### Agenda and Reports

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<td>1.</td>
<td>Public Hearing Agenda (will be published June 14, 2018)</td>
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| 2. | Second Reading May 28, 2018  
- Staff Report dated May 4, 2018  
  This report provides an overview of the zoning amendments and changes to the project that occurred in response to the approval of the Maplewood Village Centre Implementation Plan.  
- Minutes of May 28, 2018 Regular Meeting of Council (will be added once adopted by Council and signed by the Mayor and Clerk) |
| 3. | First Reading April 10, 2017  
- Staff Report dated March 31, 2017  
  This report provides an overview of the project and the land use issues related to the proposal to create 193 residential units and approximately 10,500 sq. ft. of commercial space.  
- Minutes of April 10, 2017 Regular Meeting of Council |
| 4. | Bylaw 8209 which rezones the subject site from General Commercial Zone 2 (C2) to Comprehensive Development 84 (CD84) to enable the development of a 35 unit residential apartment project. |

### Additional Information

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| 6. | Associated Bylaws  
- Bylaw 8210 – Housing Agreement Bylaw securing 28 market rental units  
- Bylaw 8227 – Housing Agreement Bylaw securing 10 affordable rental units  
- Bylaw 8238 – Housing Agreement Bylaw ensuring no rental restrictions  
- Bylaw 8223 – Highway Closure Bylaw |
| 7. | Land Use  
- Maplewood Area Charrette Report  
- Maplewood Area Plan – Summary of Engagement Phase 1  
- Maplewood Local Plan  
- Maplewood Village Centre and Innovation District Implementation Plan and Design Guidelines |
| 8. | Traffic and Parking  
- Maplewood Village Transportation Study Update and Maplewood Village Functional Design Report  
9. **Construction Traffic Management Plan** – A further, more detailed plan, will be required prior to Building Permit.

10. **Design**
   - Architectural and Landscape Plans for the project – RHA Architects

11. **Design** - Advisory Design Panel’s minutes
   - July 7, 2016
   - November 10, 2016

12. **Arborist Report**
   - Diamond Head Consulting Ltd. February 19, 2016

13. **Green Building and Energy Conservation** – note that a minimum “gold” standard will be required if the project proceeds to development permit
   - PGL Environmental Consultants

14. **Geotechnical Report**
   - Davies Geotechnical Inc. October 30, 2015

15. **Flood Risk Management Strategy**
   - NHC Consultants – June 14, 2016

16. **Chemical Hazard Reports**
   - November 7, 2016
   - March 20, 2016
   - August 8, 2012

17. **Site Profile**

18. **Highway Closure Bylaw 8228**
   - Staff report dated March 3, 2017
   - Minutes of April 3, 2017 Regular Meeting of Council
   - Staff report dated February 14, 2018
   - Minutes of February 26, 2018 Regular Meeting of Council

19. **Residential and Retail Tenant History**
   - This report provides an outline of existing tenants and describes the tenant relocation assistance strategy

**Public Input**

20. **Past Public Input**
   - Public Information Meeting June 1, 2016 - Facilitator’s Report
   - Public Information Meeting June 1, 2016 – Feedback Forms

21. **Public Input** - submissions from the public since 1st Reading given April 10, 2017
The District of North Vancouver
REPORT TO COUNCIL

May 4, 2018
File: 08.3060.20/001.16

AUTHOR: Darren Veres, Development Planner

SUBJECT: Amendment to Rezoning Bylaw 8209 - 229 Seymour River Place and 2015 Old Dollarton Road

RECOMMENDATION:

THAT "District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)" is given SECOND Reading, as amended;

AND THAT Bylaw 8209 is referred to a Public Hearing.

REASON FOR REPORT:

The reason for this report is to amend rezoning Bylaw 8209 as presented at First Reading and to respond to comments made by Council at First Reading. The entire First Reading report and Bylaws are found in Attachment 2 of this report. The proposed amendments involve adding 14 new live/work units along Old Dollarton Road and increasing the Community Amenity Contribution (CAC) (see Attachment 1). Council comments included concerns regarding the amount of commercial space proposed, the impact of the six-storey street wall along Old Dollarton Road, and the timing of Council consideration of the proposal occurring in advance of approval of Maplewood Village Centre Implementation Plan.

BACKGROUND:

Official Community Plan (OCP) Amending Bylaw 8208 and Rezoning Bylaw 8209 were given First Reading and referred to a Public Hearing on April 10, 2017 (see Attachment 2). At the time of First Reading, the Maplewood Village Centre Implementation Plan had not yet been approved. As a result, the review of the proposal had been informed and directed by the Maplewood Village Centre planning work that was underway at the time.

In response to Council concern regarding the timing of the application in relation to the approval of the Maplewood Plan, staff recommended to the applicant that the District postpone the Public Hearing until after the approval of the plan in order to ensure consistency.
between the proposal and the Plan. The applicant agreed and has made amendments to their proposal as a result of the approved Maplewood Plan.

The Maplewood Village Centre and Innovation District Implementation Plan and Design Guidelines was approved on November 6, 2017 and the Official Community Plan Amending Bylaw 8279 was adopted on February 5, 2018.

At the time of First Reading for this project’s Bylaws, the proposed uses and density of the project required an amendment to the OCP to designate the site Commercial Residential Mixed-Use Level 2 (CRMU Level 2). However, OCP amending Bylaw 8279 (Maplewood Village Centre Plan Land Use Amendments) re-designated the property to CRMU Level 2, which eliminated the need for this project to have an OCP amendment. As a result, Amending Bylaw 8208 has been abandoned at First Reading.

The site is currently zoned C2 which allows an FSR of 1.75 and the proposed zoning allows an FSR of 2.49.

ANALYSIS

Commercial Floor Space

At First Reading, Council expressed concern that the amount of commercial floor space proposed in the application was not sufficient considering Maplewood Village Centre’s focus on employment generation.

The application as presented at First Reading proposed 973m$^2$ (10,473 sq ft) of commercial space in eight commercial/retail units along the future shared street and wrapping the corner onto Front Street. The proposal also included seven live/work units fronting onto Front Street. The overall commercial floor area anticipated within the Village Centre during the life of the plan (not including the Innovation District) is approximately 9,290m$^2$ (100,000 sq ft). The amount of commercial proposed with this application is consistent with the overall vision for the village heart as identified in the Maplewood Plan.

In response to the newly approved plan and council comments, the applicant has revised their original proposal to include an additional 14 new live/work units along Old Dollarton Road which brings the total to 21 live/work units. These units will provide an opportunity for an additional 1,254m$^2$ (13,500 sq ft) of live/work commercial/retail space along Old Dollarton Road and Front Street in accordance with the Maplewood Village Plan concept for this site.
Community Amenity Contribution Increase

In acknowledgement of the change in the market value of the property since First Reading of the Bylaw in 2017, the applicant is proposing to increase the CAC from $200,000 to $500,000.

A redline version of Bylaw 8209 has been prepared to reflect these changes (see Attachment 1).

Old Dollarton Road Six-Storey Street Wall

Council also voiced concern regarding the perceived height of the six-storey street wall fronting onto Old Dollarton Road.

The building has been designed to reduce the massing and to create a transition from the higher density land use of the village centre heart to the existing townhouses across Dollarton Road by stepping back the top two floors by 1.8 m (6 ft). The stepback results in a four-storey street wall with set back upper stories (see images below).
Maplewood Village Centre and Innovation District Implementation Plan and Design Guidelines Compliance

The proposal as amended addresses the policy objectives identified in the Maplewood Village Centre and Innovation District Implementation Plan and Design Guidelines for this site as follows:

- Replaces the existing 28 purpose-built, market rental units;
- Provides an additional 10 non-market rental units;
- Supports mixed-use, medium density housing with 21 live/work options at street level with a total of 1,254m² (13,500 sq ft) of live/work commercial/retail space in these units;
- Focuses 973m² (10,473 sq ft) of local servicing commercial uses (in a mixed-use, street-oriented development along the shared street (Seymour River Place);
- Creates a rhythm of eight retail storefronts along the shared street;
- Provides retail uses fronting onto the future plaza and gathering space along the southern corner of the new shared street;
- Designed to be shared between pedestrians, slow-moving cyclists and vehicles and portions of the street can be easily closed to vehicular traffic for local markets and festivals; and
- Activates the "heart" of the village centre with streetscape design guidelines addressing civic improvements such as public plazas and art, coordinated street furniture, street trees and landscaping.

CONCLUSION:

This project as amended is consistent with the directions established in the District's OCP and Maplewood Village Centre and Innovation District Implementation Plan and Design Guidelines. It provides 14 new live/work units along Old Dollarton Road which increase the options for commercial/retail space in the Village Centre from 700m² (7,500 sq ft) on the site now to 2,227m² (23,971 sq ft) (total including live/work and retail) on the site. The building design is setback at the fourth floor along Old Dollarton Road to reduce the perceived height of the building. In addition, the applicant is proposing to increase the CAC to $500,000 in recognition of the change in market value of this site since First Reading of the project's Bylaws in April 2017.

The second reading amendment to Rezoning Bylaw 8209 is now ready for Council's consideration.
OPTIONS:

1) Give the bylaw Second Reading, as amended, followed by referral to a public hearing (staff recommendation);
2) Give the bylaw Second Reading as presented, followed by referral to a public hearing; or,
3) Give no further readings to the bylaw and abandon the bylaw at First Reading.

Darren Veres
Development Planner

Attachments:

1. Bylaw 8209 – Suggested Amendments Redlined
2. First Reading Report to Council Considered April 10, 2017

REVIEWED WITH:

- Sustainable Community Dev.
- Development Services
- Utilities
- Engineering Operations
- Parks
- Environment
- Facilities
- Human Resources
- Clerk’s Office
- Communications
- Finance
- Fire Services
- ITS
- Solicitor
- GIS
- Real Estate

External Agencies:
- Library Board
- NS Health
- RCMP
- NVRC
- Museum & Arch.
- Other:
The Corporation of the District of North Vancouver

Bylaw 8209

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

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

a) Citation

This bylaw may be cited as "The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)".

b) Amendments

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

a) Part 2A, Definitions is amended by adding CD 99 to the list of zones that Part 2A applies to.

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

"Comprehensive Development Zone 99 CD 99"

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

"4B99 Comprehensive Development Zone 99 CD 99"

The CD 99 zone is applied to:

225 to 247 Seymour River Place and 2015 to 2029 Old Dollarton Road

Legally described as:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702
b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699
c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule C
4B 99-1 Intent

The purpose of the CD 99 Zone is to establish specific land use and development regulations to permit a medium density commercial and residential mixed use development.

