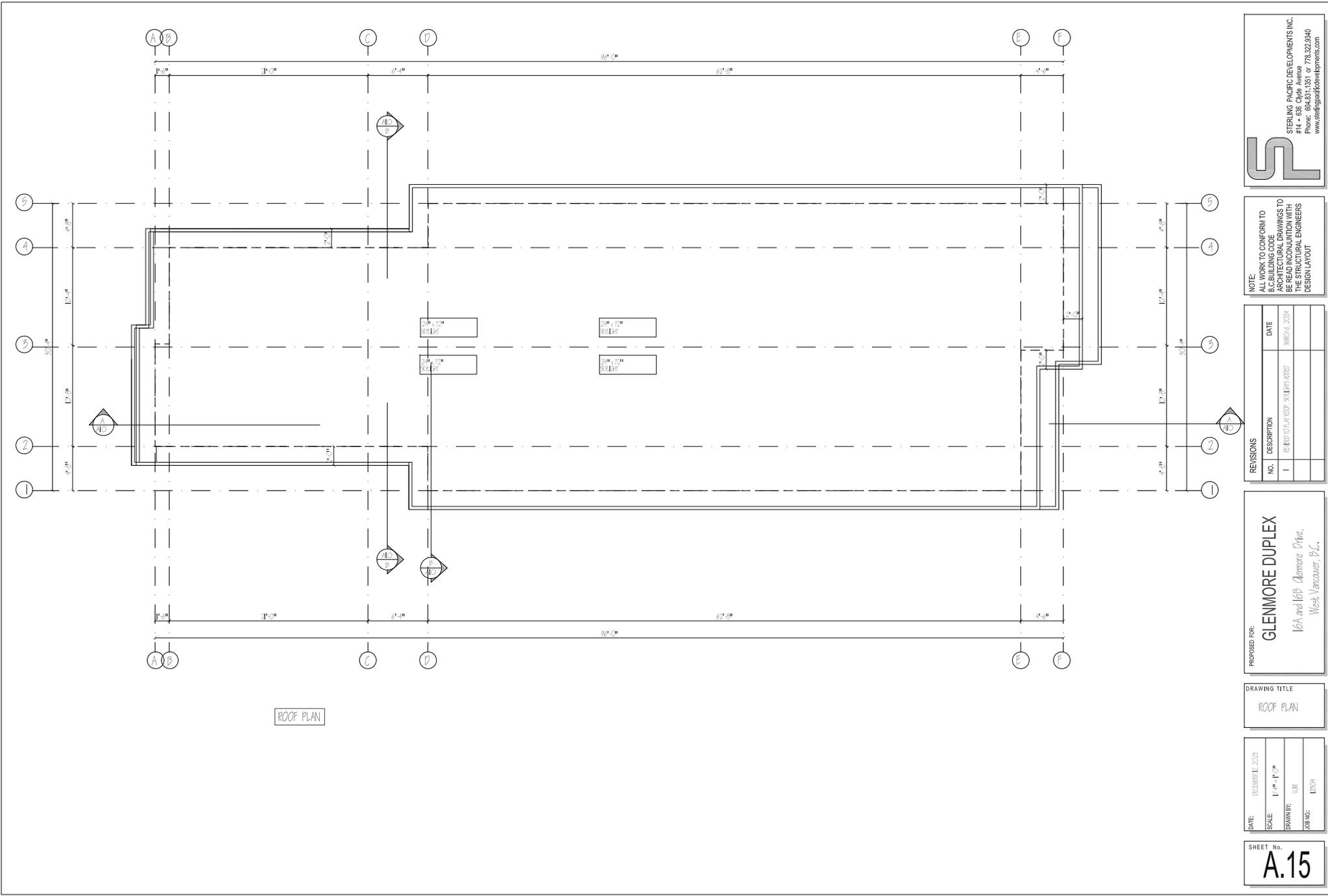
REVISIONS	NO.	DESCRIPTION	DATE
	1	18-11-27 (16A) (16B) 5th (16A) (16B)	11/27/16

PROPOSED FOR:
GLENMORE DUPLEX
 16A and 16B Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
SECOND FLOOR

DATE:	08/11/2016
SCALE:	1/4" = 1'-0"
DRAWN BY:	V.M.
CHECKED BY:	EPD

SHEET No.
A.14



ROOF PLAN

STERLING PACIFIC DEVELOPMENTS INC.
 #4 - 636 Clegg Avenue
 West Vancouver, BC V8V 1G5
 www.sterlingpacific.com

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 THE STRUCTURAL ENGINEERS
 DESIGN LAYOUT

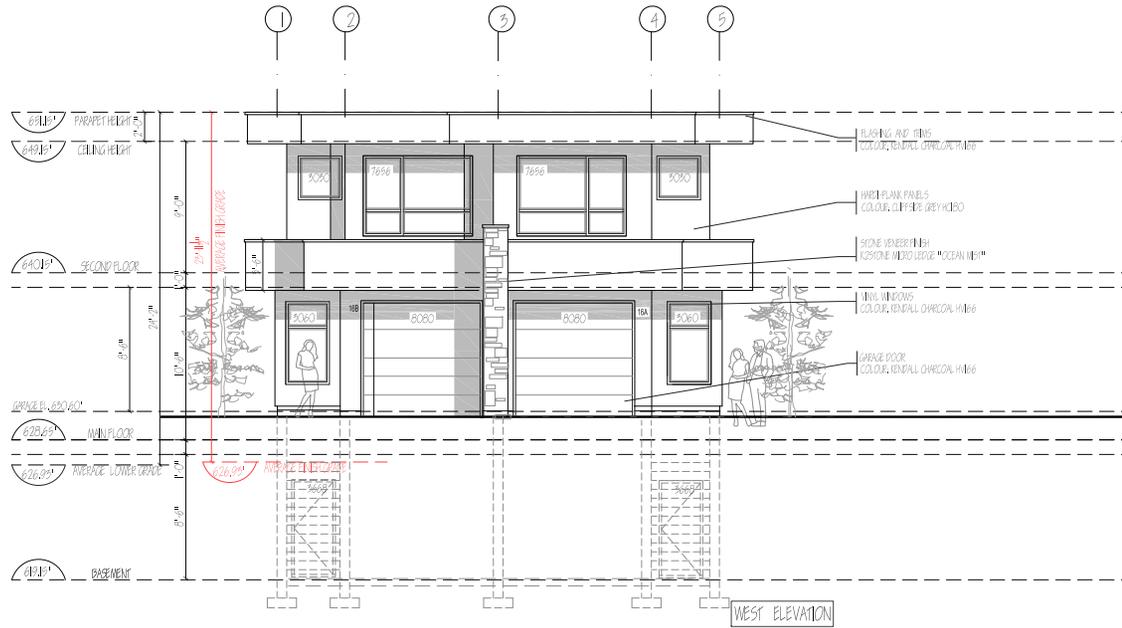
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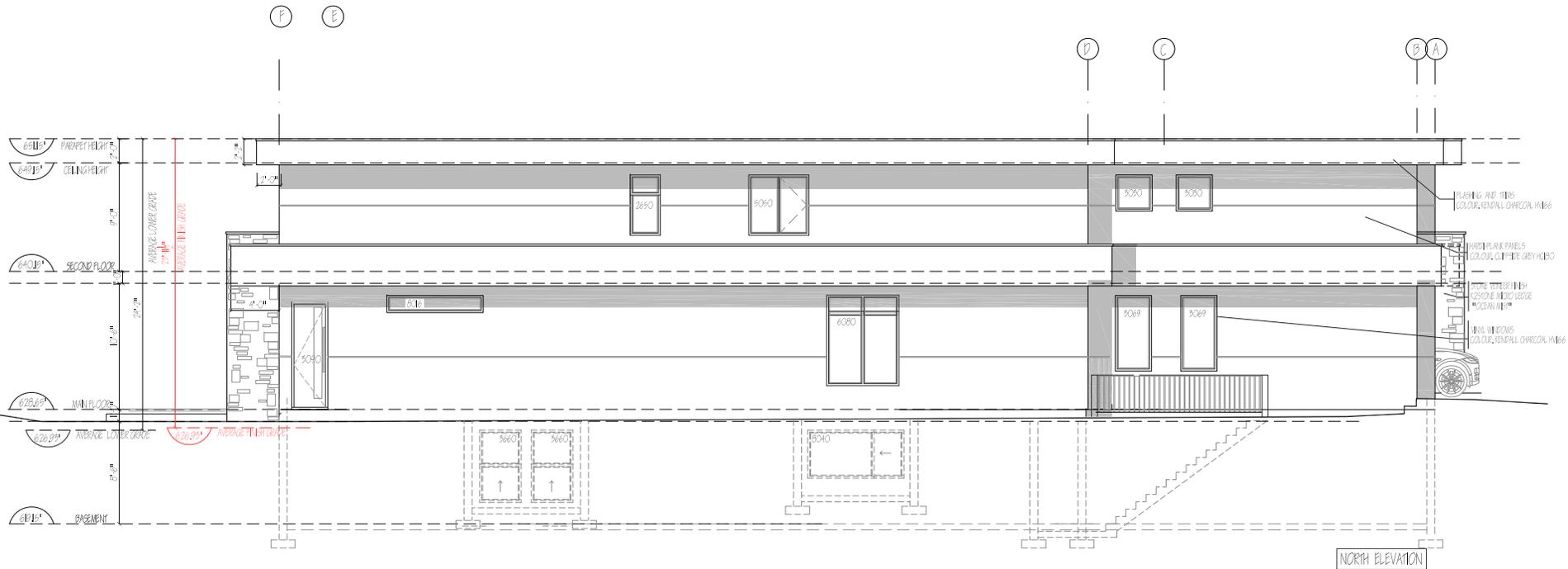
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DATE:	02/08/2018
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.15



WEST ELEVATION



NORTH ELEVATION

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DRAWING TITLE
 NORTH AND WEST
 ELEVATIONS

DATE:	02/08/2021
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.16



West Elevation
16 Glenmore Drive



North Elevation
16 Glenmore Drive

EXTERIOR FINISHES

EXTERIOR SIDING
FINISH: HARD SIDING SMOOTH FINISH
COLOUR: GREENBRIER BEIGE HC79



MASONRY
TYPE: K2STONE
COLOUR: OCEAN MIST MICRO LEDGE



WINDOWS/FRAMES:
TYPE: VINYL
COLOUR: KENDALL CHARCOAL



SOFFITS:
TYPE: CEDAR
COLOUR: NATURAL



TRIM:
FINISH: METAL
COLOUR: KENDALL CHARCOAL HV166



SOFFIT LIGHTING:
TYPE: LED POT LIGHT
WARM WHITE
COLOUR: BLACK TRIM



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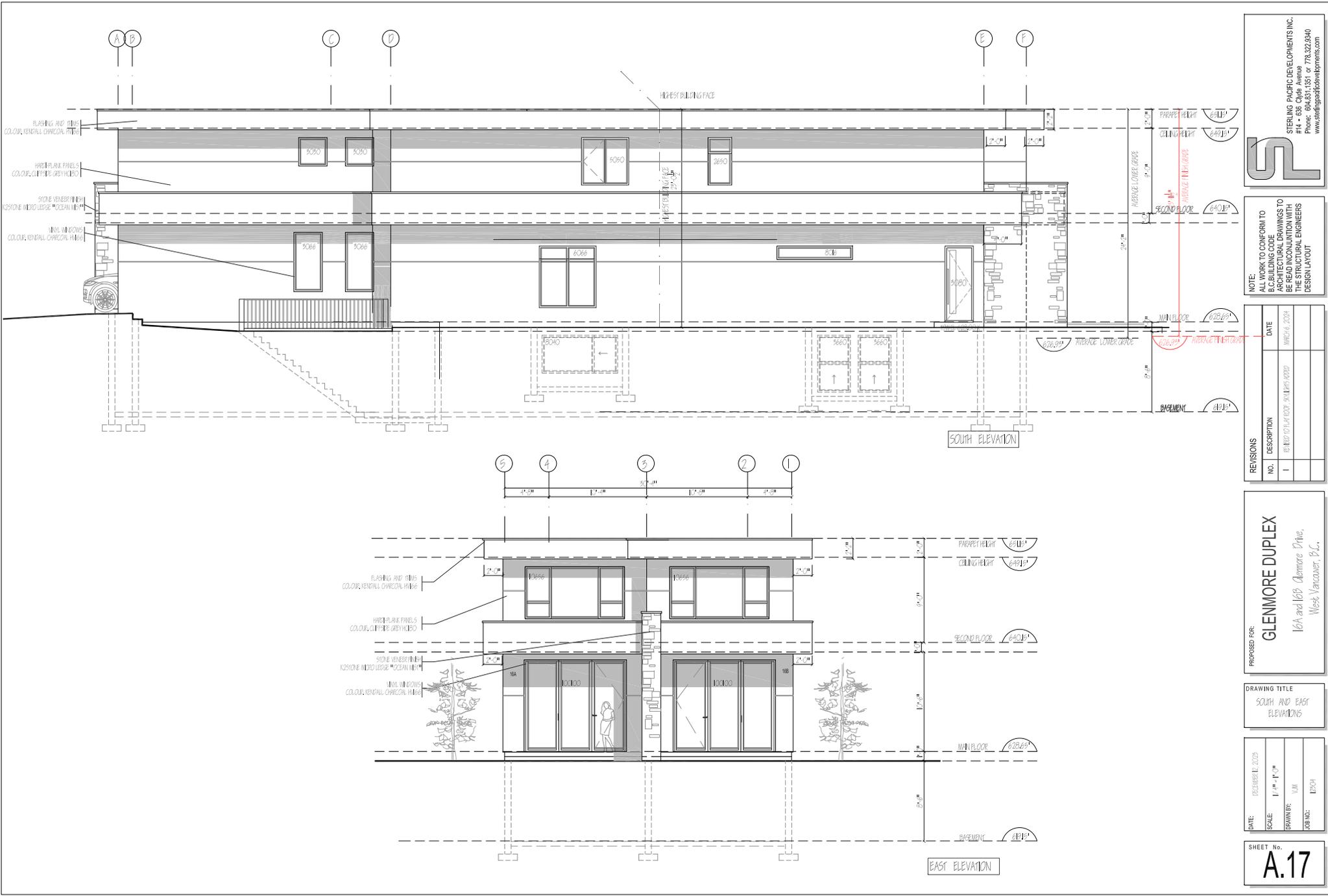
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PROPOSED FOR:
GLENMORE DUPLEX
16A and 16B Glenmore Drive,
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DRAWING TITLE
NORTH AND WEST
ELEVATION RENDERINGS

DATE:	SCALE: 1/4" = 1'-0"
DRAWN BY: VJM	CHECKED: EPOH

SHEET No.
A.16b



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	1	ISSUED FOR PERMIT	MAR 16, 2024

PROPOSED FOR:
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 16A and 16B Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 SOUTH AND EAST
 ELEVATIONS

DATE:	02/08/2024
SCALE:	1/4" = 1'-0"
DRAWN BY:	Y.M.
CHECKED BY:	Y.M.