4B 99-2 Permitted Uses:

The following principal uses shall be permitted in the CD 99 Zone:

a) Uses Permitted Without Conditions:
   Not applicable.

b) Conditional Uses:
   The following principal uses are permitted when the conditions outlined in Section 4B 99-3 Conditions of Use, are met:

   i) live-work use;
   ii) office use;
   iii) personal service use;
   iv) residential use;
   v) restaurant use;
   vi) retail use; and,
   vii) service use.

4B 99-3 Conditions of Use

a) All conditional uses: All uses of land, buildings and structures are only permitted when the following condition of use is met:

   i) All aspects of the use are completely contained within an enclosed building except for:

      (1) Parking and loading areas;
      (2) Outdoor customer services areas;
      (3) The display of goods; and,
      (4) Outdoor amenity areas (plazas, roof decks, play areas, and private or semi-private outdoor space).

b) Residential and live-work: Residential uses and live-work uses are only permitted when the following conditions are met:

   i) A minimum of seven live work units are provided on Front St and 14 on Old Dollarton Road;
ii) Each dwelling unit has access to private or semi-private outdoor space; and,

iii) Balcony enclosures are not permitted; and,

iv) Each dwelling unit has exclusive access to a private storage space of a minimum size of 4.6 m² (50 sq. ft.).

c) **Live-work**: Live-work use is only permitted when the following condition is met:

i) A direct outside public entrance is provided; or

ii) An entrance onto a corridor that is open to the public, as in a commercial building, is provided.

d) **Office use; personal service use; restaurant use; retail use; and, service use** are limited to the ground floor.

e) **Residential uses** are only permitted when a minimum of 10,400 sq. ft. (966 m²) of ground floor commercial is provided in accordance with Schedule B.

4B 99 - 4 Accessory Use

a) **Home occupations** are permitted in **residential** dwelling units.

4B 99 - 5 Density:

a) The maximum permitted density in the CD 99 Zone is limited to a 1.75 floor space ratio and 40 residential units for a total floor space maximum of 4,645 m² (50,000 sq. ft.), inclusive of any density bonus for energy performance

b) For the purpose of calculating **gross floor area** the following are exempted:

   i) a common indoor amenity area that is accessory to the residential buildings permitted in this zone of up to 91 m² (980 sq. ft.) gross floor area; and,

   ii) individually secured bicycle storage lockers co-located with a bicycle work and repair station of up to 137 m² (1,475 sq. ft.) on each floor to a maximum of 592 m² (6,380 sq.ft.) gross floor area in total;

   iii) underground storage;

   iv) above grade mechanical areas up to a maximum of 41 m² (448 sq. ft.);

   v) area within parking garages, parking access areas, covered loading areas, roof deck areas, and common heating, mechanical, electrical, service and utility rooms; and,

   vi) The area of private balconies and covered patios in a building to a maximum area equal to 10% of the residential floor area in that building.
4B 99 - 6 Amenities:

a) Despite Subsection 4B99-5, permitted density in the CD 99 Zone may be increased to a maximum of 17,284 m² (186,050 sq. ft.) and a maximum of 195 residential units, inclusive of a minimum of any live-work units; and, inclusive of any density bonus for energy performance, if the owner completes the following:

i) Contributes $500,000 to the municipality to be used for any or all of the following amenities (with allocation and timing of expenditure to be determined by the municipality in its sole discretion):

   a. Improvements to public parks, plazas, trails and greenways, or other public realm improvements;
   b. Municipal facilities and facility improvements;
   c. Public art and other beautification projects; and,
   d. Affordable or special needs housing.

   A minimum of 964 m² (10,376 sq. ft.) of the total permissible gross floor area must be used for commercial purposes provided in accordance with Schedule B where commercial purposes includes any of the following permitted uses singly or in combination: personal service use, restaurant use, live-work and retail use.

   Enter into a Housing Agreement prohibiting any restrictions preventing the owners in the project from renting their units;

   Enters into a Housing Agreement securing a minimum of 38 residential rental units, of which a minimum of 10 residential rental units are secured as affordable;

   All residential units meet the basic accessible design criteria; at least 11 units must meet the enhanced accessible design criteria as outlined in the District of North Vancouver Council Policy: ‘Accessible Design Policy for Multi-Family Housing’; and,

4B 99-7 Setbacks

a) Buildings shall be set back from property lines to the closest building face, excluding any partially exposed underground parking structure, window wells, balcony columns, or projecting balconies, said projecting balconies not to exceed 0.9 m (3.0 ft) as established by development permit and in accordance with Figure 1:
4B 99-8 Coverage:

a) Maximum building coverage is 85%, not including parking or patios; and,

b) Maximum site coverage is 90%, not including parking or patios.

4B 99 - 9 Height

a) Maximum permitted height for any building in the CD 99 Zone, inclusive of a 15% bonus for any sloping roofs, shall be 22.5 m (74.0 ft) and may not exceed 6
storeys. For the purposes of this section building height shall be measured from the average grade to the highest point of the roof surface.

4B 99 - 10 Landscaping:

a) All land areas not occupied by buildings and patios must be landscaped in accordance with a landscape plan approved by the District of North Vancouver; and,

b) All electrical kiosks and garbage and recycling container facilities not located underground or within a building must be screened.

4B 99 - 11 Parking and Loading Regulations:

a) A minimum of 255 residential parking spaces are required and must be apportioned as follows:
   i. a minimum of 20 designated visitor parking spaces are required;
   ii. a minimum of 18 accessible parking spaces are required; and,
   iii. a maximum of 89 parking spaces may be small car spaces.

b) A minimum of 22 commercial parking spaces are required and must be apportioned as follows:
   i. a minimum of 1 accessible parking space is required.

c) All parking spaces shall meet the minimum width and length standards established in Part 10 of the Zoning Bylaw, exclusive of building support columns;

d) A minimum of 201 class 1 (long term secure) resident bicycle storage spaces must be provided;

e) A minimum of 58 class 2 (short term) visitor bicycle parking spaces must be provided and must be apportioned as follows:
   i. a minimum of 17 bicycle parking spaces for commercial use; and,
   ii. a minimum of 41 bicycle parking spaces for residential use."

2.2 The Zoning Map is amended in the case of the lands illustrated on the attached map (Schedule A) by rezoning the land from the General Commercial Zone 2 (C2) to Comprehensive Development Zone 99 (CD 99).
READ a first time April 10th, 2017.

PUBLIC HEARING held

READ a second time

READ a third time

Certified a true copy of "Rezoning Bylaw 1347 (Bylaw 8209)" as at Third Reading.

Municipal Clerk

APPROVED by the Ministry of Transportation and Infrastructure on

ADOPTED

Mayor

Municipal Clerk

Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8209

BYLAW 8209
The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)

GENERAL COMMERCIAL ZONE 2 (C2) TO COMPREHENSIVE DEVELOPMENT ZONE 99 (CD99)
Schedule B to Bylaw 8209

Sketch plan showing location of commercial use

MINIMUM 966 m² (10,400 sq. ft.)

LOCATION OF COMMERCIAL USE
Schedule C to Bylaw 8209

Sketch Plan
The District of North Vancouver
REPORT TO COUNCIL

March 31, 2017
File: 08.3060.20/001.16

AUTHOR: Natasha Letchford, Development Planner

SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

RECOMMENDATION

THAT "The District of North Vancouver Official Community Plan Bylaw 7900, 2011, Amendment Bylaw 8208, 2016 (Amendment 22)" (Bylaw 8208), to amend the Official Community Plan (OCP) from Commercial Residential Mixed Use Level 1 (CRMU1) to Commercial Residential Mixed Use Level 2 (CRMU2) be given FIRST reading;

AND THAT "The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)" to rezone the subject site from General Commercial Zone 2 (C2) to Comprehensive Development Zone 99 (CD99) be given FIRST reading;

AND THAT "Housing Agreement Bylaw 8210, 2016 (229 Seymour River Place)" be given FIRST reading;

AND THAT "Housing Agreement Bylaw 8227, 2017 (229 Seymour River Place)" be given FIRST reading;

AND THAT "Housing Agreement Bylaw 8238, 2017 (229 Seymour River Place)" be given FIRST reading;

AND THAT pursuant to Section 475 and Section 476 of the Local Government Act, additional consultation is not required beyond that already undertaken with respect to Bylaw 8208;

AND THAT in accordance with Section 477 of the Local Government Act, Council has considered Bylaw 8208 in conjunction with its Financial Plan and applicable Waste Management Plans

AND THAT Bylaw 8208 and Bylaw 8209 be referred to a Public Hearing.
SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

March 31, 2017

REASON FOR REPORT

The proposed project requires Council’s consideration of:

- Bylaw 8208 to amend the Official Community Plan (OCP)
- Bylaw 8209 to amend the zoning bylaw to a new CD99 Zone
- Bylaw 8210 to authorize entry into a Housing Agreement to secure 28 rental units as market rental in perpetuity
- Bylaw 8227 to authorize entry into a Housing Agreement to secure an additional 10 rental units as affordable rental in perpetuity
- Bylaw 8238 to authorize entry into a Housing Agreement to ensure owners of strata units are not prevented from renting their units

SUMMARY

The applicant proposes to redevelop two commercial lots with 700 m² (7,500 sq ft) of commercial space and 28 rental units (Maplewood Plaza) into a six storey mixed-use building comprising 193 residential units (172 apartments and 21 townhouses) and approximately 10,470 sq. ft. (973 m²) of commercial space. Included in the proposed residential units are 38 rental units, 10 of which would be secured as affordable rental units at CMHC Level 2 rent levels.

The proposal addresses District objectives for Affordable Housing, Accessibility, green building, tenant assistance, housing diversity, increased commercial in the heart of Maplewood Village, the Maplewood Village charrette concept, land for pedestrian and road connections, off-site infrastructure improvements and flood construction.
BACKGROUND

Maplewood Planning Process

The ongoing Maplewood planning process has informed and directed the review and development of this project. The preliminary development application was received in 2013, prior to the start of the Maplewood process. The detailed application for Maplewood Plaza was received in December 2015 with the understanding that changes could be needed in the project during the review process arising from the Maplewood planning process. The project has evolved in conjunction with Maplewood Village Centre community workshop / design charrette and is consistent with the direction received through the community workshop.

The Maplewood planning process is in Phase 3 which involves refining the direction provided to date into an implementation plan. It is not expected that the final implementation plan will change the vision for this site.
The site is 0.69 ha (1.7 acres) and shown by a yellow star in the image below. It is within the identified “Village Heart” shown by a faint red circle and is in good proximity to shops, services, and transit.

During the design charrette, the site was identified for a mix of live-work space, multi-family apartments, and commercial space. The project as proposed provides a mix of uses similar to those identified in the design charrette.

The project provides approximately 10,500 sq. ft. (975 m²) of commercial space near the corner of Front St. and the future shared pedestrian Seymour River Place. This results in an increase of commercial space on this site. This commercial space is important to help activate the Village Heart and will create a connection between the Village Heart and Northwoods Village to the south across Front St.
Retail and Commercial Need in Maplewood

To assist in reviewing this proposal relative to the anticipated need for commercial space in Maplewood, an economic study was conducted to examine the amount of commercial-retail that would be supported by the anticipated Maplewood population. A study on Maplewood Employment Lands was prepared by Rollo and Associates and Urban Systems in October 2016. The study found that 104,000 sq ft (9,662 m$^2$) of retail and commercial space will be supportable in Maplewood by 2031. The current OCP projection for a need of 100,000 sq ft (9,290 m$^2$) of commercial space is consistent with the findings of the Rollo and Associates and Urban Systems report. The 10,500 sq. ft. (975 m$^2$) of commercial space in this project represents an increase on this site and will contribute to the identified “Village Heart.” The new employees and residents brought to this area by this project will help support the emerging commercial area around Northwoods Village and Stong’s. Northwoods Village provides approximately 33,000 sq. ft. (3,066 m$^2$) of commercial retail space.

Pedestrian-friendly Seymour River Place

An important concept that emerged in the design charrette was the need for a pedestrian friendly north-south extension of Seymour River Place to connect Front St. to Northwoods Village (see red arrow in adjacent image pointing to this link). This is a key connection in the OCP’s integrated mobility network to create a pedestrian and cyclist-friendly link for destinations in Maplewood such as Maplewood Farm, Kenneth Gordon Maplewood School, and Northwoods Village.

This development proposal delivers land dedication to achieve this extension of Seymour River Place.
ANALYSIS AND PROJECT DESCRIPTION

Official Community Plan and Zoning Bylaw

The subject properties are designated Commercial Mixed Use Level 1 (CRMU1) in the OCP which allows for densities up to 1.75 FSR. The proposed OCP amendment bylaw (Bylaw 8208) would change the designation for these two properties to Commercial Mixed Use Level 2 (CRMU2) which allows for densities up to 2.50 FSR. Development with this designation may include residential or commercial uses, which encompass retail, office, and service uses.

The existing zoning is General Commercial Zone 2 (C2) which allows for a maximum FSR of 1.75. The floor space ratio (FSR) proposed is approximately 2.49.

In addition to an OCP amendment, a rezoning is required to accommodate the project and Bylaw 8209 proposes to create a new Comprehensive Development Zone 99 (CD99) tailored specifically to this project.

The OCP amendment and rezoning achieve the following:
- land dedications
- increase number of rental units
- 10 secured affordable rental units
- increased housing diversity
- community amenity contributions
- enhanced pedestrian and cycling connectivity
- accessible units

Site Plan and Building Description

The project consists of 193 residential units (21 townhouses and 172 apartments) and 10,473 sq. ft (973 m²) of commercial space. 7 of the 21 townhouses, located on Front St, are live-work units which respond well to the live-work units at Northwoods Village across the street. This project is separated into two six storey buildings over underground parking. The building adjacent to the north property line and the existing retail/commercial property to the north steps down to five storeys.
All residents in the buildings will have access to a large outdoor amenity and play space located on the second floor. This space is visible between the buildings in the site plan above.

Dwelling units are a mix of one to three bedroom layouts and range in size from 539 sq. ft. (52 m²) to 1,433 sq. ft. (133 m²). 85 units (44%) are 1 bedroom units, 99 units (51%) are 2 bedroom and 9 units (5%) are 3 bedroom.

The images below are photographs of the applicant's model of the project. These show the second floor outdoor amenity space as well as building entrances and building breaks along Old Dollarton and Front Street.
The streetscape along Old Dollarton Rd is envisioned to have future AAA bicycle facilities and an animated street where neighbours can walk and meet each other. The location of live-work townhouses on the ground level is well placed in this location and the addition of wide sidewalks and boulevard planting will soften the 6 floor building. The building itself is articulated with a rhythm of decks and windows. The main entrance at the central portion along Old Dollarton creates a generous building break.

Image looking north along Old Dollarton Rd, Rental and Affordable Housing Strategy

The proposed units are a mix of 1, 2, and 3 bedroom layouts, which will be attractive to individuals, families, and downsizers, responding to Goal #2 of the OCP to “encourage and enable a diverse mix of housing type, tenure, and affordability to accommodate the lifestyles and needs of people at all stages of life.”
The District’s recently adopted “Rental and Affordable Housing Strategy provides further direction on ways to achieve Goal #2 of the OCP, and this project addresses the six key areas of focus of the strategy in the following ways:

1. **Expand the supply and diversity of housing**
   - The number of residential units on this site is being increased from 28 units to 193 units. The existing units are all one bedroom units except for 1 two bedroom unit. The proposal provides a much greater mix of units than what is currently on site. Of the 193 proposed units, 108 or 56% of the units are 2 or 3 bedroom with the remaining 85 or 44% of the units being 1 bedroom units. The 38 rental units include 18 one bedroom units, 17 two bedroom units and 3 three bedroom units.

2. **Prioritize the retention of affordable housing outside centres**
   - This guideline does not apply as this project is within the Maplewood Village Centre.

3. **Enable the replacement of existing housing with conditions**
   - This project is providing a greater than 1:1 rental unit replacement. There are currently 28 rental units on site and the proposal includes 38 rental units, 10 of which will meet CMHC Level 2 affordability.

4. **Minimize impacts to tenants**
   - The applicant has worked closely with the existing tenants to provide tailored residential tenant relocation and assistance packages that address the requirements of the District’s "Residential Tenant Relocation Assistance" Policy.

5. **Expand the supply of new rental and affordable housing**
   - The number of rental units on the site will increase from 28 to 38 rental units, 10 of which will meet CMHC Level 2 affordability;
   - The rental units meet the objective of creating homes with good access to frequent transit, community services, retail, and employment;
   - A mix of unit types provided: 20 or 53% of the rental units are 2 and 3 bedroom and 18 or 47% of the units are 1 bedroom.

6. **Partner with other agencies to deliver affordable housing**
   - This project does not include a partnership with other agencies or levels of government as the applicant is the landowner and intends to operate both the market and the affordable rental units.

The project meets the key areas of focus of the Rental and Affordable Housing Strategy.
Housing Agreement Bylaws

Three Housing Agreement Bylaws are proposed:
- Bylaw 8210 will secure 28 market rental units for rental in perpetuity;
- Bylaw 8227 will secure 10 rental units at CMHC Level 2 affordability in perpetuity; and,
- Bylaw 8238 implements the "Strata Rental Protection Policy" and ensures future strata bylaws do not prevent owners of the remaining 155 market strata units from renting their units.

Bylaw 8227 to secure the 10 affordable rental units uses the CMHC Level 2 affordability level. The 2016 CMHC Level 2 represents the 65th rent percentile of rents for a given area. The table below provides the CMHC Level 2 affordability and eligible household incomes where the rent represents no more than 30% of the household income. The average rent (as stated by CMHC Rental Market Report – 2016) in North Vancouver and the existing rents at Maplewood Plaza are provided for comparison.

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<th></th>
<th>Average Rent (North Vancouver)</th>
<th>Existing Rent Maplewood Plaza</th>
<th>CMHC Level 2 Rent (Vancouver area)</th>
<th>Maximum Household Income</th>
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<td>$911 - $1,025</td>
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<td>$1,726</td>
<td>n/a</td>
<td>$1,525</td>
<td>$61,000</td>
</tr>
</tbody>
</table>

The "Strata Rental Protection Policy" applies to this project as the rezoning application would permit development of more than five units. The Housing Agreement Bylaw 8238 will ensure future strata bylaws do not prevent owners of the remaining 155 market strata units from renting their units.

Development Permit

The subject lots are included in the following Development Permit Areas:
- Form and Character of Multi-Family Development (Mixed Use Buildings)
- Creek Hazard
- Energy and Water Conservation and GHG Emission Reduction

Form and Character of Multi-Family Development (Mixed Use Buildings)

A detailed development permit report, outlining the project's compliance with the applicable DPA guidelines, will be provided for Council's consideration at the Development Permit stage should the OCP amendment, rezoning, and housing agreement bylaws be approved.

In addition, the project will be reviewed against the Maplewood Area Implementation Plan. The draft Maplewood Area Plan proposes an improved street cross-section for Old Dollarton Rd. to include a wide sidewalk, boulevard, and a AAA bike lane. The land dedications
proposed as part of this project will allow for the implementation of this vision for Old Dollarton Rd.

Creek Hazard

The site is included within the Development Permit area for Creek Hazard. The applicant has submitted a report from Northwest Hydraulic Consultants that details the flood construction level (FCL) and notes that no habitable space and mechanical or electrical equipment may be installed below the FCL. The District's Manager for Public Safety has reviewed and accepted the Northwest Hydraulic Consultants report. The proposal is designed to meet the FCL identified by the consultant and flood protection requirements will be secured by covenant.

Energy and Water Conservation and GHG Emission Reduction

Compliance with the District's Green Building Strategy is mandatory given the need for rezoning. The project must meet the 'gold' standard of a recognized green building, sustainability, and environmental design certification system. The project is targeting an energy performance rating of at least 5% improvement over baseline building performance rating based on ASHRAE 90.1 – 2010.

Landscape

Lanscaping for the project is proposed around the perimeter of the site and within the courtyard at the second floor level. The streetscape design includes street trees, boulevard plantings and sidewalks. The project includes a small plaza at the south-east corner of the site is planned to expand in future if the properties to the east redevelop. All residents have access to a large outdoor courtyard which includes an outdoor kitchen area with BBQ, a fire ring, seating areas, pathways, and a natural play area with a timber playhouse.
Parking

Parking is provided on three levels—two levels of underground and one enclosed level at grade. The proposal includes 255 residential stalls which results in 1.25 stalls per strata unit and 0.8 stalls per rental unit plus 0.1 stalls per unit (20 stalls) for visitors. The parking provided is consistent with the District’s policy for multifamily residential developments in town and village centres. The proposed commercial parking rate is 1/45m² of commercial space and the 22 spaces complies with Part 10 of the District Zoning Bylaw.

Bus service exists near the site along Old Dollarton Road, Riverside Drive, and Dollarton Hwy. The site is also within 400 m of a future frequent transit network as Old Dollarton Road is identified as a future frequent transit service route.

The parking structure is designed such that if the property to the north redevelops, access to that garage can be achieved via a knock-out panel. Signage on the knock-out panel will notify residents that future cross property access may occur.

All of the parking spaces will be wired for Electric Vehicle charging (level 1-110 V) and 20% of the parking spaces will have EV level 1 charging infrastructure installed. For the commercial component, 10% of the parking spaces will be wired for level 2 (240 V) charging and three parking spaces will have EV level 2 installed.