SHEET No.
A.17



South Elevation
16 Glenmore Drive



East Elevation
16 Glenmore Drive

EXTERIOR FINISHES

EXTERIOR SIDING

FINISH: HARD SIDING SMOOTH FINISH
COLOUR: GREENBRIER BEIGE HC79



MASONRY

TYPE: K2STONE
COLOUR: OCEAN MIST MICRO LEDGE



WINDOWS/FRAMES:

TYPE: VINYL
COLOUR: KENDALL CHARCOAL



SOFFITS:

TYPE: CEDAR
COLOUR: NATURAL



TRIM:

FINISH: METAL
COLOUR: KENDALL CHARCOAL HV166



SOFFIT LIGHTING:

TYPE: LED POT LIGHT
WARM WHITE
COLOUR: BLACK TRIM



51M.

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REVISIONS	NO.	DESCRIPTION	DATE
			APPROVE GRADE
	1	ISSUED FOR PERMITS	

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GLENMORE DUPLEX
16A and 16B Glenmore Drive,
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DRAWING TITLE
SOUTH AND EAST
ELEVATION RENDERINGS

DATE:	SCALE: 1/4" = 1'-0"
DRAWN BY: VJM	JOB NO: 1704

SHEET No.
A.17b

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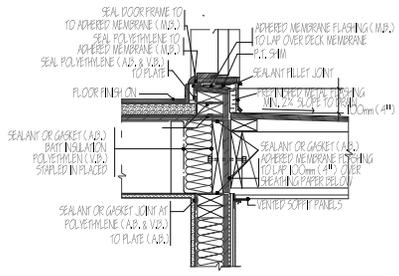
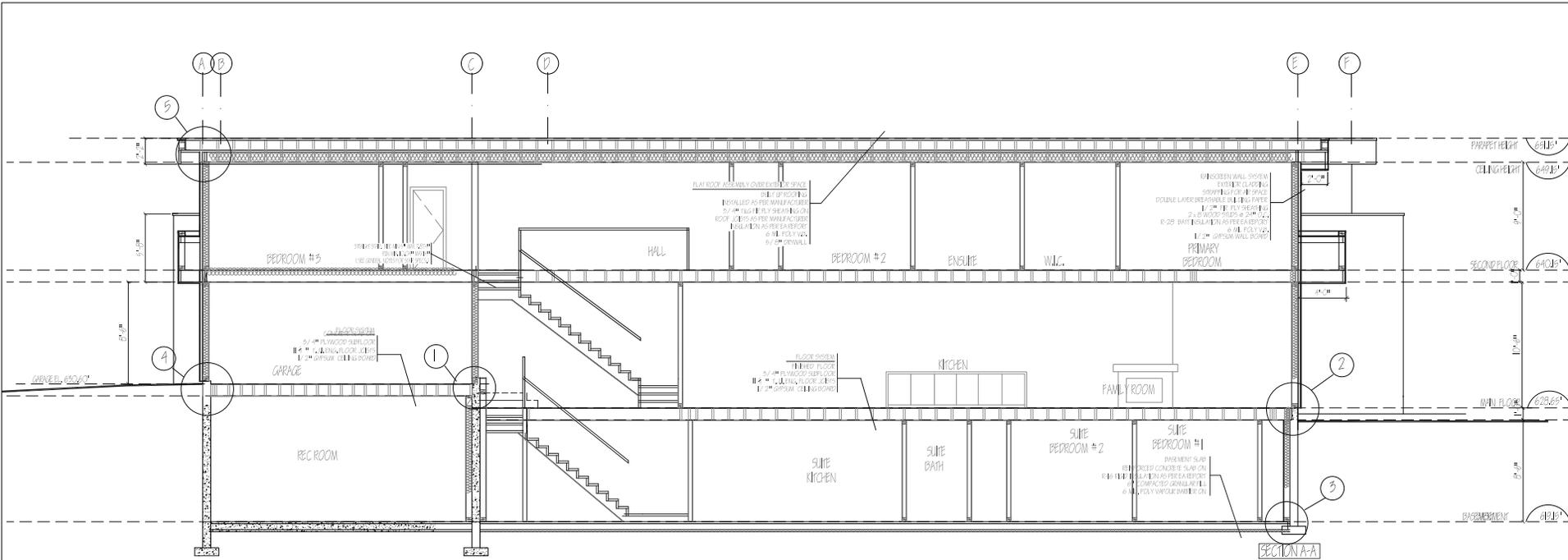
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GLENMORE DUPLEX
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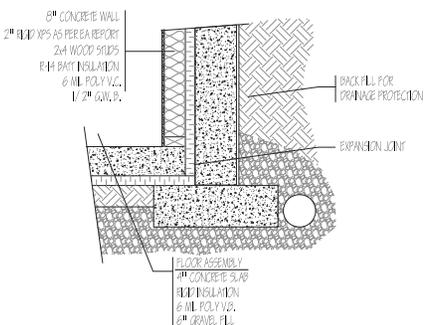
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JOB NO.:	17034

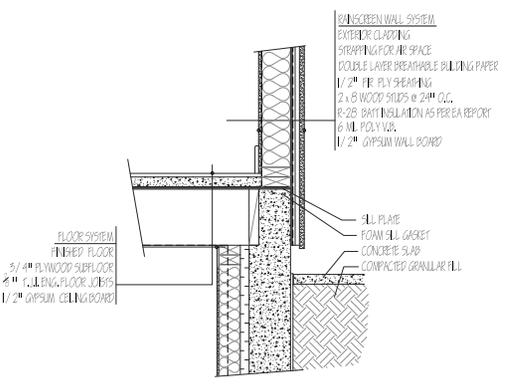
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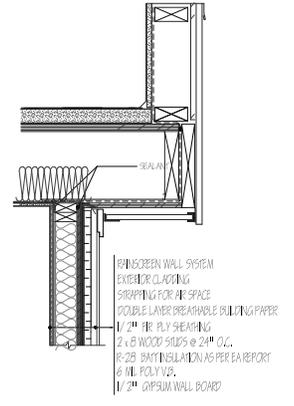
DOOR SILL AT DECK ①



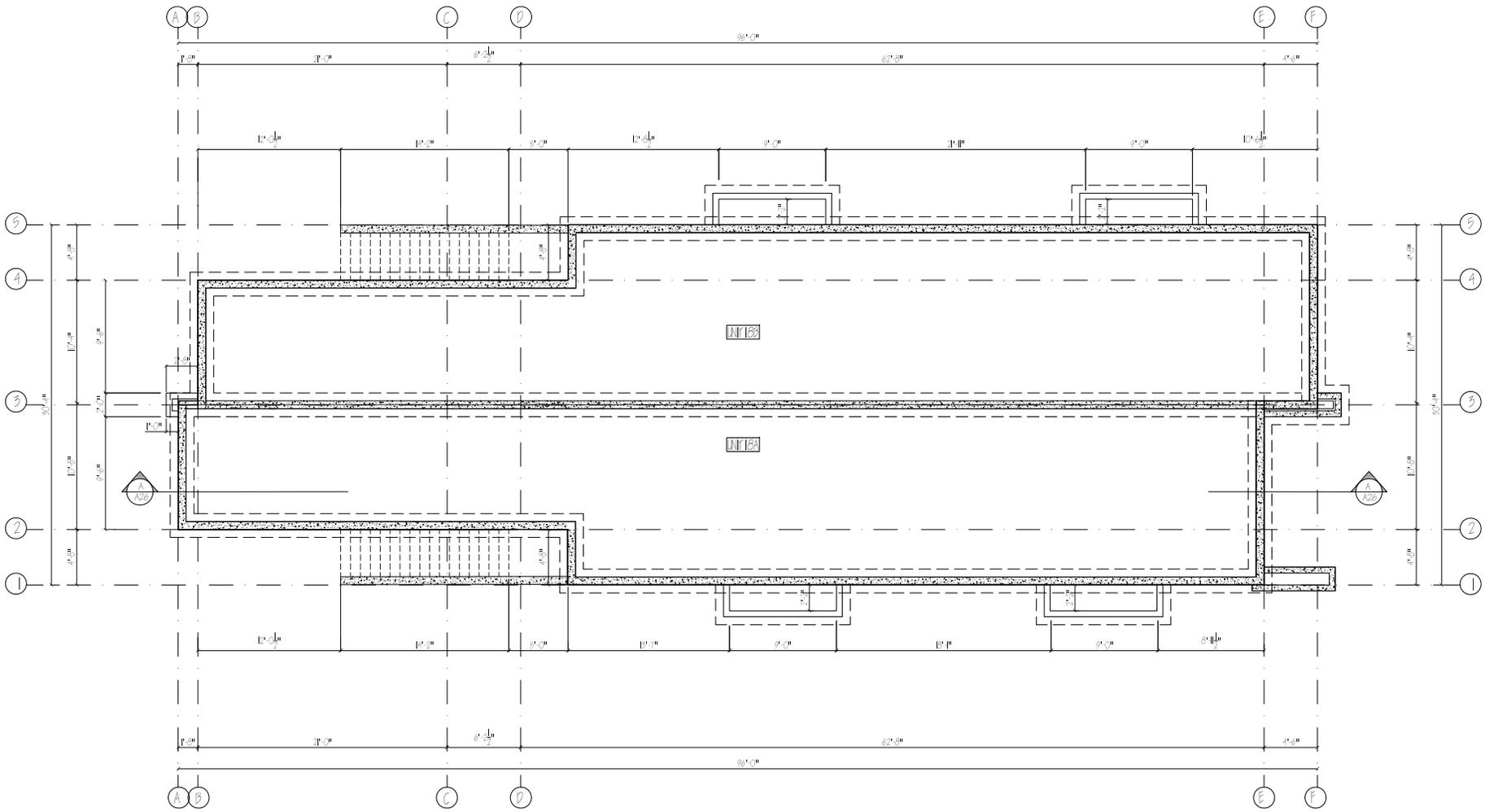
FOUNDATION DETAIL ②



FLOOR DETAIL ③



TYPICAL FLAT ROOF ④



SHEET No.
A.19

DATE: 08/08/11, 2010
SCALE: 1/4" = 1'-0"
DRAWN BY: V.M.
JOB NO: 1704

DRAWING TITLE
FOUNDATION PLAN

PROPOSED FOR:
GLENMORE DUPLEX
18A and 18B Glenmore Drive,
West Vancouver, B.C.

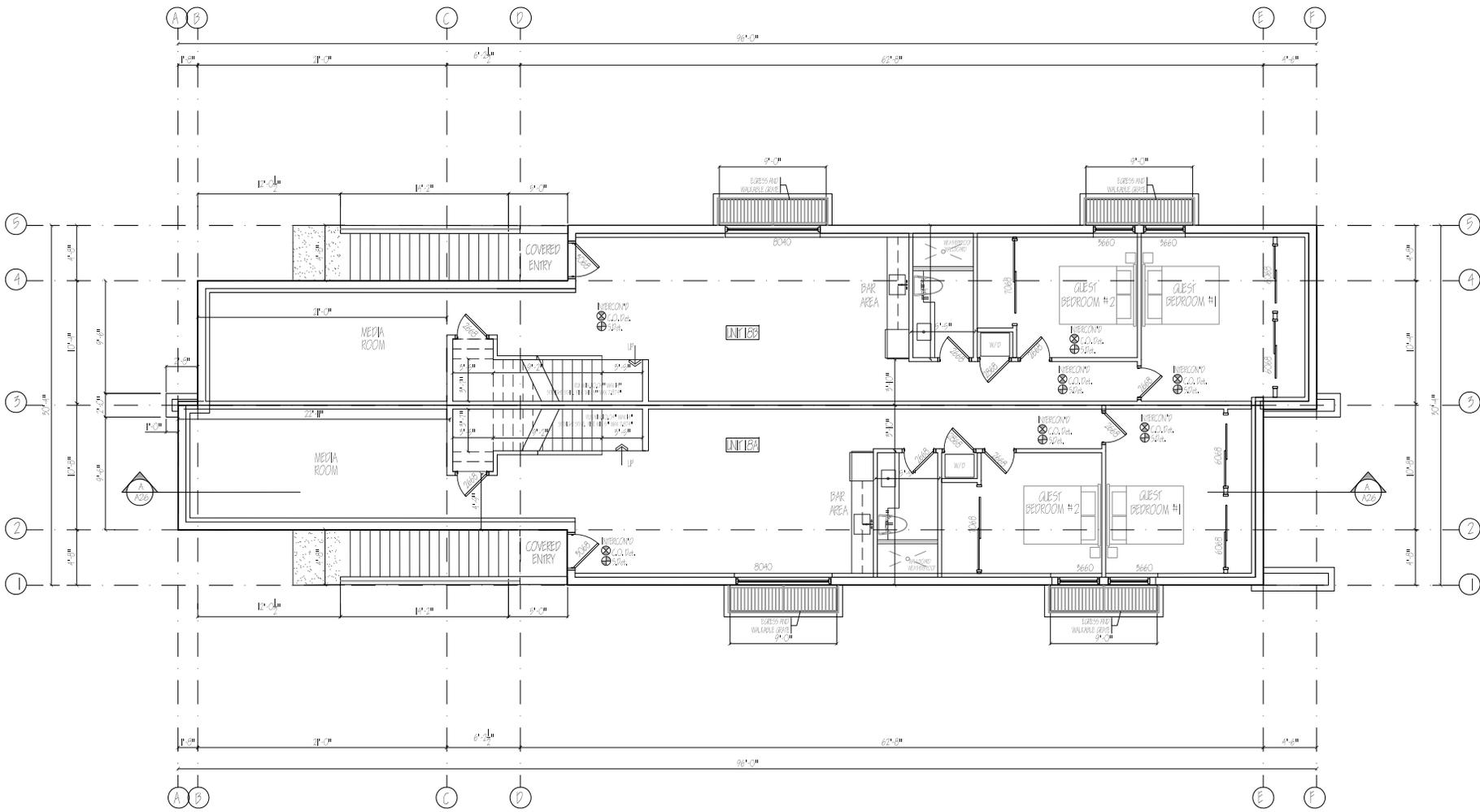
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PROPOSED BASEMENT LEVEL
 UNIT 13A
 AREA, 1,254 SQFT
 UNIT 13B
 AREA, 1,306 SQFT
 TOTAL FLOOR AREA, 2,560 SQFT.



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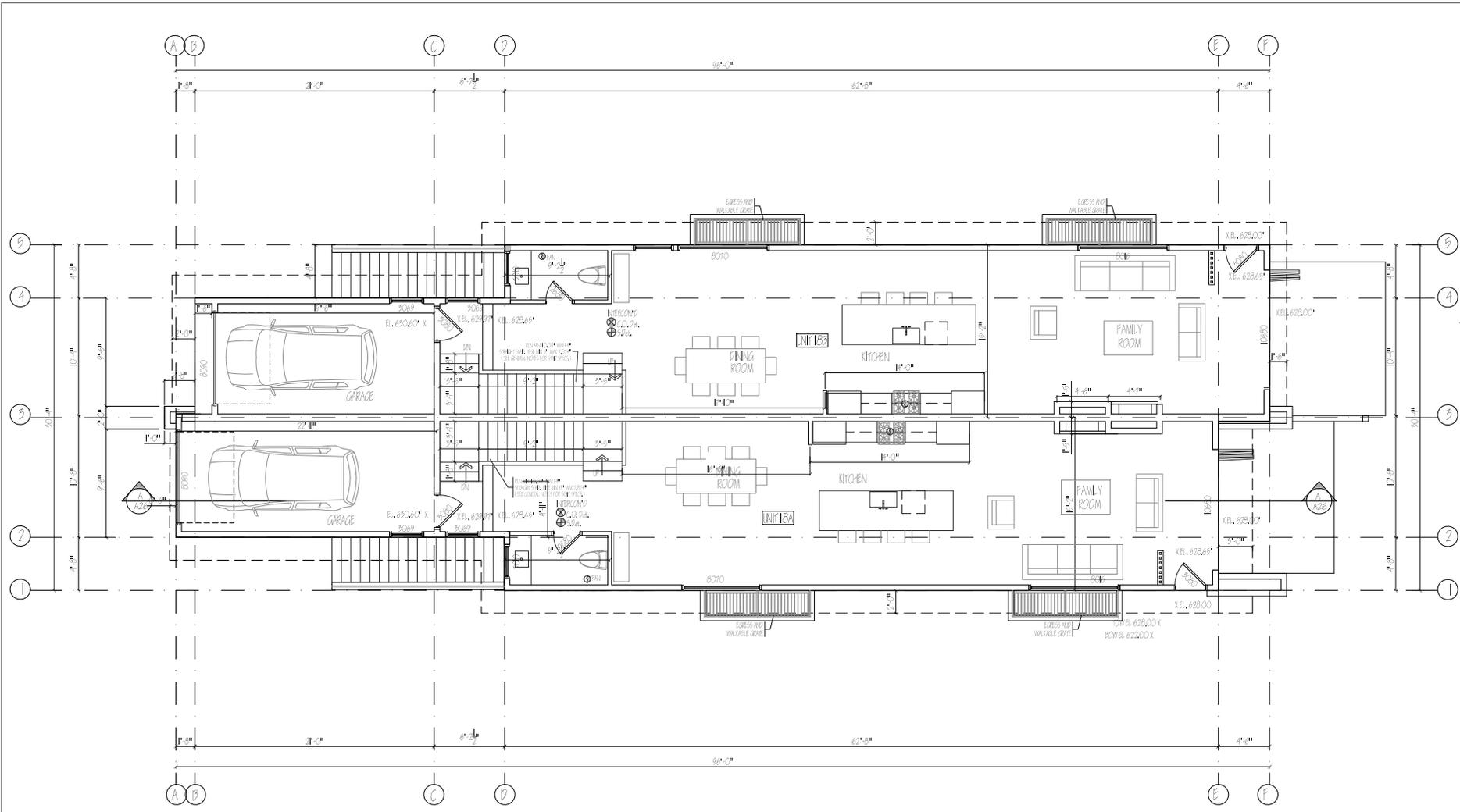
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	1	SHE TRACED / FINISHED	MAR 16, 2021

PROPOSED FOR:
GLENMORE DUPLEX
 13A and 13B Glenmore Drive,
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DRAWING TITLE
 BASEMENT LEVEL

DATE:	02/28/2021
SCALE:	1/4" = 1'-0"
DRAWN BY:	V.M.
CHECKED BY:	EPCH

SHEET No.
A.20



PROPOSED MAIN FLOOR
 UNIT 18A
 AREA: 1,019 SQ.FT.
 PLUS GARAGE: 241 SQ.FT.
 UNIT 18B
 AREA: 1,083 SQ.FT.
 PLUS GARAGE: 223 SQ.FT.
 TOTAL FLOOR AREA: 2,560 SQ.FT.



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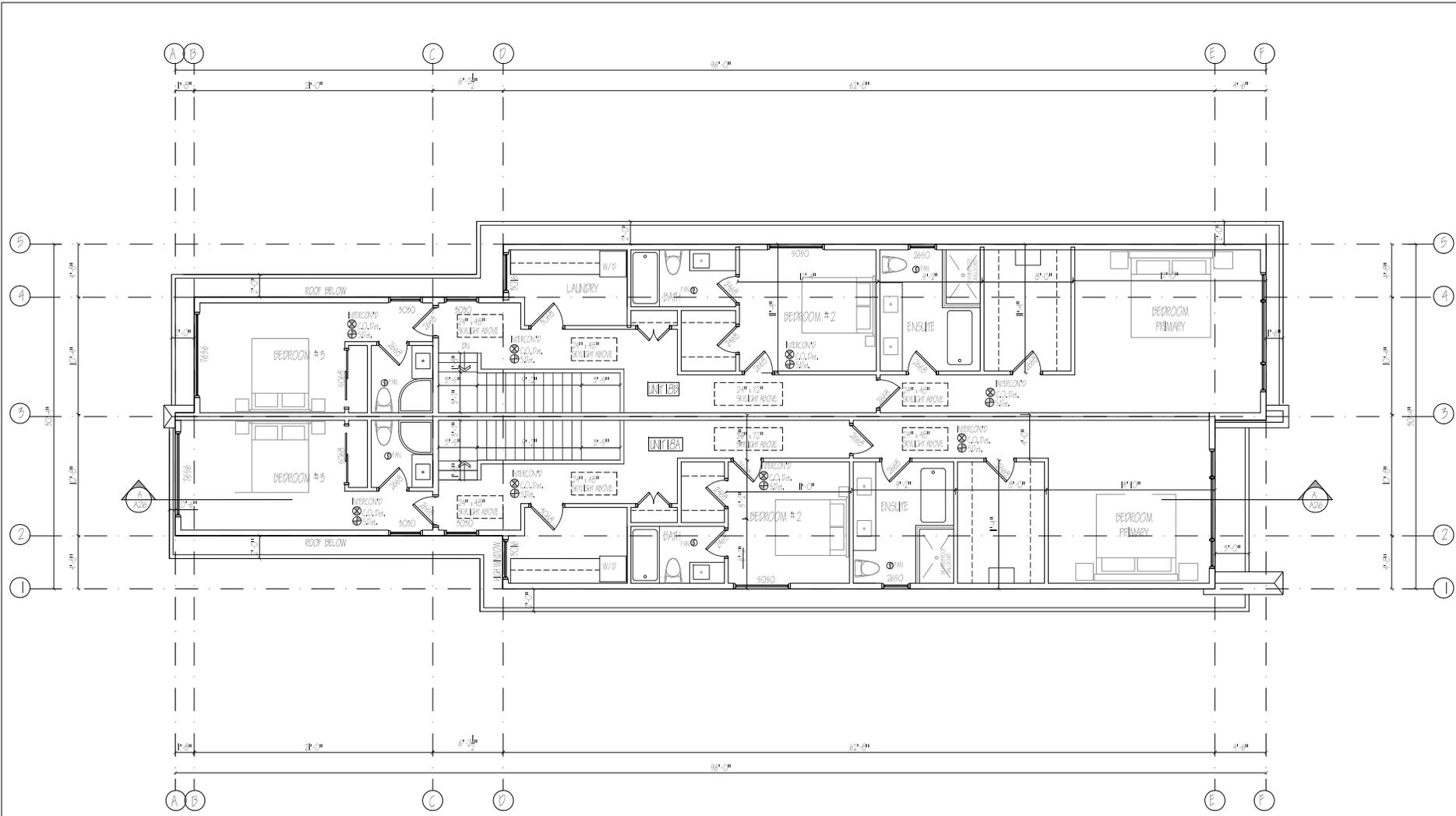
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	1	SEE REVISIONS LIST	MAR 06, 2021

PROPOSED FOR:
GLENMORE DUPLEX
 18A and 18B Glenmore Drive,
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DRAWING TITLE
 MAIN FLOOR

DATE:	02/08/21
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPH

SHEET No.
A.21



PROPOSED SECOND FLOOR	
UNIT 18A	
AREA:	1,254 SQFT
UNIT 18B	
AREA:	1,306 SQFT
TOTAL AREA:	2,560 SQFT



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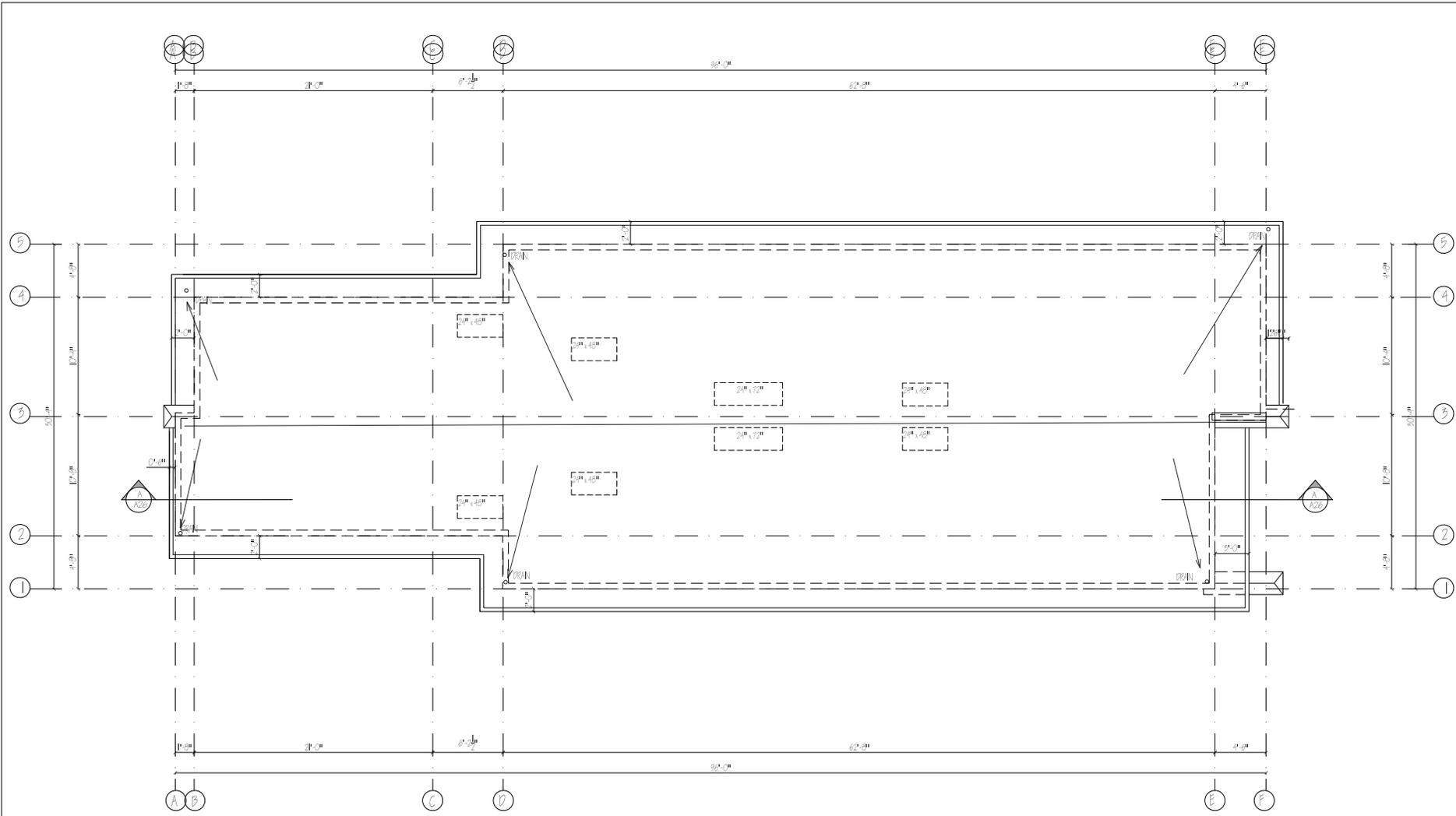
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PROPOSED FOR:
GLENMORE DUPLEX
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DRAWING TITLE
 SECOND FLOOR

DATE:	DECEMBER 11, 2020
SCALE:	1/8" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPD

SHEET No.
A.22



ROOF PLAN

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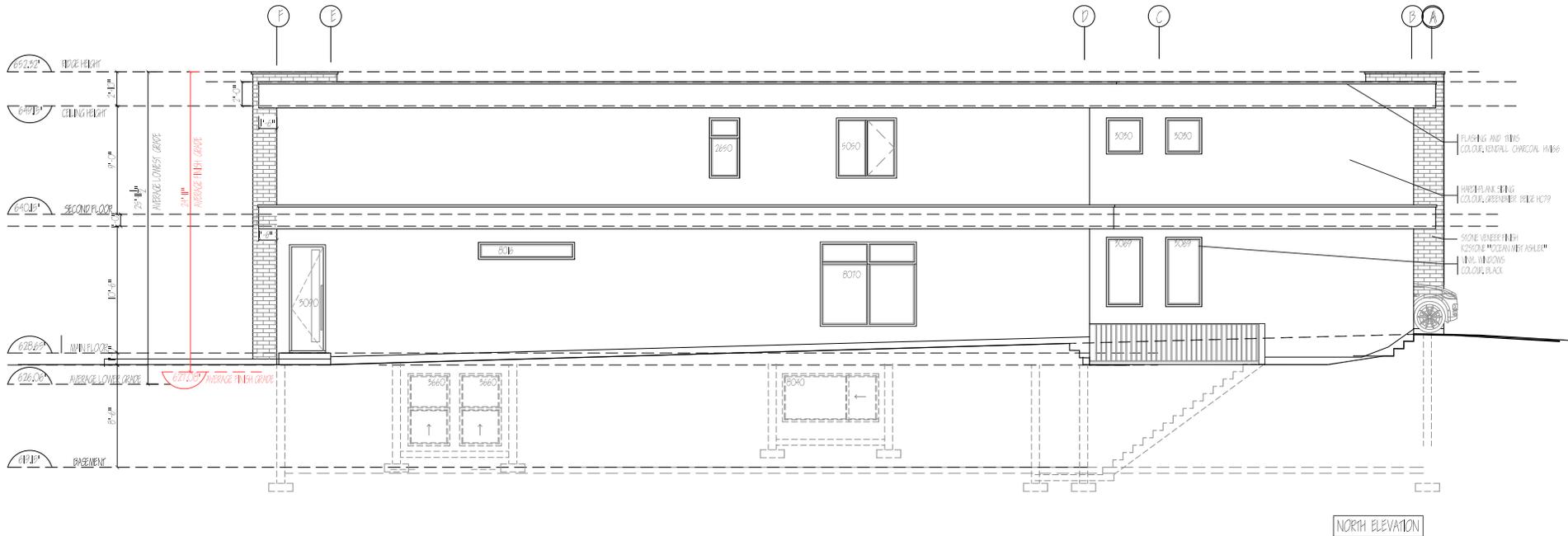
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	1	SUBMITTED PERMITS	MAR 6, 2021

PROPOSED FOR:
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 West Vancouver, B.C.