The proposal includes 201 residential Class 1 secure bicycle spaces (just over one space per unit) and 41 Class 2 (short term) bicycle spaces. The proposal also includes 17 Class 2 (short term) bicycle storage spaces for commercial use. An end of trip cycling facility is provided for the commercial units.

An area in the lower level of parking has been designated for the storage of oversized outdoor equipment such as kayaks or paddle boards.

In addition to the bicycle parking and storage noted above, and in recognition that many residents would prefer to have secure and accessible bicycle storage on the same level as their unit, the project includes 66 generously sized individual secure storage lockers on levels two through six. Within these bike spaces is a common area and work bench for individuals to work on their bicycles. The applicant anticipates that future residents would likely value this added amenity as the project is close to a large network of mountain bike trails and will be in the centre of an anticipated robust bike network in Maplewood. End of trip facilities and convenient bike storage will help facilitate this alternate mode of transportation.

Accessible Units

In response to the District’s "Accessible Design Policy for Multi-Family Housing", all apartment units will meet the basic accessible criteria and 10 will meet the enhanced criteria. One townhouse is proposed to meet the enhanced accessible criteria. Fourteen accessible parking stalls are proposed. The proposal meets the District’s policy in that 100% of the
apartment units will meet the basic accessible requirements and 5% of apartment units will meet the enhanced requirement.

Off-site improvements

The application includes improved street frontages with street tree plantings and streetlight upgrades, sidewalks, curb, gutter and paving improvements along Dollarton Rd., Front St., and Seymour River Pl. The project also includes sanitary sewer and storm sewer improvements.

The image below shows the 818 m² (8,805 sq ft) of land dedication on Old Dollarton Rd, Front St and Seymour River Place.

The road dedications will allow for the implementation of the vision for the streetscape emerging through the draft Maplewood Area plan including space for sidewalks, boulevards, and a future separated AAA bike lane on Old Dollarton Rd. The land on the east edge of the site will facilitate the realignment of Seymour River Place, for the future development of a large plaza, and for the creation of a pedestrian and cyclist friendly north-south connection.
Hazard Risk Evaluation

In 2012, Doug McCutcheon and Associates completed a preliminary study on land use in Maplewood with respect to the potential chemical hazard arising from existing industrial activities to the south.

This study included a recommendation on how far away residential use had to be from existing chemical industrial activities, without any building safety and mitigation measures, to ensure the safety of residents. Residential use was determined to be safe north of the $1 \times 10^{-6}$ risk contour line (shown in blue above).

The site is north (outside) of the $1 \times 10^{-6}$ risk contour line and as such there is no restriction on residential use and density on this site. In order to update the 2012 findings, as part of the application submission for this project, a further study was conducted by Doug McCutcheon and Associates in 2016 and confirmed that the proposal is north (outside) of the $1 \times 10^{-6}$ risk contour line and no building design changes are needed to ensure the safety of the residents. The only restriction in regards to the chemical hazard on this site is that no sensitive institutions, such as hospitals and aged care facilities, can be located on this site (green line above). There will be a covenant registered on title for this project ensuring no sensitive institutions are permitted on site.

COMMUNITY AMENITY CONTRIBUTION

A density increase from 1.75 FSR to 2.5 FSR is proposed for this site. A proforma was reviewed that demonstrated that the provision of rental housing, 10 affordable rental units and off-site works resulted in an amenity contribution of approximately $20,000. The proposal includes 38 rental units, 10 of which will be affordable. Despite the results of the proforma analysis, the applicant is providing a voluntary community amenity (CAC) of $200,000. It is anticipated that the CAC from this development will be directed toward public
IMPLEMENTATION

Implementation of this project requires consideration of an OCP amendment bylaw, (Bylaw 8208); a rezoning bylaw (Bylaw 8209); and three Housing Agreement bylaws (Bylaws 8210, 8227, and 8238) as well as issuance of a development permit and registration of legal agreements.

Bylaw 8208 (Attachment B) is an OCP amendment that would amend the designation for the site from Commercial Residential Mixed Use Level 1 (CRMU1) to Commercial Residential Mixed Use Level 2 (CRMU2).

Bylaw 8209 (Attachment C) rezones the subject site from General Commercial Zone 2 (C2) to a new comprehensive Development Zone 99 (CD99) which:
- Establishes the permitted residential and commercial uses;
- Establishes the maximum permitted floor area on the site;
- Establishes setback and building height regulations;
- Secures an amenity contribution of $200,000;
- Secures 38 rental units, including 10 affordable rental units;
- Incorporates acoustic requirements; and,
- Establishes parking regulations specific to this project.

Bylaws 8210 and 8227 (attachments D and E) authorize the District to enter into Housing Agreements to ensure that 38 of the proposed units remain available in perpetuity as rental and that 10 of those units remain available in perpetuity as affordable rental at CMHC Level 2. The third Housing Agreement Bylaw (Bylaw 8238) is to ensure that there are no rental restrictions placed on the remaining 155 units.

A legal framework will be required to support the project and it is anticipated that a development covenant will be used to secure items such as the details of off-site servicing. Additional legal documents required for the project will include:
- subdivision plan showing land dedications
- statutory right of way to secure public access to on-site plaza areas
- development covenant to reference the general form and layout of project as well as requirements for off-site servicing
- green building covenant
- stormwater management covenant
- creek hazard covenant
- chemical risk hazard covenant prohibiting any sensitive institutions
- covenant to secure accessible and acoustic design features
- covenant to specify that any unsold parking spaces be transferred to strata corporation
SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

March 31, 2017

- registration of housing agreement regarding prohibition of rental restrictions for strata units
- registration of housing agreement regarding 28 market rental units
- registration of housing agreement regarding 10 affordable rental units
- an easement securing the rights for future access to underground parking for the property to the north
- construction management plan and engineering servicing

Construction Traffic Management Plan

Impacts of future construction at this site have been reviewed and the applicant will be required to submit a comprehensive traffic management plan.

The map on the following page highlights the mix of projects under construction and anticipated within the Maplewood area. A preliminary planning application has been submitted for the neighbouring site at 2131 Old Dollarton Rd, (Maplewood Gardens). This proposal envisions a mixed use project and it will be reviewed in conjunction with the Maplewood Plan. Depending on timing of approvals, the applicants for the two projects will be required to coordinate efforts with regards to construction should their construction periods overlap. The applicant has submitted a draft construction management plan and will be required to provide a finalized construction management plan prior to issuance of a building permit. This plan must:

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

CONCURRENCE

Staff

The project was reviewed by staff from Environment, Permits, Parks, Engineering, Community Planning, Urban Design, the Municipal Solicitor, Transportation Planning, Fire Department, Public Safety, and the Arts Office.

Advisory Design Panel

The application was considered by the Advisory Design Panel on July 7, 2016 and the Panel recommended that revisions be made to the project and that it be returned to the Panel for a second presentation. The Panel expressed concerns regarding massing and building length.

The applicant submitted a redesigned proposal to the Panel on November 10, 2016. The redesigned proposal included a reduction of the number of units from 201 to 193 to help address the Panel's concerns regarding massing and building length. By reducing units the architect has created significant building breaks on Old Dollarton Rd and Front St. The resubmission also includes:

- improvements to the commercial and residential loading areas;
- improvements to the waste and recycling rooms;
- the addition of a second floor amenity space;
- an improved colour palette;
- the addition of resident courtyard pedestrian access from both Front St. and Seymour River Pl.; and,
- the inclusion of an end of trip commercial bike change room and shower.

Overall, the Panel was pleased with the revisions made in response to the July 7, 2016 Panel discussion. The Panel recommended approval of the project.
Staff are continuing to work with the applicant on design changes in advance of a Development Permit application proposal being submitted to Council for consideration.

PUBLIC INPUT:

Public Information Meeting

The applicant held a facilitated Public Information Meeting (PIM) on June 1, 2016. The meeting was attended by approximately 32 residents. A total of fourteen individuals spoke at the meeting. The overall tone was respectful and constructive.

Community members raised issues of concern including:
- building heights;
- timing of project in relation to the Maplewood planning process;
- loss of older rental units;
- potential for increased congestion; and,
- bicycle safety.

The facilitator’s report of the Public Information Meeting is included as Attachment A.

CONCLUSION

This project as proposed allows for the revitalization of a site near the proposed 'Village Heart' of Maplewood Village as well and assists in implementation of the District’s Official Community Plan objectives for diversity and affordability of housing. The project is consistent with the direction provided from Phase 1 and 2 of the Maplewood planning process.

The project is now ready for Council’s consideration.

Options

The following options are available for Council’s consideration:

1. Introduce Bylaws 8208, 8209, 8210, 8227, and 8238. Refer Bylaws 8208 and 8209 to a Public Hearing (staff recommendation); or,

2. Defeat the bylaws at First Reading and provide staff direction.

Natasha Letchford
Development Planner
SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

March 31, 2017

A. Facilitator's Report – Public Information Meeting
B. Bylaw 8208 – OCP amendment bylaw
C. Bylaw 8209 – Rezoning bylaw (CD99)
D. Bylaw 8210 – Housing Agreement Bylaw (market rental units)
E. Bylaw 8227 – Housing Agreement Bylaw (affordable rental units)
F. Bylaw 8238 – No Rental Restrictions

REVIEWED WITH:

- Sustainable Community Dev.
- Development Services
- Utilities
- Engineering Operations
- Parks
- Environment
- Facilities
- Human Resources
- Clerk's Office
- Communications
- Finance
- Fire Services
- ITS
- Solicitor
- GIS
- Real Estate

External Agencies:
- Library Board
- NS Health
- RCMP
- NVRC
- Museum & Arch.
- Other:

Document: 3127579
Maplewood Ltd. Partnership – 229 Seymour River Place – Maplewood Plaza

Public Information Meeting – June 1, 2016

Executive Summary

On June 1, 2016, Maplewood Ltd. Partnership hosted a Public Information Meeting at Kenneth Gordon Maplewood School, North Vancouver, regarding their proposed project at 229 Seymour River Place. Approximately 32 members of the community were in attendance.

The meeting objectives were to:

- To provide an overview of the 229 Maplewood Plaza Project
- To provide an opportunity for community input and comment on this project
- To follow up on the Owner initiated discussions with current rental occupants

The Public Information Meeting was successful in achieving the above objectives. Many participants took the opportunity to discuss the Maplewood Plaza Project on a one-on-one basis with project team members during the 30 minute Open House before the meeting. The project team then provided participants with a project overview through a PowerPoint presentation at the beginning of the large group session.

Community members had the opportunity to pose questions or provide feedback during a Q&A session following the PowerPoint presentation. Approximately fourteen individuals asked questions, offered feedback or identified issues of concern during the Q&A session. Issues and feedback raised during the Q&A session are included below in the Public Information Meeting Summary Report. Participants were also invited to complete comment sheets and submit them at the end of the meeting or send them in after the meeting. The comment sheets were collected by the District of North Vancouver representative.

The meeting was constructive and remained respectful in tone. Community members were curious about the project and offered their feedback willingly.
Summary of Findings

Following the presentations, participants were invited to ask questions or offer comments on the project. Fourteen individuals offered their feedback.

Community members raised issues of concern including: building heights, the timing of this project’s approval process in relation to the Maplewood planning process, replacing rental stock and providing affordable housing, and various traffic related issues (impact on street parking, potential for increased congestion and ensuring bicycle safety).

A summary of findings follows including issues of concern and comments. The next section documents each question, answer and comment.

Issues of Concern

- Building heights:
  - Questions and concern about building height relative to adjacent buildings
  - Concern about loss of viewscapes ("ancient light") due to increased building height
- Maplewood Area Planning process: Concern about the timing of the approval process for this project relative to the Maplewood Area Planning process.
- Rental and affordable housing: Concern about replacement of rental stock and provision of affordable housing
- Traffic management:
  - Concern about potential impact of project on street parking
  - Concern about contribution of new residents and retail traffic to congestion
  - Concern about provisions for bicycle routes and access given local volume of vehicle traffic.

Comments

- Comment: Curiosity about provisions for parking and bicycle amenities
- Comment: Question about considering building this project without parking
- Comment: Curiosity about communal spaces and potential for community gardens
- Comment: Curiosity about provisions for managing construction-related traffic
Public Information Meeting Summary

Welcome and Project Presentation

Keith Hemphill of Rositch Hemphill Architects provided an overview of the proposed site plan and building design and Daryl Tyacke of ETA Landscape Architects described the landscaping concept.

Question and Answer Session

Following the presentations, participants were invited to ask questions or offer comments on the project. The following questions, comments and issues were raised:

1. **Q1: Street Parking**: How much parking are you providing and what will the impact be on street parking?
   **A1**: We have had a thorough parking and traffic analysis study done by a consultant who works on these projects. The project will provide 286 parking stalls, broken down into with 22 commercial stalls, 243 residential stalls and 21 residential visitor stalls. All of that parking is contained within the site and within the parking levels already described. We don’t rely on street parking for any of our projects. There is some parking on Front Street and on the future extension of Seymour. The future of this parking will depend in part on what the District decides about the Seymour River Place extension. They are currently proposing to have some street level parking. The development across the street with Strong’s have substantial surface parking for commercial use.

2. **Comment: Street Parking**: Concern about insufficient street parking currently available on Front Street and whether this project will exacerbate an existing issue.
   **Response**: Street parking is up to the District. For this project, we have 3 levels of parking and all required parking is contained within the site. This is different than across the street which was developed under different rules. We are working on a project that is designed to accommodate a higher density. We are not advertising Front Street parking.

3. **Q2: Parking**: How many parking stalls per unit?
   **A2**: There are 243 residential parking stalls for 201 units (approx. 1.2 stalls per unit).

4. **Q3: Bicycles**: Are you going to provide amenities for bicycles?
   **A3**: We are meeting bylaw requirements for bicycle parking. We are also providing bicycle parking for commercial users.
5. **Q4: Commercial parking:** How many parking spots for commercial?
   **A4:** 22 commercial stalls for 10,545 square feet, as per the bylaw.

6. **Q5: Building Height:** This building has 6 floors when most other buildings have 4. Why is this?
   **A5:** We are working towards a rezoned FSR (floor space ratio of 2.5). This is the ratio of floor area to site area. Achieving this density cannot happen on one floor but rather needs to happen on a number floors. In this case, to get this density, we are working with 6 floors. We are also part of a rethinking of the Maplewood Village through the planning process just launched by the DNV. The OCP shows that there will be significant changes to density which will allow and require a larger number of storeys: more than 4. When we did the Great West Life site, we studied what all the proposed densities in the OCP would look like. The vast majority of those sites had 6 floors or more. So that's a product of lots of new thinking and the planning of Maplewood Village.

Comment 5b: I'm concerned that in trying to meet a FSR you will look for a building with greater height. *(More of the same – can't hear clearly because of microphone issues)* People live around here because they like the scenery. They don't want it to look like downtown Vancouver or Toronto. A 4-storey building would be more in keeping with what we are used to.

**Response:** Your concerns relate to more than the building itself: they relate to the economics of the project, to the viability of the project, to the District goals for the densification of Maplewood Village (through the District's process). The number of storeys is a result of the density. There are a number of ways to put density on a site, we could put a 26-storey building that is tall and skinny and have more green space, but when we hear from the public at these meetings, they don't want tall, skinny buildings. So it is a matter of balancing the various forces to meet the District's goals and the neighbourhood's goals, etc. It is not just one project. But this project is early in the Maplewood process, and it is only one building. As a result, it stands out more than it would if it were seen in the context of what will ultimately be there when the District's master plan is fulfilled.

7. **Q6: Gathering spaces:** Do all of the apartments have balconies. And within the landscaping and green spaces, are there benches and gathering places?
   **A6:** The generous centre area is geared towards a communal gathering space. We're showing tables and benches, a fire pit, a play area for kids and a hard space for kids. The intention is that this is a community space. As well, there are terraces that front onto that space as well so that will be an added layer. Also, we have
layered back at the level above the commercial and at other upper storeys. So each unit will have a balcony and a substantial number of units will also have a broader terrace which is made bigger as a result of the setbacks. Please have a look at the model to see this.

8. **Comment: Community gardens:** You mentioned sustainability earlier. But I don’t see any mention of gardens or a place where people could teach children how to garden.

**Response:** You are right. That is not currently shown. We have not developed the rooftops. There are a substantial number of balconies and terraces where people will have space to do this on their own. The main garden area is anticipated to be a fairly shady area and doesn’t lend itself to urban agriculture.

**Comment:** Maplewood Farm has a community garden and I am sure that people who wanted that kind of thing could go there.

9. **Q7: Marketing this property without parking:** I wondered if you had considered marketing this property without parking. There is good transit nearby and people are complaining about parking. But from my point of view, you are adding a lot more cars to this area. I have looked at the DNV transportation plan. It says they don’t see an increase in traffic in 20 years’ time. But if you build it, they will come. If people buying these apartments and working downtown, it is pretty quick to get there by transit. We could market these areas close to central transit by forgoing the parking, reducing the price, and reducing the amount of concrete. And the transportation problems on the North Shore are not getting any better.

**A7:** No, we didn’t consider doing the project without parking. We have considered that approach in other projects in areas where there is serious, transit oriented development. The transit system close to Maplewood is not sufficient to eliminate cars. In this area, people will still rely on their cars. The first reason we can’t do it is because it is required by the bylaw. But as we move towards more sustainable living principles, we can make improvements towards bicycle lanes that improve that method of transportation. And we can promote pedestrian traffic and walkability. We are also looking to concentrate amenities in areas close to development and only a pedestrian stroll away. Maplewood Farm is a stroll away. Other things we can do is encourage car-sharing so that we don’t have physical cars waiting around. It is difficult to consider these kinds of principles one project at a time. It is also important to consider the relationship between transit and the types of density and uses nearby. We are not ignoring sustainability, but we cannot do the project without parking.
10. **Q8: Question for DNV:** At the Maplewood planning meeting, I thought they said that Council wouldn’t approve any new projects until the Maplewood Planning process has been done. Also, I read in the Council meeting minutes that they wouldn’t approve any new projects beyond those already approved for development.

**A8:** The preliminary application for this project was received in 2009 and the most recent development permit application was received last year, long before the Maplewood planning process started. This application is being considered concurrently with the planning process. This project is early in the detailed stage so any feedback in relation to this project will inform that process. The next step will be having the project reviewed by the Advisory Design Panel.

11. **Q9: Rental stock replacement:** In your designs, are you going to replace the rental stock that will be removed? Will you be maintaining the same amount of square footage or the same number of units?

**A9:** There are currently 28 rental units. The proposal will replace all of those units and add ten more. There will be a greater number of rental units than there are now. The balance of the development will be condos.

12. **Q10: Affordability:** My first thought when I saw the notice about this meeting was what would happen to those people currently living in those apartments, presumably in affordable housing. What will happen to them?

**A10:** That is a big issue and a very big issue in the District. As a result, it triggered an affordable housing study to establish policy regarding affordable housing and other work in the District. Our clients have been working very closely with the current tenants to assist them with transition planning and financial questions, and to provide some financial assistance. There have been lots of meetings and discussions. Not all of the 28 units are currently occupied. But the client is working with those living there to assist them to implement the transition plan.

13. **Q11: Construction parking:** How will the parking of workers and movement of construction trucks during construction impact existing buildings and neighbours?

**A11:** There is an impact around a neighbourhood when a building is built. But developers must put together a construction traffic plan specific to the period of construction. This is designed by traffic consultants and reviewed and approved by the District. The developer must show that existing businesses are not going to be cut off. A lot of work goes into construction traffic planning. That has yet to yet to be completely implemented for this project.
14. Q12: Bicycle Routes: Turning from Dollarton Highway onto the Old Dollarton Road, making a left turn north, there is very little space allotted to bicycles. There is all this talk about cycle paths but it is difficult to negotiate these routes.

A12: In terms of other bike routes and special lanes for bikes, these issues come from the District. Much of that is dictated to us. Because your District is implementing the Maplewood process, that is the time and place to voice and discuss these concerns. For this project, we cannot directly address these issues. But you can have more influence at that planning process.

Comment: (Longer explanation and request for more thought to pedestrian and bicycle access and safety in this area – hard to hear) I compliment you for putting your entrance off of Front Street and not on Dollarton which would involve trying to dart across that road.

15. Q13: Affordable Housing: Any plans for social or affordable housing for disabled or disenfranchised residents?

A13: Yes, part of the plan is finding a partner to assist in managing the 10 units of affordable housing. Our clients have agreed to provide 10 units. These are in addition to the other rental units.

16. Q14a: Building height: I am not in favour of the height of this building; the extra two storeys. Has there been any thought to acquiring the additional piece of property at the north east end that is privately owned. Couldn’t the footprint be enlarged by purchasing that property to reduce the height?

A14: Every effort was made to do that. But the owner of that property and the owner of this development were not able to come to agreement about how to do that. What we did do was ensure that if and when that piece of land is ever developed in the future, that they could potentially share the driveway access to the underground to minimize the impact to the neighbours. But that is as much as they can do without owning the property.

Comment 14b: I am very concerned about the loss of ancient light. This property is 6 storeys tall and the next one could be 8 storeys tall. In this area, this isn't fair to the neighbours.

Response: That is why the DNV is doing the Maplewood area plan. So by all means, go to those meetings.
Next Steps and Closing Comments

Natasha Letchford, Community Planner with the DNV, outlined the next steps in this process. The next steps for this project is to go to the Advisory Design Panel which is a council appointed committee who will review the design of this building at a meeting this summer. This project is also following in step with the Maplewood process and any input in relation to this project will also inform the Maplewood planning process.