DRAWING TITLE
 ROOF PLAN

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A.23



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	1	SUBMITTED FOR PERMITS	MAY 16, 2024

PROPOSED FOR:
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 18A and 18B Glenmore Drive,
 West Vancouver, B.C.

DRAWING TITLE
 NORTH AND WEST
 ELEVATIONS

DATE:	DECEMBER 11, 2023
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.24



West Elevation
18 Glenmore Drive



North Elevation
18 Glenmore Drive

EXTERIOR FINISHES

STUCCO
FINISH: SMOOTH FINISH
COLOUR: GREENBRIER BEIGE HC79



MASONRY
TYPE: K2STONE
COLOUR: OCEAN MIST ASHLER



WINDOWS/FRAMES:
TYPE: VINYL
COLOUR: BLACK



SOFFITS:
TYPE: CEDAR
COLOUR: NATURAL



TRIM:
FINISH: METAL
COLOUR: KENDALL CHARCOAL HW166



SOFFIT LIGHTING:
TYPE: LED POT LIGHT
WARM WHITE
COLOUR: BLACK TRIM



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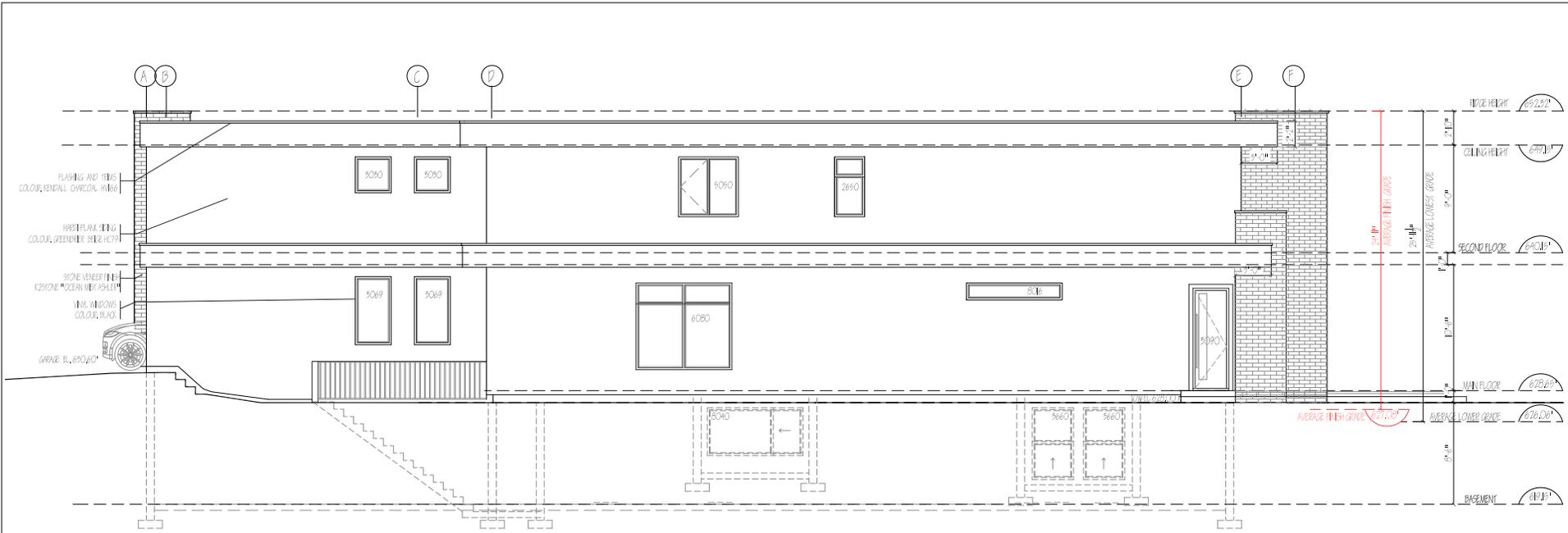
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GLENMORE DUPLEX
18A and 18B Glenmore Drive,
West Vancouver, B.C.

DRAWING TITLE
NORTH AND WEST
ELEVATIONS

DATE:	SEPTEMBER 20, 2023
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPCH

SHEET No.
A.24b



SOUTH ELEVATION



EAST ELEVATION

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	1	SUBMITTED PERMITS	MAR 6, 2021

PROPOSED FOR:
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 West Vancouver, B.C.

DRAWING TITLE
 SOUTH AND EAST
 ELEVATIONS

DATE:	DECEMBER 11, 2020
SCALE:	1/4" = 1'-0"
DRAWN BY:	V.M.
JOB NO.:	1704

SHEET No.
A.25



South Elevation
18 Glenmore



East Elevation
18 Glenmore

EXTERIOR FINISHES

STUCCO
FINISH: SMOOTH FINISH
COLOUR: GREENBRIER BEIGE HC79



MASONRY
TYPE: K2STONE
COLOUR: OCEAN MIST ASHLER



WINDOWS/FRAMES:
TYPE: VINYL
COLOUR: BLACK



SOFFITS:
TYPE: CEDAR
COLOUR: NATURAL



TRIM:
FINISH: METAL
COLOUR: KENDALL CHARCOAL HW166



SOFFIT LIGHTING:
TYPE: LED POT LIGHT
WARM WHITE
COLOUR: BLACK TRIM



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SOUTH AND EAST
ELEVATIONS

DATE:	SEPTEMBER 20, 2023
SCALE:	1/4" = 1'-0"
DRAWN BY:	VJM
CHECKED BY:	EPD

SHEET No.
A.25b



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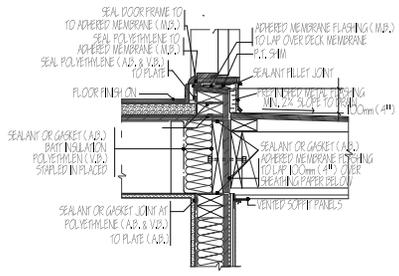
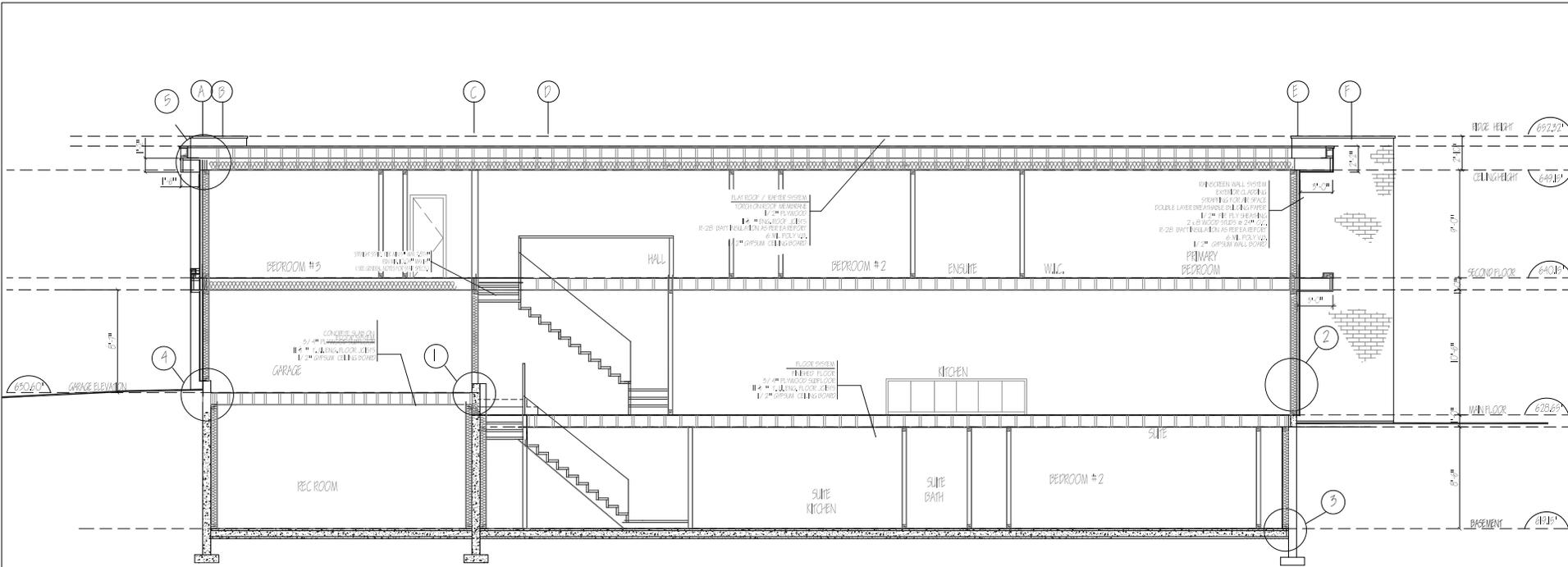
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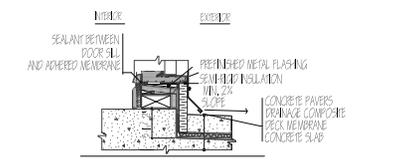
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 SECTIONS AND DETAILS

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CHECKED BY:	EPD

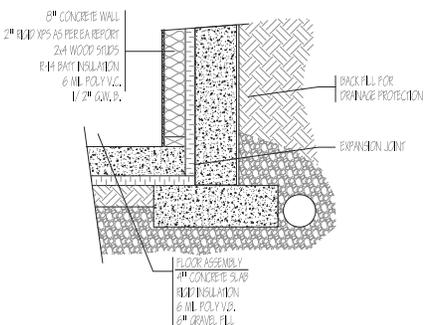
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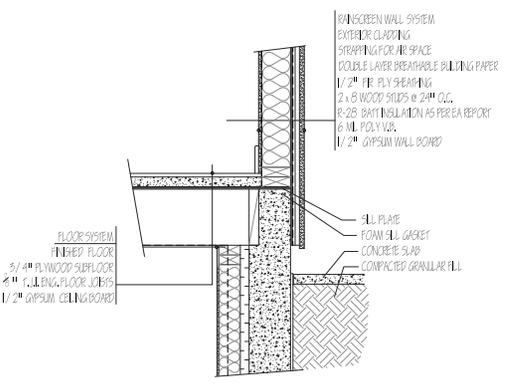
DOOR SILL AT DECK ①



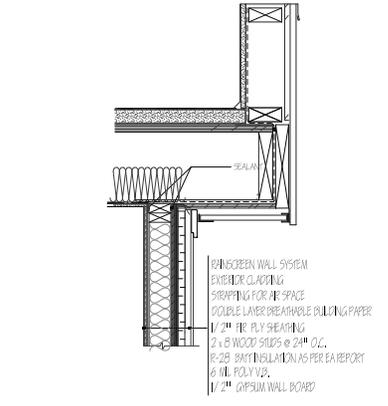
BASE WALL AT DOOR SILL ②



FOUNDATION DETAIL ③



FLOOR DETAIL ④



TYPICAL FLAT ROOF ⑤

Wildfire Hazard DP Area Assessment Report

14 Glenmore Drive
West Vancouver, BC

October 3, 2023



Submitted to:

Jamie Harper
Sterling Pacific Developments
harps.jamie@gmail.com

778.322.9340



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The following Diamond Head Consulting staff conducted the assessment and prepared or reviewed the report.

All general and professional liability insurance and staff accreditations are provided below for reference.

Author:



Riley Spear
ISA Certified Arborist (PN-9691A)
ISA Tree Risk Assessment Qualified (TRAQ)
Forester in Training

Reviewer:



Conor Corbett MSFM
Registered Professional Forester
ISA Certified Arborist (PN-8429A)
ISA Tree Risk Assessment Qualified (TRAQ)
BC Wildlife and Danger Tree Assessor (P2722)

Please contact us if there are any questions or concerns about the contents of this report.

Contact Information:

Phone: 604-733-4886
Fax: 604-733-4879
Email: conor@diamondheadconsulting.com
Website: www.diamondheadconsulting.com

Insurance Information:

WCB: # 657906 AQ (003)
General Liability: Northbridge General Insurance Corporation - Policy #CBC1935506, \$10,000,000
Errors and Omissions: Lloyds Underwriters – Policy #1010615D, \$1,000,000

Summary of Report

- The nearest intact forest edge is approximately 50m to the east of the proposed new buildings. This forest was assessed to have a **moderate wildfire fuel threat** rating applying methods from the 2020 Wildfire Threat Assessment Guide and Worksheets¹.
- Future structural hazard of the proposed development using the FireSmart Homeowners Manual² found the new development would likely have a **low overall wildfire hazard score** if the recommendations for building and landscaping are followed.
- Landscaping requirements from within this report must be followed. Ensure that no conifer species or long grasses with a mature height greater than 30cm are installed in new landscaping. This includes hedges of cedar, cypress, or yew species. No combustible materials, including fencing and decks, are permitted within 1.5m of the structure.
- Ensure the exterior building materials including roofs and decks are ignition resistant or non-combustible and meet the requirements from within this report. “Ignition-resistant” and “non-combustible” have the same meaning as in the most recent edition of the National Fire Protection Association (NFPA) 1144 standard.

¹ Ministry of Forests, Lands, Natural Resource Operations, and Rural Development BC, BC Wildfire Service. 2020, June 4. 2020 Wildfire Threat Assessment Guide and Worksheets (version 4). Available at: <https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/fire-fuel-management/fuels-management/2020-wildfire-threat-assesment-guide-final.pdf>

² Partners in Protection Association. 2019. FireSmart Begins at Home Manual. Available at: https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/prevention-home-community/bcws_homeowner_firesmart_manual.pdf

1.0 Introduction

Diamond Head Consulting Ltd. (DHC) was retained to prepare an assessment of wildfire interface risks and mitigation measures for the proposed development at 14 Glenmore Drive in West Vancouver, BC. This project includes one residential lot located within the District of West (DWV) Vancouver Wildfire Hazard Development Permit Area. The overall objective of this report is to assess the potential wildfire hazard and provide recommendations and tools to reduce this threat to the development site. This 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. Specific goals for this assessment are:

- To assess and describe fuels by strata (surface, ladder, and crown), type (FBP), composition, quantity, and distribution.
- To provide an assessment for the proposed development based on adjacent fuels, building design and materials, landscaping, setbacks, and site-specific concerns.
- To discuss factors that contribute to wildfire hazard.
- To provide photographs, mapping, and plans as needed to show vegetation, proposed site changes, and current site conditions.