Participants were reminded to submit comments via the written comment forms, email or fax to Natasha Letchford at the District of North Vancouver (nletchford@dnv.org) by June 17, 2016.
The Corporation of the District of North Vancouver

Bylaw 8208

A bylaw to amend the District of North Vancouver Official Community Plan Bylaw 7900, 2011

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

1. Citation

This bylaw may be cited as "The District of North Vancouver Official Community Plan Bylaw 7900, 2011, Amendment Bylaw 8208, 2016 (Amendment 22)".

2. Amendments

2.1 The District of North Vancouver Official Community Plan Bylaw 7900, 2011 is amended as follows:

   a) Map 2 Land Use by changing the land use designation from Commercial Residential Mixed-Use Level 1 to Commercial Residential Mixed-Use Level 2 as illustrated on Schedule B with respect to the following lands:

      i. Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702;

      ii. Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699; and,

      iii. the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A

   b) Map 2 Land Use: as illustrated on Schedule B, by changing the land use designation of the properties on Map 2 from Commercial Residential Mixed-Use Level 1 to Commercial Residential Mixed-Use Level 2

READ a first time by a majority of all Council members.

PUBLIC HEARING held

READ a second time by a majority of all Council members.

READ a third time by a majority of all Council members.

ADOPTED by a majority of all Council members.
Mayor

Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8208

Sketch Plan

[Diagram of land parcel with labels and measurements]
Schedule B to Bylaw 8208

BYLAW 8208
The District of North Vancouver Official Community Plan Bylaw 7900 (2011)
Amendment Bylaw 8208, 2016 (Amendment 22)

COMMERCIAL RESIDENTIAL MIXED USE LEVEL 1 (CRMU 1) TO COMMERCIAL RESIDENTIAL MIXED USE LEVEL 2 (CRMU 2)
The Corporation of the District of North Vancouver

Bylaw 8209

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

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

a) Citation

This bylaw may be cited as "The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)".

b) Amendments

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

a) Part 2A, Definitions is amended by adding CD 99 to the list of zones that Part 2A applies to.

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

"Comprehensive Development Zone 99 CD 99"

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

"4B99 Comprehensive Development Zone 99 CD 99"

The CD 99 zone is applied to:

225 to 247 Seymour River Place and 2015 to 2029 Old Dollarton Road

Legally described as:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702

b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule C
4B 99-1 Intent

The purpose of the CD 99 Zone is to establish specific land use and development regulations to permit a medium density commercial and residential mixed use development.

4B 99-2 Permitted Uses:

The following principal uses shall be permitted in the CD 99 Zone:

a) Uses Permitted Without Conditions:
   Not applicable.

b) Conditional Uses:
   The following principal uses are permitted when the conditions outlined in Section 4B 99-3 Conditions of Use, are met:
   i) live-work use;
   ii) office use;
   iii) personal service use;
   iv) residential use;
   v) restaurant use;
   vi) retail use; and,
   vii) service use.

4B 99-3 Conditions of Use

a) All conditional uses: All uses of land, buildings and structures are only permitted when the following condition of use is met:

   i) All aspects of the use are completely contained within an enclosed building except for:

      (1) Parking and loading areas;
      (2) Outdoor customer services areas;
      (3) The display of goods; and,
      (4) Outdoor amenity areas (plazas, roof decks, play areas, and private or semi-private outdoor space).

b) Residential and live-work: Residential uses and live-work uses are only permitted when the following conditions are met:

   i) A minimum of seven live work units are provided on Front St;
   ii) Each dwelling unit has access to private or semi-private outdoor space; and,
iii) Balcony enclosures are not permitted.
iv) Each dwelling unit has exclusive access to a private storage space of a minimum size of 4.6 m² (50 sq. ft.).

c) **Live-work:** Live-work use is only permitted when the following condition is met:
   i) A direct outside public entrance is provided; or
   ii) An entrance onto a corridor that is open to the public, as in a commercial building, is provided.

d) **Office use; personal service use; restaurant use; retail use; and, service use** are limited to the ground floor.

e) **Residential uses** are only permitted when a minimum of 10,400 sq. ft. (966 m²) of ground floor commercial is provided in accordance with Schedule B.

### 4B 99 - 4 Accessory Use

a) **Home occupations** are permitted in residential dwelling units.

### 4B 99 - 5 Density:

a) The maximum permitted density in the CD 99 Zone is limited to a 1.75 floor space ratio and 40 residential units for a total floor space maximum of 4,645 m² (50,000 sq. ft.), inclusive of any density bonus for energy performance.

b) For the purpose of calculating gross floor area the following are exempted:

   i) a common indoor amenity area that is accessory to the residential buildings permitted in this zone of up to 91 m² (980 sq. ft.) gross floor area; and,

   ii) individually secured bicycle storage lockers co-located with a bicycle work and repair station of up to 137 m² (1,475 sq. ft.) on each floor to a maximum of 592 m² (6,380 sq.ft.) gross floor area in total;

   iii) underground storage;

   iv) above grade mechanical areas up to a maximum of 41 m² (448 sq. ft.);

   v) area within parking garages, parking access areas, covered loading areas, roof deck areas, and common heating, mechanical, electrical, service and utility rooms; and,

   vi) The area of private balconies and covered patios in a building to a maximum area equal to 10% of the residential floor area in that building.
4B 99 - 6 Amenities:

a) Despite Subsection 4B99-5, permitted density in the CD 99 Zone may be increased to a maximum of 17,284 m² (186,050 sq. ft.) and a maximum of 195 residential units, inclusive of a minimum of any live-work units; and, inclusive of any density bonus for energy performance, if the owner completes the following:

i) Contributes $200,000 to the municipality to be used for any or all of the following amenities (with allocation and timing of expenditure to be determined by the municipality in its sole discretion):

   a. Improvements to public parks, plazas, trails and greenways, or other public realm improvements;
   b. Municipal facilities and facility improvements;
   c. Public art and other beautification projects; and,
   d. Affordable or special needs housing.

ii) A minimum of 964 m² (10,376 sq. ft.) of the total permissible gross floor area must be used for commercial purposes provided in accordance with Schedule B where commercial purposes includes any of the following permitted uses singly or in combination: personal service use, restaurant use, live-work and retail use.

iii) Enters into a Housing Agreement prohibiting any restrictions preventing the owners in the project from renting their units;

iv) Enters into a Housing Agreement securing a minimum of 38 residential rental units, of which a minimum of 10 residential rental units are secured as affordable;

v) All residential units meet the basic accessible design criteria; at least 11 units must meet the enhanced accessible design criteria as outlined in the District of North Vancouver Council Policy: 'Accessible Design Policy for Multi-Family Housing'; and,

4B 99-7 Setbacks

a) Buildings shall be set back from property lines to the closest building face, excluding any partially exposed underground parking structure, window wells, balcony columns, or projecting balconies, said projecting balconies not to exceed 0.9 m (3.0 ft) as established by development permit and in accordance with Figure 1:
4B 99-8 Coverage:

a) Maximum building coverage is 85%, not including parking or patios; and,

b) Maximum site coverage is 90%, not including parking or patios.

4B 99 - 9 Height

a) Maximum permitted height for any building in the CD 99 Zone, inclusive of a 15% bonus for any sloping roofs, shall be 22.5 m (74.0 ft) and may not exceed 6
storeys. For the purposes of this section building height shall be measured from the average grade to the highest point of the roof surface.

4B 99 - 10 Landscaping:

a) All land areas not occupied by buildings and patios must be landscaped in accordance with a landscape plan approved by the District of North Vancouver; and,

b) All electrical kiosks and garbage and recycling container facilities not located underground or within a building must be screened.

4B 99 - 11 Parking and Loading Regulations:

a) A minimum of 255 residential parking spaces are required and must be apportioned as follows:
   
   i. a minimum of 20 designated visitor parking spaces are required;
   
   ii. a minimum of 18 accessible parking spaces are required; and,
   
   iii. a maximum of 89 parking spaces may be small car spaces.

b) A minimum of 22 commercial parking spaces are required and must be apportioned as follows:

   i. a minimum of 1 accessible parking space is required.

   ii. a maximum of 201 class 1 (long term secure) resident bicycle storage spaces must be provided;

   iii. A minimum of 58 class 2 (short term) visitor bicycle parking spaces must be provided and must be apportioned as follows:

   i. a minimum of 17 bicycle parking spaces for commercial use; and,

   ii. a minimum of 41 bicycle parking spaces for residential use.

2.2 The Zoning Map is amended in the case of the lands illustrated on the attached map (Schedule A) by rezoning the land from the General Commercial Zone 2 (C2) to Comprehensive Development Zone 99 (CD 99).
READ a first time

PUBLIC HEARING held

READ a second time

READ a third time

Certified a true copy of “Rezoning Bylaw 1347 (Bylaw 8209)” as at Third Reading

Municipal Clerk

APPROVED by the Ministry of Transportation and Infrastructure on

ADOPTED

___________________________  __________________________
Mayor                                           Municipal Clerk

Certified a true copy

___________________________
Municipal Clerk
Schedule A to Bylaw 8209

BYLAW 8209
The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)

GENERAL COMMERCIAL ZONE 2 (C2) TO COMPREHENSIVE DEVELOPMENT ZONE 99 (CD99)
Schedule B to Bylaw 8209

Sketch plan showing location of commercial use

Minimum 966 m² (10,400 sq. ft.)

Location of commercial use
Schedule C to Bylaw 8209

Sketch Plan
The Corporation of the District of North Vancouver

Bylaw 8210

A bylaw to enter into a Housing Agreement (229 Seymour River Place)

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

1. Citation

This bylaw may be cited as "Market Rental Housing Agreement Bylaw 8210, 2016 (229 Seymour River Place)".

2. Authorization to Enter into Agreement

The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Fonnie International Investments Ltd. substantially in the form attached to this Bylaw as Schedule "B" with respect to the following lands:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702;

b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699; and,

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A.

3. Execution of Documents

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

READ a first time

READ a second time

READ a third time

ADOPTED

Mayor                                              Municipal Clerk
Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8210

SKETCH PLAN
Schedule B to Bylaw 8210

HOUSING AGREEMENT

HOUSING AGREEMENT
(28 Market Rental Units)

This agreement dated for reference the ___ day of _____________, 20__ is

BETWEEN:

FONNIE INTERNATIONAL INVESTMENTS LTD. (Inc. No. BC0255927),
a company incorporated under the laws of the Province of British Columbia
having an office at 2700 – 700 West Georgia Street, Vancouver, BC V7Y 1B8

(the “Owner”)

AND:

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

(the “District”)

WHEREAS:

A. The Owner is the registered owner of the parcels of land in the District of North
Vancouver legally described as:

(a) Parcel Identifier 002-491-699 Lot G Block 18 District lot 193 Plan 20080;
(b) Parcel Identifier 002-491-702 Lot H Block 18 District lot 193 Plan 20080; and
(c) [Insert legal description for the portion of closed road].