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:

- Site Plan for 14 Glenmore Drive, West Vancouver. August 18, 2023. Sterling Pacific Developments Inc.

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 District’s Wildfire Hazard Report Requirements were developed based on the recommendations of the Community Wildfire Protection Plan. The objective of the guidelines, described in Schedule II of the Official Community Plan, is to proactively minimize the risk from wildfire. Guidelines are provided for buildings and structures and landscaping to reduce wildfire risk. This assessment report considers both NFPA standards and Canadian FireSmart standards to assess fire hazard in the surrounding forests and guide recommendations for the design and construction of buildings and accessory structures. Recommendations in this report translate the OCP guidelines into standards tailored to the development site that will achieve the purposes of the DPA to the extent practicable. No home in the interface can be completely free of risk. The application of the DP guidelines will reduce risk relative to standard development patterns.



Figure 1. Location of the subject site – 14 Glenmore Drive

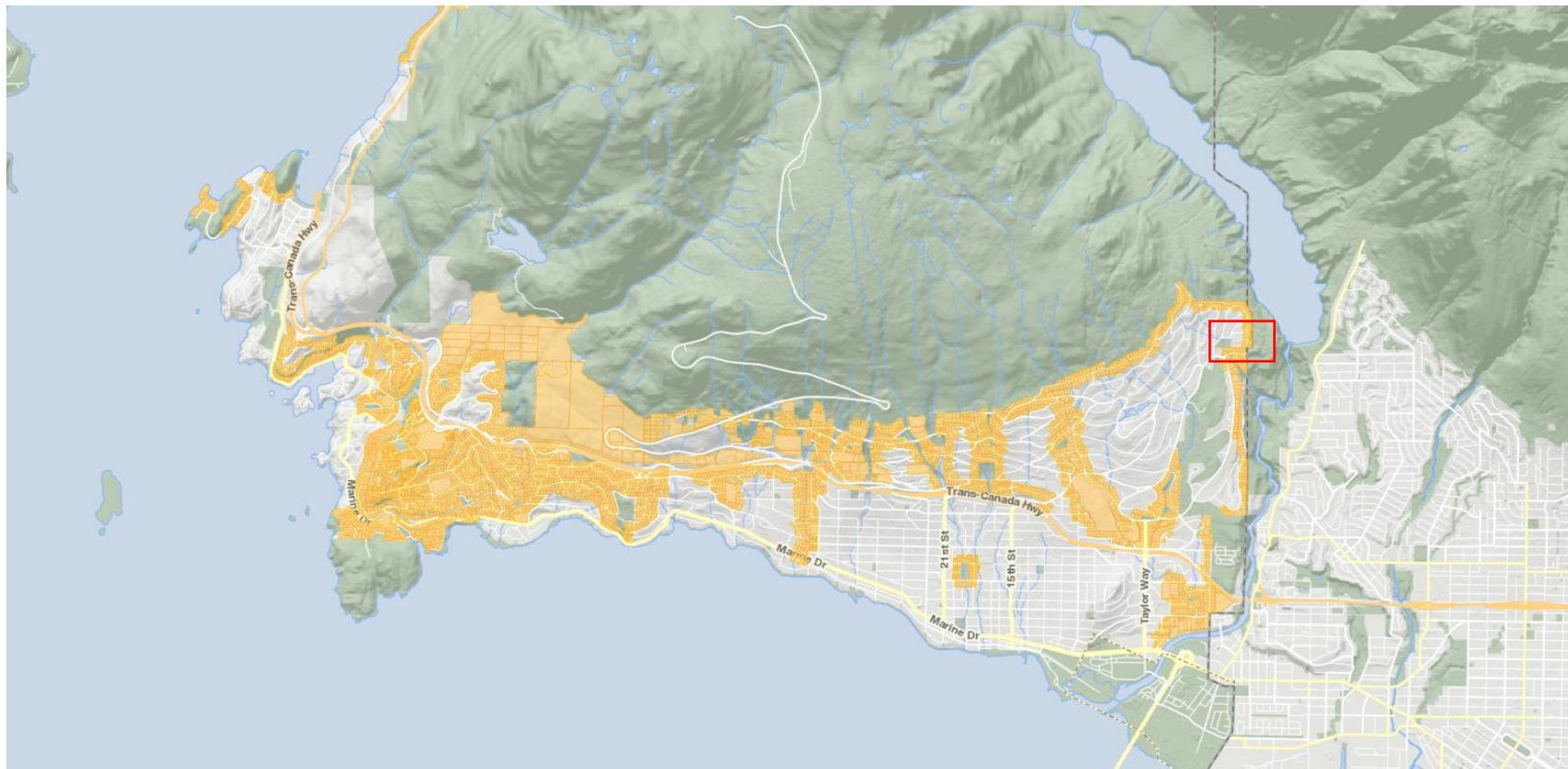


Figure 2. Development Permit Areas (Wildfire) as defined by the District of West Vancouver. Approximate site location indicated in red.

2.0 Methodology

This project falls within the DWV Wildfire Hazard Development Permit Wildfire Interface Area. There are native forests that exist about 50 metres east of the site. These natural forest areas have been assessed for wildfire fuel threat and the forest fuels have been classified. The site has been classified according to the Canadian Fire Behaviour Prediction System to the fuel type that best represents the fire behavior potential of the forest types. Generic descriptions of the CFBPS fuel types found in coastal British Columbia are provided in Appendix 3.

Detailed fuel hazard assessments were completed within 100m of the lot using the provincial assessment system, 2020 Wildfire Threat Assessment Guide and Worksheets³. The location of assessment plots is shown in Figure 4 and Figure 5. 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
- Quantity and distribution of ground fuels by size class.

A Wildfire Hazard Assessment has been completed using:

1. Current forest fuel threat in and adjacent to the proposed development using the 2020 Wildfire Threat Assessment Guide and Worksheets.
2. Future structural hazard of the proposed development using the FireSmart Homeowners Manual⁴.

³ Ministry of Forests, Lands, Natural Resource Operations, and Rural Development BC, BC Wildfire Service. 2020, June 4. 2020 Wildfire Threat Assessment Guide and Worksheets (version 4). Available at: <https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/fire-fuel-management/fuels-management/2020-wildfire-threat-assesment-guide-final.pdf>

⁴ Partners in Protection Association. 2019. FireSmart Begins at Home Manual. Available at: https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/prevention-home-community/bcws_homeowner_firesmart_manual.pdf

3.0 Project Overview

The site consists of an 1831 m² lot on Glenmore Drive in West Vancouver. The lot is currently occupied by two duplexes, with an asphalt driveway extending the length of the north and west property boundaries. The house is surrounded by maintained lawns and a variety of coniferous and deciduous landscaping trees, shrubs, and plants. There are multiple conifer hedges along the property boundaries and surrounding the existing building. The property is mostly flat, with a multi-tiered planter along the western property line, contained by 3 lock block retaining walls. A total of nine (9) trees and six (6) hedges with a diameter of 10cm or more are located on the property.

The proposed development includes replacing the existing building with three (3) detached duplex units. The existing driveway will be narrowed at the entrance from Glenmore Drive but will be preserved to provide access to each unit. New landscaping will be focused on the eastern portion of the lot, between the new buildings and Glenmore Drive.



Photo 1. View of the property from Glenmore Drive (looking west).

4.0 Fuel Descriptions and Threat Assessment

4.1 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. Forest areas within 100 metres of the project site include mature coastal forests composed of the coniferous species Douglas-fir (*Pseudotsuga menziesii*), western redcedar (*Thuja plicata*), and western hemlock (*Thuja heterophylla*) and the deciduous species black cottonwood (*Populus balsamifera ssp. trichocarpa*). They are classified as the C5 (coniferous) fuel type.

C5 fuel type is assigned to coniferous forests in Capilano River Regional Park. These are areas characterized by mixed age forests of large, low-density, conifer trees with considerable crown fuel volumes. Surface fuels are comprised of a dense layer of deciduous ferns and shrubs, with increased distributions of coarse woody debris in the southern portions. Ladder fuels consist of a low density (<500 stems per hectare) of suppressed and regenerating Douglas-fir and redcedar. However, these ladder fuels are scattered and discontinuous. A large fuel strata gap of 6-9 metres is present between the mature conifer overstory and the understory.

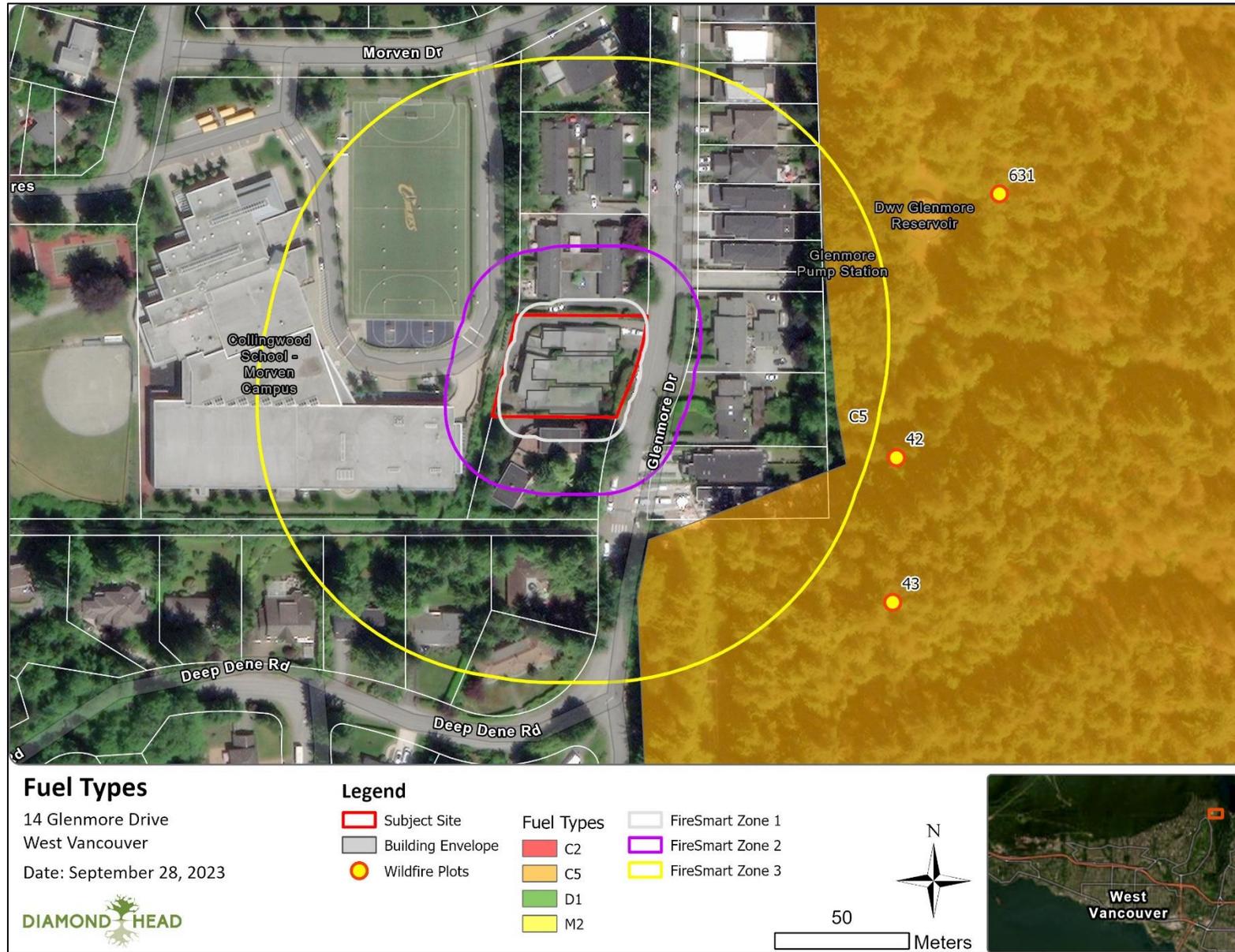


Figure 4. Location of fuel types relative to the project site.

4.2 Summary of Wildfire Fuel Threat from surrounding forest

Each forest stand was also assessed for wildfire fuel threat using the 2020 Wildfire Threat Assessment Guide and Worksheets. Figure 5 outlines the wildfire fuel threat in relation to the FireSmart zones (10m, 30m, and 100m from the structure). The threat ratings and plot characteristics are summarized in Appendix 1. This assessment accounts for the wildfire fuel threat in these stands but does not represent the likelihood of ignition for the future building.

The subject site was assessed to have an overall **moderate** wildfire fuel threat, associated with the C5 stands in Capilano River Regional Park. These stands represent one of the largest remaining areas of contiguous forest cover within the general urban area of West Vancouver. Forest composition within the C5 stands of Capilano River Regional Park is dominated by mature native conifers Douglas fir (*Pseudotsuga menziesii*), western redcedar (*Thuja plicata*), and western hemlock (*Tsuga heterophylla*). Individual black cottonwood (*populus balsamifera ssp. trichocarpa*) trees are scattered along the forest edge. Ladder fuel composition and continuity are the primary factors driving the wildfire threat in these stands. Ladder fuels are mostly coniferous, however have a scattered, discontinuous continuity. Additionally, scattered concentrations of dead and down material northeast of the site slightly elevate the fuel threat. However, overall, a crown fire in this stand would likely require extreme fire weather conditions such as sustained winds following a period of drought.

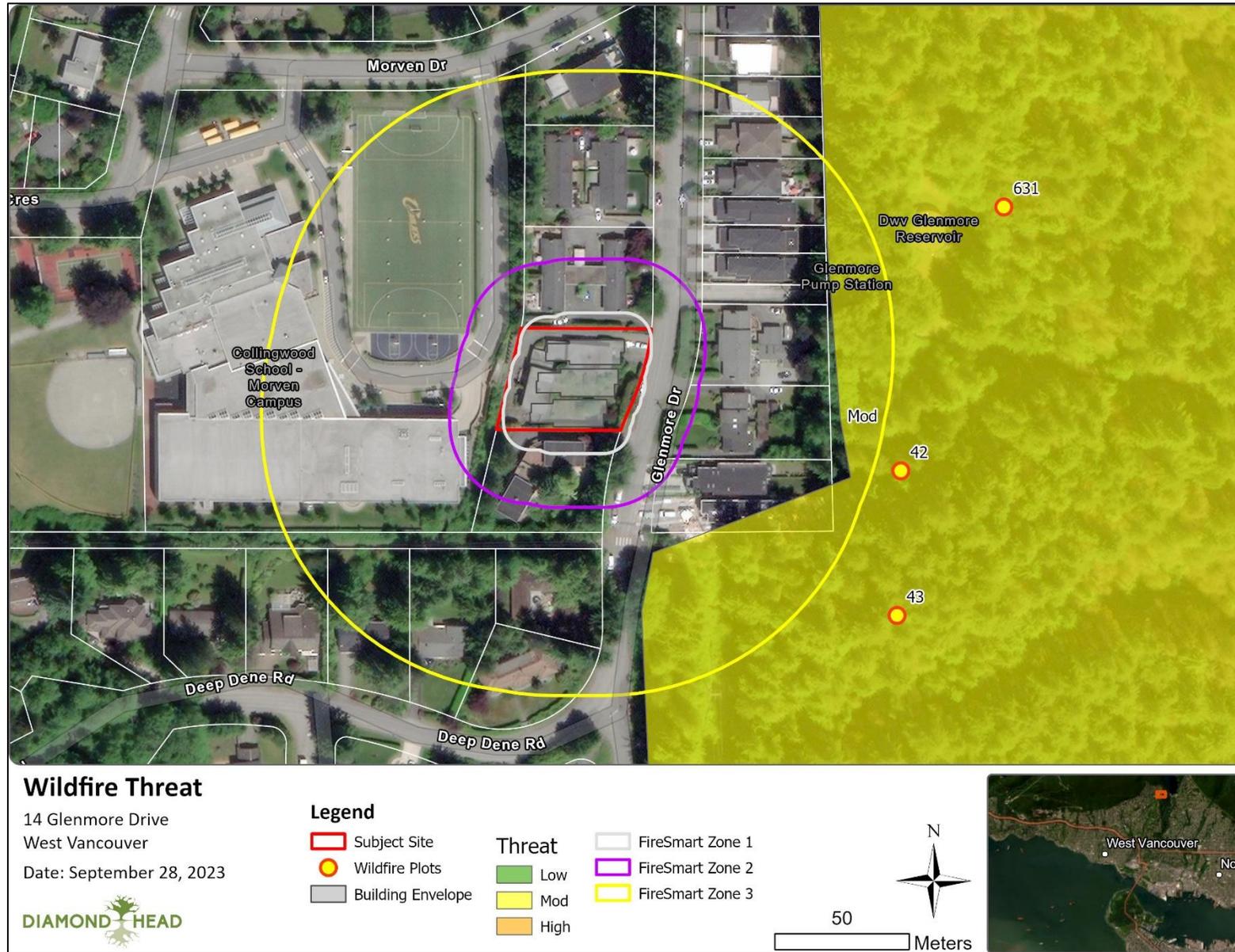


Figure 5. Wildfire fuel threat near the subject site.

4.3 On-site vegetation

On-site landscaping consists primarily of a mix of deciduous and coniferous trees and shrubs set amid lawns. Nine (9) trees with a diameter of at least 10 cm were observed during the site visit. One of these (#1895) is a protected tree under the District’s tree bylaw. The property has a total of seven (7) cedar hedges on its north, west, east, and south boundaries and surrounding the existing buildings. An additional two (2) offsite cedar hedges were observed along the western edge of the subject site on a neighbouring property. These hedges are not protected under the DWV tree bylaw. Most of the on-site vegetation is an unsuitable under the wildfire DP guidelines. Section 5.1 considers existing vegetation in the context of wildfire hazard mitigation.

Table 1. On-site trees measuring 10cm diameter at breast height.

Tag #	Common Name	DBH (cm)	Ht (m)	Overall Condition	Comments
1892	White Spruce	25	5	Moderate	Single stem rooted in roasted planter along W property line contained by concrete retaining walls. Full open grown crown.
1893	White Spruce	23	5	Moderate	Single stem rooted in roasted planter along W property line contained by concrete retaining walls. Full open grown crown.
1894	Western Red Cedar	20	4	Moderate	Small hedging cedar between units in small plater along paved driveway. Multiple stems <10cm.
1895	Western Red Cedar	75	6	Moderate	4 stems, largest 35 and smallest 17. Abutting concrete porch gate. Rooted against concrete patio slab. Crown asymmetrical to S due to proximity to house.
1896	Western Red Cedar	44	6	Poor	Topped at 6m with poor apical dominance. Large sweeping branches. Rooted against concrete patio slab and concrete patio wall/gate. Ivy growth at base.
1897	Willow spp.	27	5	Moderate	Codominant at base. Full open grown crown in island planter.
1898	Japanese Maple	15	5	Moderate	Multi stemmed at base with 3 stems <10cm. Open grown in planter.
1899	Western Red Cedar	25	5	Moderate	Multi stemmed cedar with asymmetrical crown to E. CBH at ground.
1900	Spruce spp.	50	4	Poor	Topped at 4 m with no apical dominance. Large sprawling branches. Rooted approx. 1.5m from existing building footprint.
Hedge1	Western Red Cedar	20	5	Moderate	Large cedar hedge stretching along eastern and southern property line.
Hedge2	Western Red Cedar	10	3	Poor	Short cedar hedge at NE corner of lot.
Hedge3	Western Red Cedar	20	5	Moderate	Large cedar hedge along entire N property boundary.
Hedge4	Western Red Cedar	10	4	Moderate	Cedar hedge along S side of driveway.
Hedge5	Western Red Cedar	15	5	Moderate	Small privacy hedge in SW corner of site. Full open grown crown. Rooted against wall and driveway and concrete property fence.
Hedge6	Western Red Cedar	20	5	Moderate	3 stem privacy hedge along W property line. Grown on slope in raised planter contained by concrete retaining walls.
Hedge7	Eastern White Cedar	10	3	Moderate	Small hedge row planted in raised planter contained by concrete retaining walls along W property line.

5.0 Wildfire Threat Mitigation Recommendations

The following are recommendations to mitigate wildfire 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.

It is the responsibility of the owner and their project team to understand and comply with the following requirements.

Wildfires threaten structures primarily through radiant heat and ember ignition. Radiant heat threatens structures when a wildfire establishes in adjacent vegetation and the heat is sufficient to ignite the construction materials. This requires proximity between the wildfire and the structure. Ember ignition occurs when a wildfire spreads embers or firebrands throughout an area, which can then ignite structures. Embers can spread several kilometers, and therefore can threaten structures that do not directly interface with forests and natural vegetation.



Figure 6. Ignition pathways in the interface. Radiant heat threatens structures within 10m of the forest edge while embers spread to structures within the interior of the development.

The fire resistance of homes in the interface can be improved by achieving FireSmart standards for building materials, ignition sources and combustible fuels within each of the three FireSmart Priority Zones. In the event that a wildfire does threaten the area, suppression capability is improved with good access to the interface area, a defensible space to defend from and a good water supply. FireSmart divide the area around the home into “priority zones”, which radiate out from the structure and reflect the different ignition pathways.

The Non-Combustible Zone is the area immediately adjacent to a structure, out to 1.5 m. A non-combustible surface should extend around the entire structure and any attachments, such as decks. Creating a non-combustible surface can be as easy as clearing vegetation and combustible material down to mineral soil.

Zone 1 is the area within 1.5 and 10 m of the home or building. In this area life and property are at higher vulnerability from radiant heat. It has been shown through analysis of recent large-scale wildfires that the most important factors in protecting structures are the exterior construction materials and immediate landscaping next to homes⁵. FireSmart guidance emphasizes the use of non-combustible or fire-resistant building materials for decks and outbuildings along with landscaping plans that reduce the potential for direct exposure of the home to radiant heat or flame in this area. Cleaning up debris, garbage, or storage from around the home is also of primary importance in this area.

Zone 2 includes the area from 10 m to 30 m from a structure. Wildfire in forests within this zone can subject the building to radiant heat and may produce an ember shower onto the building. Forest fuels are generally treated aggressively in this area to prevent a crown fire from establishing and reduce the intensity of radiant heat and ember production. Treatments may include removal of ground fuel, thinning of trees, and lift pruning of retained trees.

Zone 3 includes the area from 30 m out to 100 m. People and structures are vulnerable to ember transport associated with a wildfire in this area. FireSmart guidance in this area can recommend forest stand thinning, fuel management, and the designation of access and egress. The goal in this area is to prevent a crown fire, but the distance from the home means fuel management is generally not as aggressive as treatments in Zone 2.

⁵ Westhaver, A. 2017. Why some homes survived: Learning from the Fort McMurray wildland/urban interface fire disaster. *Institute for Catastrophic Loss Reduction (ICLR) research paper series – number 56.* (March 2017).

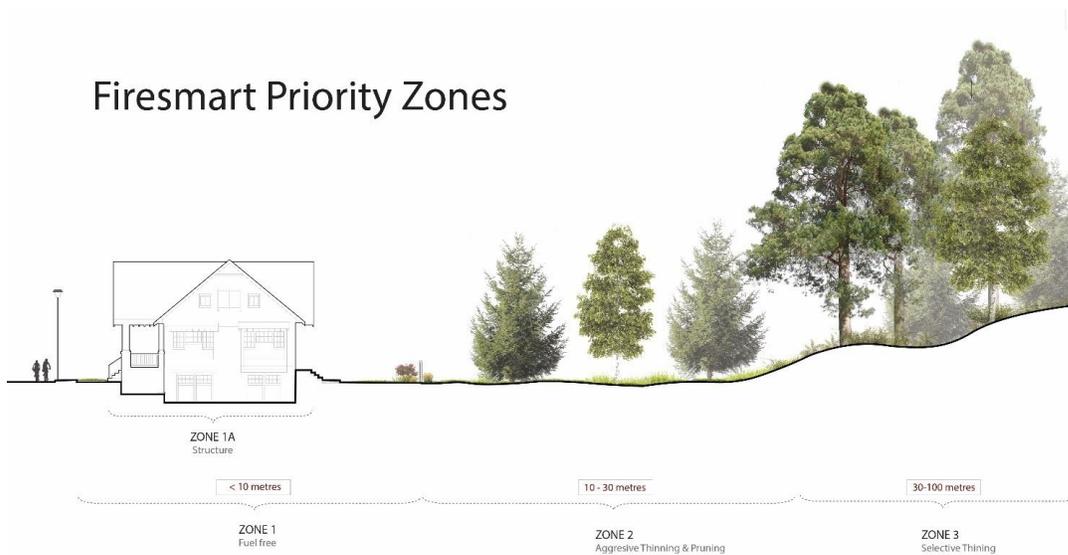


Figure 7. FireSmart Management Zones

5.1 Buildings setback from hazardous fuels and on-site vegetation

FireSmart recommends that a 10m fuel free zone be established and maintained between structures and hazardous fuels. The on-site vegetation proposed in the Landscape Plan satisfies this guideline by using only deciduous species with high foliar moisture and little resin. The perimeter of the home will be surrounded by a band of gravel or other non-combustible surface (patio, driveway pavers) that reduces the likelihood of flame transfer between landscape vegetation and building surfaces.

Many properties within the Wildfire Hazard DPA are unable to build homes so that all of FireSmart Zone 1 is located within the property limit because of zoning regulations. While vegetation on neighbouring properties can pose a fire hazard, removing, pruning, or otherwise modifying vegetation outside the subject site for the purposes of reducing wildfire risk is not always possible. In the event permission cannot be obtained for modification of off-site vegetation, all FireSmart recommendations and guidelines in this report must be followed. On-site FireSmart construction, landscaping, and maintenance will reduce the development's vulnerability to wildfire and meet the Wildfire DPA objectives as much as practically possible.

All unsuitable vegetation within Zone 1 is found on the subject property. Several hedging cedars are installed on each property boundary of the site. Due to their proximity to the proposed building footprint, these hedges should be removed to mitigate the wildfire threat to the property. Any future vegetation overhanging the property line should be trimmed back to maintain the maximum practicable fuel free zone.

Vegetation on the property will mostly be removed to accommodate new landscaping, including tree #1895, a multi-stemmed western redcedar protected under the District's tree bylaw.

Recommendations for observed vegetation as they relate to wildfire hazard are provided in Table 2. Figure 8 shows the location of trees referred to in Table 2.

Table 2. On site and neighboring trees relevant to wildfire hazard.

Tag #	Common Name	DBH (cm)	Ht (m)	Overall Condition	Comments	DP Suitable	Tree Retention Comments
Onsite Trees							
1892	White Spruce	25	5	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
1893	White Spruce	23	5	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
1894	Western Red Cedar	20	4	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
1895	Western Red Cedar	75	6	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
1896	Western Red Cedar	44	6	Poor	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
1897	Willow spp.	27	5	Moderate	Within 10m of the proposed building envelope	Yes	No mitigation required
1898	Japanese Maple	15	5	Moderate	Within 10m of the proposed building envelope	No	No mitigation required
1899	Western Red Cedar	25	5	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
1900	Spruce spp.	50	4	Poor	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
Hedge1	Western Red Cedar	20	5	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
Hedge2	Western Red Cedar	10	3	Poor	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer

Tag #	Common Name	DBH (cm)	Ht (m)	Overall Condition	Comments	DP Suitable	Tree Retention Comments
Hedge3	Western Red Cedar	20	5	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
Hedge4	Western Red Cedar	10	4	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
Hedge5	Western Red Cedar	15	5	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
Hedge6	Western Red Cedar	20	5	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
Hedge7	Eastern White Cedar	10	3	Moderate	Within 10m of the proposed building envelope	No	Remove to maintain 10m fuel free buffer
Off-site Trees							
OS1	Grand Fir	55	18	Moderate	10-30m from proposed building envelope	No	No mitigation required
OSHedge1	Eastern White Cedar	10	4	Moderate	10-30m from proposed building envelope	No	No mitigation required
OSHedge2	Western Red Cedar	15	5	Moderate	10-30m from proposed building envelope	No	No mitigation required



Tree Locations

14 Glenmore Drive
 West Vancouver
 Date: September 28, 2023



Legend

- Subject Site
- Building Envelope
- Trees
- FireSmart Zone 1
- FireSmart Zone 2
- FireSmart Zone 3

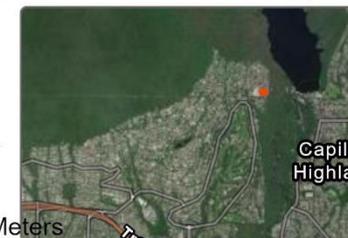
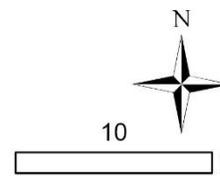


Figure 8. Location of trees referred to in this report.