(collectively, referred to herein as the “Lands”);

B. The Owner wishes to obtain development permissions with respect to the Lands and
wishes to create a development containing a range of residential and commercial uses and
associated civic and community uses, including 28 market rental units;

C. Section 219 of the Land Title Act permits the registration of a covenant of a negative or
positive nature in favour of the District in respect of the use of land, construction on land
or the subdivisions of land;

D. Section 483 of the Local Government Act permits the District to enter into a housing
agreement with an owner of land, which agreement may include terms and conditions
regarding the occupancy, tenure and availability of dwelling units located on the Land; and

E. The Owner and the District wish to enter into this Agreement to restrict the use of, and construction on, the Lands on the terms and conditions of this agreement, to have effect as a housing agreement under section 483 of the *Local Government Act*.

NOW THEREFORE in consideration of the sum of $10.00 now paid by the District to the Owner and other good and valuable consideration, the receipt and sufficiency of which the Owner hereby acknowledges, the parties covenant and agree pursuant to Section 219 of the *Land Title Act* (British Columbia) as follows:

1. **DEFINITIONS**

**Definitions**

1.01 In this agreement:

(a) "*Development Covenant*" means the section 219 covenant registered under number ___ at the LTO against the Owners title to the Lands in favour of the District;

(b) "*Director*" means the District's General Manager of Planning, Properties and Permits and his or her designate;

(c) "*Discharges*" has the meaning given to it in section 2.02 herein;

(d) "*Dwelling Unit*" means a residential strata lot in the Proposed Buildings;

(e) "*Gross Floor Area*" has the meaning given to it in the District's Zoning Bylaw 3210, 1965, as amended and consolidated from time to time;

(f) "*Lands*" has the meaning given to it in Recital B herein;

(g) "*LTO*" means the Lower Mainland Land Title Office and any successor of that office;

(h) "*Market Rental Units*" means 28 Dwelling Units, consisting of 12 one-bedroom units, 14 two-bedroom units and 2 three-bedroom units, said rental units to be designed, located and configured in accordance with the requirements and approvals set out in this Agreement and in the Development Covenant;

(i) "*Proposed Buildings*" means the proposed buildings to be constructed on the Lands as described in the Development Covenant; and

(j) "*Strata Corporation*" means the strata corporation established pursuant to the *Strata Property Act* (British Columbia) upon registration at the LTO of a strata plan to stratify the Proposed Buildings, once constructed.

2. **THE MARKET RENTAL UNITS**

**Owner's Covenants**
2.01 The Owner covenants and agrees with the District that:

(a) the Lands will not be developed for residential purposes and no residential building or structure will be constructed on the Lands unless as part of the construction and development of any such building or structure, the Owner also designs and constructs to completion, in accordance with a building permit issued by the District and in accordance with the Development Covenant and a development permit issued by the District, the Market Rental Units;

(b) the Market Rental Units must be designed and constructed to the same standard, in terms of Gross Floor Area, layout, workmanship and materials, as the balance of the Dwelling Units in the Proposed Buildings on the Lands;

(c) the accessibility features as set out in the Development Covenant will be incorporated in each of the Market Rental Units; and

(d) the Owner will do everything necessary, at the Owner's expense, to ensure that this Agreement will be registered as a section 219 covenant and rent charge against title to the Lands in priority to all financial charges and encumbrances at the earliest possible opportunity after execution and delivery by the District.

Discharge Provision

2.02 At the request of the Owner and at the Owner's sole expense, the District will deliver to the Owner discharges (collectively, the "Discharges") in registrable form discharging this Agreement from each Dwelling Unit and any other strata lot created by the strata subdivision of the Proposed Buildings that is not a Market Rental Unit, provided that the District may withhold delivery of the Discharges until after the District has received from the Strata Corporation its duly authorized agreement that it will not take any action that would result in an inability to rent the Market Rental Unit in accordance with this Agreement or would render such rental a breach of the Strata Corporation bylaws.

Limitation on Discharges

2.03 The District will be under no obligation to provide the Discharges unless the Director is satisfied that the Owner has met all of its obligations under section 2.02 of this Agreement, has completed the construction of the Market Rental Units in accordance with the requirements in section 2.01 and the Development Covenant, and has obtained occupancy permits for all of the Dwelling Units, including the Market Rental Units, in the Proposed Buildings.

Effect of Discharge

2.04 Any Dwelling Unit against which this section 219 Housing Agreement Covenant remains as a charge after deposit at the LTO of the Discharges will be deemed to be an Market Rental Unit under this Agreement

No Separate Sale

2.05 The Market Rental Units are not to be sold or otherwise transferred separately.
Rental Housing

2.06 The Market Rental Units may not be used or occupied for any purpose whatsoever save and except for the purpose of providing rental accommodation (and ancillary services such as parking and storage) to tenants pursuant to month-to-month residential tenancy agreements or residential tenancy agreement with terms not exceeding one year in duration, where said tenancy agreements comply with all of the requirements of this Agreement.

Tenancy Agreements

2.07 The Owner shall not suffer, cause or permit occupancy of any Market Rental Unit except pursuant to a residential tenancy agreement that:

(a) does not require the rent to be prepaid at an interval greater than monthly; and

(b) prohibits the tenant from subletting the unit, assigning the tenancy agreement, or operating the unit on a short term rental basis (less than one month).

3. DEFAULT AND REMEDIES

Notice of Default

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

Costs

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

Damages

3.03 The Owner acknowledges that the District requires rental housing for the benefit of the community. The Owner therefore agrees that for each day the Lands are occupied in breach of this Agreement, the Owner must pay the District $100.00 (the “Daily Amount”), as liquidated damages and not as a penalty, due and payable at the offices of the District on the last day of the calendar month in which the breach occurred. The Daily Amount is increased on January 1 of each year by the amount calculated by multiplying the Daily Amount as of the previous January 1 by the percentage increase between that previous January 1 and the immediately preceding December 31 in the Consumer Price Index. The Owner agrees that payment may be enforced by the District in a court of competent jurisdiction as a contract debt.

Rent Charge
3.04 By this section, the Owner grants to the District a rent charge under section 219 of the Land Title Act, and at common law, securing payment by the Owner to the District of the amounts described in section 3.03. The District agrees that enforcement of the rent charge granted by this section is suspended until the date that is 30 days after the date on which any amount due under section 3.03 is due and payable to the District in accordance with section 3.03. The District may enforce the rent charge granted by this section by an action for an order for sale or by proceedings for the appointment of a receiver.

Specific Performance

3.05 The Owner agrees that, without affecting any other rights or remedies the District may have in respect of any breach of this Agreement, the District is entitled to obtain an order for specific performance of this agreement and a prohibitory or mandatory injunction in respect of any breach by the Owner of this Agreement. The Owner agrees that this is reasonable given the public interest in restricting occupancy of the Lands in accordance with this Agreement.

No Penalty or Forfeiture

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

Cumulative Remedies

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

4. LIABILITY

Indemnity

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

Release

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

Survival

4.03 The covenants of the Owner set out in Sections 4.01 and 4.02 will survive termination of this Agreement and continue to apply to any breach of the Agreement or claim arising under this Agreement during the ownership by the Owner of the Lands or any Dwelling Unit therein, as applicable.

5. GENERAL PROVISIONS

District’s Power Unaffected

5.01 Nothing in this Agreement:

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

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

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

Agreement for Benefit of District Only

5.02 The Owner and District agree that:

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

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any Occupant or any future owner, occupier or user of any part of the Proposed Buildings including any Dwelling Unit; and

(c) The District may at any time execute a release and discharge of this Agreement in respect of the Proposed Buildings or any Dwelling Unit therein, without liability to anyone for doing so.
**Agreement Runs With the Lands**

5.03 This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Dwelling Unit after the date of this Agreement. Notwithstanding anything contained herein, the Owner shall not be liable under any of the covenants and agreements contained herein where such liability arises by reason of an act or omission occurring on the Lands or a portion thereof after the Owner ceases to own the Lands or such portion thereof.

**Release**

5.04 The covenants and agreements on the part of the Owner and herein set forth in this Agreement have been made by the Owner as contractual obligations as well as being made pursuant to Section 905 of the *Local Government Act* (British Columbia) and as such will be binding on the Owner, except that neither the Owner shall be liable for any default in the performance or observance of this Agreement occurring after the Owner ceases to own the Lands or the Market Rental Units as the case may be.

**Priority of this Agreement**

5.05 The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Dwelling Unit in the Proposed Building in priority to all financial charges, including any amendments to this Agreement as may be required by the LTO or the District to effect such registration, subject to the discharge provisions contained herein.

**Agreement to Have Effect as Deed**

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

**Waiver**

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

**Time**

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

**Validity of Provisions**

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

Extent of Obligations and Costs

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

Notices

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

If to the District:

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

Attention: Clerks Department
Facsimile: (604) 984-9637

If to the Owner:

Attention:
Facsimile: (604)

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request; if made by facsimile transmission, on the first business day after the date when the facsimile transmission was transmitted; and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

Further Assurances

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

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

6. INTERPRETATION

References

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

Construction

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

No Limitation

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

Terms Mandatory

6.04 The words “must” and “will” are to be construed as imperative.

Statutes

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

Entire Agreement

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

6.07 This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw [Redacted].
Governing Law

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

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

END OF DOCUMENT
The Corporation of the District of North Vancouver

Bylaw 8227

A bylaw to enter into a Housing Agreement (229 Seymour River Place)

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

1. Citation

This bylaw may be cited as "Affordable Rental Housing Agreement Bylaw 8227, 2017 (229 Seymour River Place)".

2. Authorization to Enter into Agreement

The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Fonnie International Investments Ltd. substantially in the form attached to this Bylaw as Schedule “B” with respect to the following lands:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702;

b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699; and

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A.

3. Execution of Documents

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

READ a first time

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk
Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8227
Sketch Plan
Schedule B to Bylaw 8227

HOUSING AGREEMENT

(10 Affordable Rental Units)

This agreement dated for reference the ___ day of _____________, 20___ is

BETWEEN:

FONNIE INTERNATIONAL INVESTMENTS LTD. (Inc. No. BC0255927),
a company incorporated under the laws of the Province of British Columbia
having an office at 2700 – 700 West Georgia Street, Vancouver, BC V7Y 1B8

(the “Owner”)

AND:

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

(the “District”)

WHEREAS:

A. The Owner is the registered owner of the parcels of land in the District of North
Vancouver legally described as:

(a) Parcel Identifier 002-491-699 Lot G Block 18 District lot 193 Plan 20080;
(b) Parcel Identifier 002-491-702 Lot H Block 18 District lot 193 Plan 20080; and
(c) [Insert legal description for the portion of closed road].