Photo 2. Protected tree #1895 recommended for removal to maintain fuel free buffer (middle).



Photo 3. Hedge3 along the north boundary. representative of most hedges found onsite. (looking NE)

3559 Commercial Street, Vancouver B.C. V5N 4E8 | T 604-733-4886



Photo 4. Tree #1897 and various onsite landscaping vegetation. (looking E)



Photo 5. Tree #1900 and surrounding shrubs recommended for removal. (Looking W)



Photo 6. Multi-tiered planter along western property line contained by lock block walls. (looking NW)

5.2 Zone 1A – Building and Construction

Generally, during a wildfire, homes are ignited by 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 can 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. Combustible fencing can “wick” fires in the yard or landscaping towards the home. Therefore, the building material and construction techniques are a significant 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 II of the District of West Vancouver’s Official Community Plan, which can be viewed on the District’s website. Building standards along with additional recommendations are summarized in Table 3. These should be consistent with the highest current wildfire protection standards published by the NFPA, or any similar, successor, or replacement body that may exist.

Table 3. Requirements for building design and construction

Requirements for building materials	
Building setbacks	<ul style="list-style-type: none"> All new buildings must be located as far from forest interface as possible within the constraints of zoning and environmentally sensitive areas.
Roofing	<ul style="list-style-type: none"> Class A 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. See additional roofing specifications below.
Siding	<ul style="list-style-type: none"> Exterior vertical walls should be clad with fire resistant materials*. Preference should be given to stucco, metal, brick and concrete cladding. Ensure that fire resistant materials extend from the foundation to the roof. Flame resistant coatings that require ongoing maintenance or reapplication are not acceptable. Exterior wall assemblies that have exterior wood that is untreated and rely on the interior wall for fire resistance are not acceptable. See additional siding specifications below.
Vents, openings, eaves, attics, overhanging projections, soffits	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> All windows should be double glazed, 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.

Requirements for building materials

	<ul style="list-style-type: none"> Exterior doors on radiant faces exposed to the forest edge should be of fire resistant materials.
Decks, porches, balconies	<ul style="list-style-type: none"> Decks, patios, porches, and balconies must use fire-resistant or non-combustible materials. Slotted deck surface allows 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	<ul style="list-style-type: none"> All chimneys and wood-burning appliances should have approved spark arrestors (securely attached and made of 12-gauge welded or woven wire mesh screen with mesh opening of less than 12 mm).
Exterior sprinklers	<ul style="list-style-type: none"> 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.
Fences	<ul style="list-style-type: none"> Fencing within 1.5 m of any structures must be made of ignition resistant materials. Apply a fire protective coating rated to Class A (NFPA 1144) where wood fencing is used within 10 m of the building or accessory structures. No wood fencing may be used within 1.5 metres of buildings or accessory structures.

Recommendations during construction

Combustible materials	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Prior to construction of any wood frame buildings, there must be fire hydrants within operating range.
Fire Suppression	<ul style="list-style-type: none"> 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.

Roofing specifications

Roofing must be non-combustible. These have a Class A flame spread rating defined as “Class A roof coverings are not readily flammable, are effective against severe fire exposures, and do not carry or communicate (i.e., spread) fire”. CAN/ULC S107 "Standard Test Methods for Fire Tests of Roof Coverings" is the testing procedure used to determine a product's or roof assembly's classification. Any products that are certificated as Class A with an "Assembly" requirement must have a project engineer or architect provide signed proof that the product has been installed as per the specifications of the manufacturer. Because roofing occupies a large portion of the home's exterior surface area and is oriented to down-falling embers, roofs are the most vulnerable part of the home's assembly.

The proposed roofing materials are not defined at this time. All future roofing materials used for the proposed buildings should meet the guidelines stated above.

Siding specifications

Exterior siding must be fire resistant (stucco, brick, fibre cement boards/panels and poured concrete). Untreated wood products do not meet this standard. Flame resistant coatings that require ongoing maintenance or reapplication are not acceptable. Exterior wall assemblies that have exterior wood that is untreated and rely on the interior wall for fire resistance are not acceptable. Wood products that have permanent treatments or are naturally fire resistant can be accepted as long as product specifications and certified testing is provided. The District may require that the final structure be inspected to confirm structures have been built to these standards and to obtain a permit for occupancy and bonding.

The proposed primary surface materials are not defined at this time. All future primary surface materials used for the proposed buildings should meet the guidelines stated above.

It is critical that the structure be designed and built to these standards. The District may require that the final structure be inspected to confirm it is compliant and to obtain permit for occupancy and bonding.

5.3 Zone 1 – FireSmart landscaping and maintenance

Landscaping and maintenance for the site should follow FireSmart principles as laid out in the most recent edition of the FireSmart BC Homeowner's Manual. FireSmart describes zones of increasing distance from the structure where different treatments and maintenance regimes are recommended to reduce wildfire behavior. Most of the lot will be within 10 metres of the proposed buildings. Planning and maintenance of this area should follow the requirements of priority zone 1 (<10m from structures) outlined in the FireSmart program. The goal in this zone is to remove hazardous fuels and convert vegetation to fire-resistant species to produce an environment that does not support combustion. Recommendations for landscape and maintenance are summarized in Table 4. It is recommended that new coniferous trees and shrubs, including hedging, be excluded from the landscape plan.

Table 4. Requirements for landscaping and maintenance

Landscaping Requirements
<ul style="list-style-type: none"> • Remove all highly flammable vegetation and other combustibles from around the building. • No conifer trees species should be planted within 10m of any buildings. Existing trees further than 10m from the proposed home can be retained if desired. • 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 FireSmartBC website. A list of suitable species has also been provided in Appendix 6. • Ensure that vegetation will not grow to touch or overhang buildings through appropriate tree selection and proactive maintenance. • Irrigation sprinklers may be installed in landscaping but are not required. Where possible, use plants that are tolerant of drought.
Landscaping Maintenance Requirements
<ul style="list-style-type: none"> • Annual grasses within 10 meters of buildings should be kept mowed to 10 centimeters or less and watered regularly during the summer months • 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. • Ensure off-site and encroaching trees are pruned to eliminate contact between foliage and building surfaces • Plant only fire-resistant trees and shrubs. A list of fire-resistant plants and trees can be found at the FireSmartBC website. A list of suitable species has also been provided in Appendix 6.

The Landscape Plan as proposed is anticipated to meet these requirements.

5.4 Zones 2 and 3 – Fuel Hazard Mitigation in Adjacent Forested Areas

Forests that are adjacent to planned structures and pose a high wildfire fuel threat can be treated to reduce fuel loading and continuity. The property does not directly interface with forest vegetation, with the nearest forest being in Capilano River Regional Park approximately 50 m to the southeast of the proposed buildings. Proposed landscaping in the on-site portion of FireSmart Zones 2 follows the guidance listed in Table 4. No off-site fuel mitigation is proposed in relation to this project.

6.0 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. All three structures share similar characteristics and siting, and the assessments below apply to all three structures.

Table 5. FireSmart Structure and Hazard Assessment

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	
Gutter type and roof cleanliness?	Non-combustible gutter – no debris	0	0
	Combustible gutter – no debris	6	
	Non-combustible gutter with debris	10	
	Combustible gutter with debris	16	
What is the exterior of your home built of?	Non-combustible material, stucco, metal siding or brick	0	0
	Combustible or non-ignition resistant (vinyl, wood)	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)	4	
	Single-pane glass - large (greater than 1 metre x 1 metre)	6	
Are your vents screened?	Non-combustible, fire-rated vents or vents with 3 mm screening	0	0
	Combustible vents, not firerated or without 3 mm screening	6	
Are your eaves closed?	Closed or Boxed-in eaves	0	0
	Open eaves	6	
Have you sheathed-in the underside of your balcony, deck, porch or open foundation?	N/A, no gaps or cracks, heavy timber, noncombustible or fire-rated construction with non-combustible surface and no combustible debris under deck	0	0
	Gaps or cracks, no heavy timber or fire-rated construction with combustible surface and combustible debris under deck	30	
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

*Building materials have not been provided at this time

NON-COMBUSTIBLE ZONE			
Within 1.5 m of home	Criteria	Rating Options	RATING
1.5 m from the ground-level exterior footprint of the structure including any attachments or extensions	Non-combustible surface, no combustible debris, materials, fences or plants present	0	0
	Combustible surface, combustible debris, materials, fences or plants present	30	
NON-COMBUSTIBLE ZONE SCORE			0

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

*a forest is considered a continuous intact treed area

ZONE 2			
YARD/10 – 30 m	Criteria	Rating Options	RATING
What type of forest surrounds your home?	Deciduous trees	0	0
	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 2 YARD SCORE			0
TOTAL SCORE			Rating

ZONE 1/ Home and Yard	Home	2
	Non-Combustible Zone	0
	10 metres from home	6
ZONE 2 / Yard	10 – 30 metres from home	20
TOTAL		8 - 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

The FireSmart Hazard Assessment for this property is low assuming the recommendations in this report are followed. This rating reflects the building materials and landscaping prescribed by this report and proposed in the reviewed issue of the site plans. Risk associated with ember transport from landscape forests can be managed through FireSmart construction and landscape maintenance.

7.0 Final Remarks

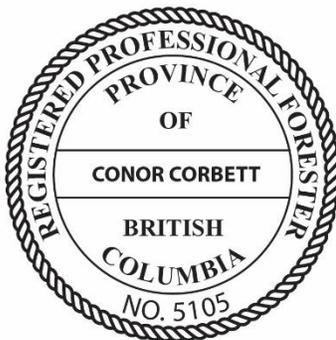
The District of West Vancouver requires that the proposed development is consistent with the Wildfire Development Permit Guidelines. Planners, engineers, and landscape architects should refer to this report and the FireSmart manual during the design phase of this development. All construction operations should be conducted according to the Wildfire Act and the regulations. Following these regulations will help reduce liability and protect the development.

The District may require that an inspection be done following construction to ensure that the structure and landscaping meet these requirements.

If the recommendations made within this report and the requirements outlined by the District of West 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,



Signed: October 3, 2023

Conor Corbett MSFM
Registered Professional Forester
ISA Certified Arborist (PN-8429A)
ISA Tree Risk Assessment Qualified (TRAQ)
BC Wildlife and Danger Tree Assessor (P2722)

Appendix 1 Wildland Urban Interface Plots

Wildfire Threat Assessment Worksheet - Fuel Setting Scoring			
Location	Plot 42	Date	23-Sep
Assessor	N/A		
Crown species composition (species %)	Fd5Cw3Hw2		

Component/subcomponent	PULLDOWNS	SCORE
Depth of organic layer	5-<10	5
Surface and ladder fuel (.1-3m in height)		
Surface fuel composition	Moss, herbs and deciduous shrubs	4
Dead and down material continuity (<7cm)	10-25% coverage	8
Ladder fuel composition	Other conifer	8
Ladder fuel horizontal continuity	Scattered 10-39% coverage	8
Stems/ha (understory)	<500	2
Stand structure and composition (dominant and co-dominant)		
Overstory composition/CBH	Conifer with moderate CBH (5-9 m)	4
Crown closure	41-60%	2
Fuel strata gap	6-9	1
Stems/ha (overstory)	<400	0
Dead and dying (% of dominant and co-dominant stems)	Standing dead/partial down <20%	2
Comments:	TOTAL	44
	RATING	MODERATE
c5, slightly elevated CWD. rich site, deep duff.		

Threat Rating (Max Score 110)				
Eco - province	Low	Moderate	High	Extreme
Coast and Mountains, Georgia Depression	0 - 41	42 - 57	58 - 69	70-100

Wildfire Threat Assessment Worksheet - Fuel Setting Scoring			
Location	43	Date	23-Sep
Assessor	N/A		
Crown species composition (species %)	Cw6Hw2Fd1Mb1		

Component/subcomponent	PULLDOWNS	SCORE
Depth of organic layer	5-<10	5
Surface and ladder fuel (.1-3m in height)		
Surface fuel composition	Moss, herbs and deciduous shrubs	4
Dead and down material continuity (<7cm)	Scattered <10% coverage	4
Ladder fuel composition	Other conifer	8
Ladder fuel horizontal continuity	Scattered 10-39% coverage	8
Stems/ha (understory)	<500	2
Stand structure and composition (dominant and co-dominant)		
Overstory composition/CBH	Conifer with moderate CBH (5-9 m)	4
Crown closure	41-60%	2
Fuel strata gap	6-9	1
Stems/ha (overstory)	601-900	3
Dead and dying (% of dominant and co-dominant stems)	Standing dead/partial down <20%	2
Comments:	TOTAL	43
	RATING	MODERATE
slightly denser area of C5. steep slope to south. lots of ground fuel and ladder fuel on DNV land adjacent to site.		

Threat Rating (Max Score 110)				
Eco - province	Low	Moderate	High	Extreme
Coast and Mountains, Georgia Depression	0 - 41	42 -57	58 - 69	70-100

Wildfire Threat Assessment Worksheet - Fuel Setting Scoring			
Location	631	Date	28-Sep
Assessor	RS		
Crown species composition (species %)	Fd6Cw4Act+		

Component/subcomponent	PULLDOWNS	SCORE
Depth of organic layer	5-<10	5
Surface and ladder fuel (.1-3m in height)		
Surface fuel composition	Moss, herbs and deciduous shrubs	4
Dead and down material continuity (<7cm)	10-25% coverage	8
Ladder fuel composition	Other conifer	8
Ladder fuel horizontal continuity	Scattered 10-39% coverage	8
Stems/ha (understory)	<500	2
Stand structure and composition (dominant and co-dominant)		
Overstory composition/CBH	Conifer with high CBH (>10 m)	3
Crown closure	41-60%	2
Fuel strata gap	6-9	1
Stems/ha (overstory)	<400	0
Dead and dying (% of dominant and co-dominant stems)	Standing dead/partial down <20%	2
Comments:	TOTAL	43
	RATING	MODERATE
<p>Behind locked metal fence for Capilano drinking water supply. Low-density conifer stand predominately Fd and Cw. Scattered Act along clearing edges. Little to no understory. Ladder fuels are on low end of scattered. Overall good health throughout.</p>		

Threat Rating (Max Score 110)				
Eco - province	Low	Moderate	High	Extreme
Coast and Mountains, Georgia Depression	0 - 41	42 - 57	58 - 69	70-100

Appendix 2 Description of Forest Fuel Types

Fuel Type C5 – Coniferous dominated stand

C5 is the only fuel type identified within 100 metres of the project site. This part of Capilano River Regional Park is characterized by mixed age coniferous stands with a dominant layer of old douglas fir and a secondary canopy layer of native conifers and sparse black cottonwood (*Populus balsamifera ssp. Trichocarpa*) along the forest edge. The stand is comprised of moderately stocked (300-700 stems per hectare) conifers Douglas-fir (*Pseudotsuga menziesii*), western redcedar (*Thuja plicata*) and western hemlock (*Tsuga heterophylla*). Some areas within these stands have increased amounts of course woody debris on the forest floor.

This fuel type poses a moderate wildfire threat. In order for a crown fire to generate it would likely require extreme fire weather conditions, where temperature exceeds relative humidity during a period of drought and sustained winds. Table 6 outlines the general stand characteristics of a C5 stand.

Table 6. Stand characteristics for fuel type C5

Characteristic	Threat 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



Photo 7. Coniferous fuels in Lighthouse Park.

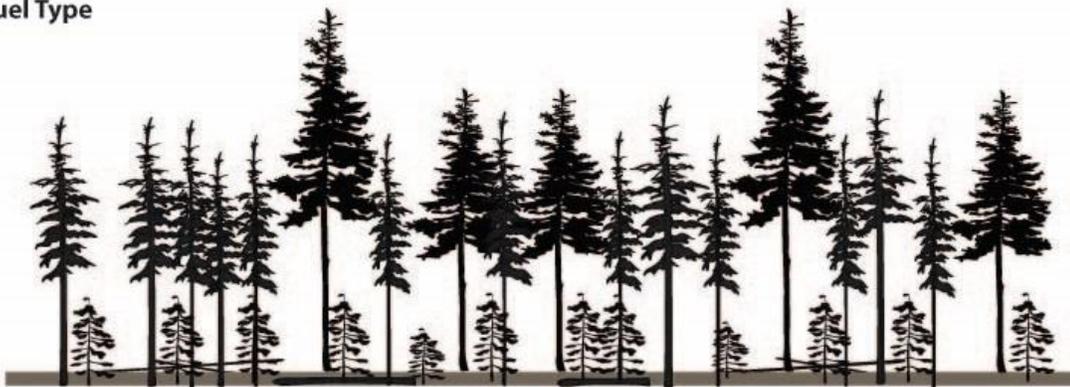
Appendix 3 Generic Description of Coastal Fuel Types

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 Threat

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.

C5 Fuel Type



C3 – Multistoried Second Growth Conifer Stand – High Threat

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.

C3 Fuel Type



M2 - Mature Stands Consisting of a mix of Conifer and Deciduous Trees – Low to Moderate Threat

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 threat. 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.

M2 Fuel Type



D1 - Deciduous Dominated Stands – Low Threat

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 threat.

D1 Fuel Type



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 4 Resources and Links

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- National Fire Protection Association. 2013. NFPA 1144. Standard for Reducing Structure Ignition Hazards from Wildland Fire.
- National Fire Protection Association. 2013. NFPA 1141. Standard for Fire Protection Infrastructure for Land Developments in Suburban and Rural Areas.
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- Partners in Protection and Province of British Columbia. 2018. FireSmart Homeowner's Manual: FireSmart Begins at Home. Online https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/prevention-home-community/bcws_homeowner_firesmart_manual.pdf

Appendix 5 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-

Term	Definition
	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.

Appendix 6 Fire Resistant Plants for Landscaping

Fire resistant and drought tolerant ground covers:	Fire resistant and drought tolerant perennials:
<ul style="list-style-type: none"> • Achillea species (when mowed, turf alternative) • Ajuga reptans • Arctostaphylos uva-ursi • Autennaria rosea • Aubrieta detoidea • Ceanothus prostratus • Cerastium tomentosum • Dianthus species • Delosperma nubigenum and the less cold hardy cooperi • Fragaria species (turf alternative) • Phlox subulata • Sedums • Sempervivums • Thymus praecox turf alternative) • Veronica species 	<ul style="list-style-type: none"> • Achillea species • Armeria maritima • Aquilegia • Aurinia saxatilis • Coreopsis • Echinacea purpurea • Epilebium angustifolium • Gaillardia varieties • Geranium species • Helianthemum • Hemerocallis • Kniphofia uvaria • Iris - bearded • Lavendula • Lupinus • Penstemon • Oenothera species • Papaver orientale • Perovskia atriplicifolia • Ratibida columnifera • Salvia species • Stachys byzantina
Fire resistant and drought tolerant shrubs:	Fire resistant and drought tolerant trees:
<ul style="list-style-type: none"> • Amelanchier alnifolia • Caryopteris x clandonesis • Ceanothus • Cistus • Cotoneaster species • Euonymus alatus • Fremontoden on californium • Fuchsia (dieback) • Gaultheria shallow • Holodiscus discolour • Lagerstroemia indica • Mahonia • Pachystima myrsinites • Philadelphus speceis • Paxistima myrthifolia • Pyracantha species • Ribes species • Rhus species • Rosa species and hardy own root shrub • Spiraea bumalda • Symphoricarpos albus • Syringa vulgaris, spidouglassii • Yucca species 	<ul style="list-style-type: none"> • Acer circinatum, glabrum, macrophyllum, plantanoides, rubrum • Aesculus hippocastanum • Alnus rubra tenuifolia • Betula species • Catalpa speciosa • Celtis occidentalis • Cercis canadensis • Cornus florida, stolonifera, nuttallii • Crataegus species • Fagus species • Fraxinus species • Gingko biloba • Gleditsia triacanthos • Gymnocladus dioicus • Juglans • Liquidambar styraciflua • Malus species • Populus species • Prunus cherry • Quercus agrifolia, rubra, palustris, garryana • Robinia pseudoacacia • Salix species • Sorbus aucuparia

Source: Master Gardeners Association of BC. <http://mgabc.org/node/1514>.

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Public Consultation Follow Up Report

14 Glenmore

Background

Sterling Pacific Developments Inc (Sterling) is proposing to build three duplex style homes consisting of 6 units plus basement suites on the lot located at 14 Glenmore. In this regard Sterling is requesting the rezoning of the property from RM4 to a Comprehensive Development zone.

Sterling engaged the public on December 6, 2023, with a meeting held between 530-700 pm at #10 636 Clyde Ave. Sterling hand delivered notices to the residents within 100m of the site and posted advertising in two consecutive issues of the North Shore News in the weeks prior. There was also a sign posted on the site. This is the second public consultation meeting with the first being on September 19, 2023.

Outcome

Meeting #1 - Sept 19, 2023

Sterling received zero negative comments. Sterling received ten supportive comments from West Vancouver residents. Six of the supportive comments were from direct neighbours of 14 Glenmore.

Meeting #2 - Dec 6, 2023

There were 7 groups who attended the meeting. 5 of those groups were supportive and 2 of the groups were against the proposal. The groups that were against the proposal had concerns relating to the number of cars generated by the proposal (parking issues) and the resulting potential increase in traffic. It was explained that the proposal is adding 15 additional on-site parking spaces with 5 off-site public spaces along the road to help alleviate any parking concerns. It was also explained that there is an addition of a newly dedicated laneway on the site to increase street safety as well as a sidewalk and boulevard.

The majority of the attendees felt that the street upgrades and addition of a new laneway would be beneficial to the area and were satisfied that the proposal of 3 duplex buildings is a positive attribute for Glenmore.

During the meeting it also became evident that the two individuals who were against the proposal lived outside of the 100m notification radius. There is no known opposition from any residents within 100m of the site.

Conclusion

Based on the overwhelming letters of support we can conclude that the duplex proposal is well received and welcomed by the neighbours. We can further conclude that the inclusion of duplex style housing to address and increase the supply of "missing middle" housing stock in West Vancouver is one that is well received by residents.

14 Glenmore is a development that will not only fit seamlessly into the Glenmore neighbourhood, but also one that will enhance the neighbourhood's character and appeal.

s. 22(1)

Jamie Harper
Sterling Pacific Developments

s. 22(1)

Name:

Address:

- ① USE DEVELOPER CAC TO INSTALL SPEED BUMP BETWEEN #7 TO #19 GLENMORE DR. (COMPARABLE TO HADPEN DR.)
- ② ELIMINATE SECONDARY SUITES OR REDUCE FAR TO ~~500~~^{0.5} CONSISTENT WITH EXISTING DUPLEX FAR
- ③ ENSURE ALL CURBS FOR ROAD BLVDs, AND ISLANDS IN EXISTING DESIGN ARE SOLID CONCRETE TO ELIMINATE DIAGONAL PARKING AND RESTRICT STREET PARKING TO A MAXIMUM OF 4
- ④ ENSURE HYDRO POLE FOR DEVELOPMENT IS SITUATED AT SOUTHERN EDGE OF PROPERTY

Name:

Address:

⑤ DEVELOPER TO ASSIST WITH
GLENMORE DRIVE RESIDENTS TO
FORWARD PROPOSAL TO COUNCIL TO
INSTALL FULL SIDEWALK FROM
PEEP DENE RD. TO MORVEN DR.
ALONG THE WEST SIDE OF
GLENMORE DR.

⑥ DEVELOPER HAS BUILT VERY AGREEABLE
RESIDENCES ON THE STREET ALREADY
AND WOULD SUPPORT PROPOSAL SUBJECT
TO THE FIVE POINTS BEING MET ABOVE.

s. 22(1)
Name: [Redacted]
Address: [Redacted]

I think this is excellent.
We need this type of housing.
The lane is great idea lots
of parking and added street parking.
The developer is proven to
meet expectation and follow-up
with new Buyers.

s. 22(1)
[Redacted]

s. 22(1)

Name:

Address:

I AM TOTALLY IN FAVOUR OF
IMPROVING THE NEIGHBOURHOOD WITH NEW
CONSTRUCTION. THE ARGUMENTS I HAD TONIGHT
WERE MOSTLY ABOUT INCREASED TRAFFIC. I DON'T
BELIEVE THE COMMUNITY IS THE PROBLEM.
COLINGWOOD SCHOOL CAUSES THE TRAFFIC AND
I BELIEVE THEY SHOULD HAVE MORE RESTRICTIONS
ON HOW MANY CARS THEY ARE ALLOWED TO
HAVE EVERYDAY. MAYBE A SYSTEM OF EVEN
& ODD DAYS FOR PARENTS MIGHT BE A
SOLUTION. THEY ARE THE PROBLEM.

Thank You

s. 22(1)

s. 22(1)

Name:

Address:

① If the construction affects the driveway or sewage or pipe, the developer needs to be responsible for all that damages.

② There are brick fence between our strata lots and your lot. Keep this line keeps at where it is. ~~No more~~ across the line is not acceptable for our residents.

③ Your lot used to have 4 units. Now you plan to have 3 duplex with 6 families, which cause the community even denser. It ~~is~~ ~~not~~ ~~safe~~ makes the ~~for~~ neighborhood too ~~close~~ congested. No suites are supported by our residents. **NO SUITES.**

④ ~~A~~ speed bumps is needed for the Glenmore DR uphill towards east. Otherwise, the car noise ~~can~~ be avoid near our neighborhood even the night.

⑤ The outside parking lot outside of our lot. ~~We need~~ ^{it is suggested} to have two hours limit ^{by} ~~for~~ visitors. which was ^{occupied} ~~by~~ ^{5:7.11} Glenmore ^{neighborhood}

s. 22(1)

Name:

Address:

West Van, BC

- Encourage Sidewalk development along Glenmore to public safety - developer to support
- Please encourage landscaping along adjacent streets to North Unit 26/28

- encourage speed bump public safety

- mitigate street parking

- Ensure hydro pole is away from North Street

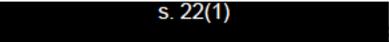
s. 22(1)

- Owner

supports proposed

development

To Whom This May Concern,

We own  s. 22(1) and feel that rezoning 14 Glenmore to 3 duplex buildings (6 units) would be beneficial for the community.

The rear facing garages and newly dedicated lane is well thought out and I feel that the proposal will provide additional housing options for West Vancouver and increase our lacking Missing Middle housing stock.

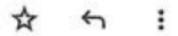
 s. 22(1)

s. 22(1)

s. 22(1)

s. 22(1)

Wed, Sep 20, 9:33 AM



Hello My name is [REDACTED] I live at [REDACTED] I welcome the addition of new housing units in my area. I believe that we need more affordable housing in our area and the newer units that have been built over the last few years greatly improved the neighborhood. It will provide the middle housing needs that are needed in the future. I hope in the near future that the area for these multi dwelling units will expand as I feel this area is the perfect fit as it already has these types of housing in the area. Thank you for your time.



s. 22(1)

14 Glenmore Drive

s. 22(1)

Wed, Oct 4, 2023 at 10:46 PM

Hi Jamie,

I just wanted to send you a quick note to let you and the city know that I fully support your upcoming duplex project at 14 Glenmore Drive.

As a s. 22(1) I can attest to the craftsmanship and level of dedication that you and your team bring to making the neighborhood a better community for all.

The neighborhood currently consists of a number of older, run down buildings, and a new series of duplexes will make the neighborhood more aesthetically pleasing as well as raise the prestige of the area.

Given the extraordinary prices of West Vancouver detached homes, duplexes will allow other young families like mine into the community that would otherwise not be attainable.

Based on the above, I fully support new duplex options in the neighborhood.

Take care,

s. 22(1)

s. 22(1)

Name:

Address:

s. 22(1)

W.V.

I Am in Favor of this Development

- This is the kind of product West Van needs for missing middle

- This type of housing might help keep people who work in this community at the businesses in West Vancouver, including schools.

- treatment of cars/parking is good.

- architecture is nice, contemporary.

s. 22(1)

Name:

[REDACTED]

Address:

s. 22(1)

[REDACTED]

W. VAN

- ATTRACTIVE DEVELOPMENT
- UNIT SIZES WORK WELL FOR DOWNSIZING RESIDENTS
- WEST VAN NEEDS MORE AFFORDABLE DEVELOPMENTS LIKE THIS ONE
- DESIGN PROVIDES MUCH NEEDED DENSITY W/O CHANGING THE NEIGHBORHOOD
- DEVELOPMENT WOULD BE A GREAT IMPROVEMENT TO THE EXISTING TIRED PROPERTY
- ADDITION OF SUITE IS A GREAT IDEA - I HAVE SEEN THIS IN MANY NORTH VAN DEVELOPMENTS

s. 22(1)

Name:

[Redacted Name]

Address:

s. 22(1)

[Redacted Address]

W.V.

s. 22(1)

[Redacted Address]

* nice plan!

s. 22(1)

Name:

Address:

Duplexes are needed. Cost of houses
are too high. This is needed!!

Name: s. 22(1)

Address: s. 22(1)
W. Van BC.

This is exactly the type of development we need in W. Van.
Perfect for downsizing.

Design fits the landscape very impressed!

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