(collectively, referred to herein as the “Lands”);

B. The Owner wishes to obtain development permissions with respect to the Lands and
wishes to create a development containing a range of residential and commercial uses and
associated civic and community uses, including ten affordable rental units;

C. Section 219 of the Land Title Act permits the registration of a covenant of a negative or
positive nature in favour of the District in respect of the use of land, construction on land
or the subdivisions of land;

D. Section 483 of the Local Government Act permits the District to enter into a housing
agreement with an owner of land, which agreement may include terms and conditions
regarding the occupancy, tenure and availability of dwelling units located on the Lands; and

E. The Owner and the District wish to enter into this Agreement to restrict the use of, and construction on, the Lands on the terms and conditions of this agreement, to have effect as a housing agreement under section 483 of the Local Government Act,

NOW THEREFORE in consideration of the sum of $10.00 now paid by the District to the Owner and other good and valuable consideration, the receipt and sufficiency of which the Owner hereby acknowledges, the parties covenant and agree pursuant to section 219 of the Land Title Act (British Columbia) as follows:

1. DEFINITIONS

Definitions

1.01 In this agreement:

(a) "Affordable Rental Units" means 10 Dwelling Units, consisting of 5 one-bedroom units, 4 two-bedroom units and 1 three-bedroom unit, said affordable rental units to be designed, located and configured in accordance with the requirements and approvals set out in this Agreement and in the Development Covenant;

(b) "Consumer Price Index" means the all-items consumer price index published by Statistics Canada, or its successor in function, for Vancouver, where ___ = 100;

(c) "Development Covenant" means the section 219 covenant registered under number _____ at the LTO against the Owner's title to the Lands in favour of the District, which said Development Covenant stipulates, among other things, that: no occupancy permit will be issued for any Dwelling Unit unless and until the Owner has granted to the District the RFR and the RFR is registered at the LTO against the title to the Affordable Rental Units in priority to all financial charges and encumbrances;

(d) "Director" means the District's General Manager of Planning, Properties and Permits and his or her designate;

(e) "Discharges" has the meaning given to it in section 2.02 herein;

(f) "Dwelling Unit" means a residential strata lot in the Proposed Buildings;

(g) "Eligibility Requirement" means aggregate annual household gross income that is less than or equal to 333% of the annual rent for the unit proposed to be rented (which rent, for greater certainty, may not be greater than the Maximum Rent for the unit), where said aggregate income is established by way of true copies of the previous year's income tax forms for each household member or individual who will reside in the unit;
(h) "First Occupancy" means the first occupancy of each of the Affordable Rental Units pursuant to residential tenancy agreements in accordance with section 2.08, which said First Occupancy continues until the tenant vacates the premises whether or not the tenant has entered into a new or revised residential tenancy agreement with the Owner and whether or not the term of the residential tenancy agreement is otherwise extended or renewed;

(i) "Gross Floor Area" has the meaning given to it in the District’s Zoning Bylaw 3210, 1965, as amended and consolidated from time to time;

(j) "Lands" has the meaning given to it in Recital B herein;

(k) "LTO" means the Lower Mainland Land Title Office and any successor of that office;

(l) "Maximum Rate" means:

(i) for the first year of each First Occupancy and for the first year of each Subsequent Occupancy monthly rent for each of the Affordable Rental Units equal to the 65th percentile of monthly market rent for one, two or three bedroom Dwelling Units, as applicable, in Vancouver as determined by CMHC for the most recent six month period, or if CMHC no longer provides this information then as determined by an appropriate replacement real estate market data gathering organization acceptable to the District;

(ii) in the second and subsequent years of each First Occupancy and each Subsequent Occupancy, an amount equal to the rent for the preceding year of the occupancy multiplied by a fraction the numerator of which is the Consumer Price Index for the month immediately prior to the commencement of the Lease Year and the denominator of which is the Consumer Price Index for the same month one year earlier; and

(iii) Notwithstanding subsections 1.01 (l)(i) and 1.01(l)(ii) above, if the rent mandated by any potential rental rate ceiling established by a senior level of government is less than the rent calculated in accordance with said subsections, then Maximum Rent shall mean the mandated rent;

(m) "Proposed Buildings" means the proposed buildings to be constructed on the Lands as described in the Development Covenant;

(n) "RFR" means the right of first refusal to purchase the Affordable Rental Units to be granted by the Owner to the District in accordance with the Development Covenant and this Agreement, which said RFR will be substantially in the form attached hereto as Schedule “A”;
(o) "Strata Corporation" means the strata corporation established pursuant to the Strata Property Act (British Columbia) upon registration at the LTO of a strata plan to stratify the Proposed Buildings, once constructed; and

(p) "Subsequent Occupancy" means any occupancy of an Affordable Rental Unit after the First Occupancy pursuant to residential tenancy agreements in accordance with this section 2.08, which said Subsequent Occupancy continues until the tenant vacates the premises whether or not the tenant has entered into a new or revised residential tenancy agreement with the Owner and whether or not the term of the residential tenancy agreement is otherwise extended or renewed.

2. THE AFFORDABLE RENTAL UNITS

Owner's Covenants

2.01 The Owner covenants and agrees with the District that:

(a) the Lands will not be developed for residential purposes and no residential building or structure will be constructed on the Lands unless as part of the construction and development of any such building or structure, the Owner also designs and constructs to completion, in accordance with a building permit issued by the District and in accordance with the Development Covenant and a development permit issued by the District, the Affordable Rental Units;

(b) the Affordable Rental Units must be designed and constructed to the same standard, in terms of Gross Floor Area, layout, workmanship and materials, as the balance of the Dwelling Units in the Proposed Buildings on the Lands;

(c) the accessibility features as set out in the Development Covenant will be incorporated in each of the Affordable Rental Units;

(d) the Owner will do everything necessary, at the Owner's expense, to ensure that this Agreement will be registered as a section 219 covenant and rent charge against title to the Lands in priority to all financial charges and encumbrances at the earliest possible opportunity after execution and delivery by the District; and

(e) the Owner will do everything necessary, at the Owner's expense, to ensure that the RFR will be registered against title to the Affordable Rental Units in priority to all financial charges and encumbrances in accordance with the Development Covenant and this Agreement.

Discharge Provision

2.02 At the request of the Owner and at the Owner's sole expense, the District will deliver to the Owner discharges (collectively, the "Discharges") in registrable form discharging this Agreement from each Dwelling Unit and any other strata lot created by the strata subdivision of the Proposed Buildings that is not an Affordable Rental Unit, provided that the District may withhold delivery of the Discharges until after the District has received
from the Strata Corporation its duly authorized agreement that it will not take any action that would result in an inability to rent the Affordable Rental Unit in accordance with this Agreement or would render such rental a breach of the Strata Corporation bylaws.

Limitation on Discharges

2.03 The District will be under no obligation to provide the Discharges unless the Director is satisfied that the Owner has met all of its obligations under section 2.02 of this Agreement, has completed the construction of the Affordable Rental Units in accordance with the requirements in section 2.01 and the Development Covenant, and has obtained occupancy permits for all of the Dwelling Units, including the Affordable Rental Units, in the Proposed Buildings.

Effect of Discharge

2.04 Any Dwelling Unit against which this section 219 Housing Agreement Covenant remains as a charge after deposit at the LTO of the Discharges will be deemed to be an Affordable Rental Unit under this Agreement.

No Separate Sale

2.05 The Affordable Rental Units are not to be sold or otherwise transferred separately.

Rental Housing

2.06 The Affordable Rental Units may not be used for any purpose whatsoever save and except for the purpose of providing rental accommodation (and ancillary services such as parking and storage) to tenants meeting the Eligibility Requirement pursuant to month-to-month residential tenancy agreements or residential tenancy agreements with terms not exceeding one year in duration, where said tenancy agreements comply with all of the requirements of this Agreement.

Occupancy Restriction

2.07 No Affordable Rental Unit may be occupied except by:

(a) a person meeting the Eligibility Requirement pursuant to month-to-month residential tenancy agreements or residential tenancy agreement with terms not exceeding one year in duration that complies with section 2.08; and

(b) the other members of the person’s household, provided that the income of all members is included in the determination of eligibility under the Eligibility Requirement.

Tenancy Agreements
2.08 The Owner shall not suffer, cause or permit occupancy of any Affordable Rental Unit except pursuant to a residential tenancy agreement that:

(a) is entered into by the Owner and, as tenant, a person at arm's length from the Owner. For the purpose of this Agreement, "at arm's length" means:

(i) not in any other contractual relationship with the Owner or any director, officer or other senior employee of the Owner;

(ii) unrelated by blood, marriage or personal relationship to any director, officer or other senior employee of the Owner; and

(iii) not employed by any corporate entity that is an affiliate of the Owner, as that term is defined in the British Columbia Business Corporations Act as of the date of this Agreement,

provided that the District may, in its sole discretion, relax the restrictions contained in this subsection 2.08(a) upon the written request of the Owner on a case-by-case base. Any such relaxation in relation to any particular residential tenancy agreement is not to be construed as or constitute a waiver of the requirements in relation to any other residential tenancy agreement. No relaxation of the restrictions in this subsection 2.08(a) will be effective unless it is granted in writing by the District prior to the execution and delivery of the residential tenancy agreement to which the relaxation relates;

(b) does not require payment of rent or any other consideration for the Affordable Rental Unit directly or indirectly that exceeds the Maximum Rate for the unit;

(c) does not require the rent to be prepaid at an interval greater than monthly;

(d) prohibits the tenant from subletting the unit, assigning the tenancy agreement, or operating the unit on a short term rental basis (less than one month);

(e) requires the tenant to provide within 30 days of demand true copies of the most recent filed income tax returns or assessment notices from Canada Revenue Agency for each occupant of the unit; and

(f) contains a provision that, if the tenant ceases to qualify for the Affordable Rental Unit because he or she no longer meets the Eligibility Requirement, the Owner may end the tenancy agreement by giving the tenant a clear month's notice to end the tenancy in accordance with section 49.1 of the Residential Tenancy Act (or successor legislation).

Housing List and Guidelines

2.09 The Owner must:
(a) prepare guidelines, criteria and procedures for determining eligibility for occupancy of an Affordable Rental Unit, which may include a minimum household income requirements of not less than 200% of the rent for the unit in question (which rent, for greater certainty, may not be greater than the Maximum Rent for that unit);

(b) accept applications for Affordable Rental Units from all applicants who meet the Eligibility Requirement and satisfy the guidelines, criteria and procedures established by the Owner under subsection 2.09(a);

(c) maintain a housing list of eligible applicants from whom the Owner has accepted applications for residential occupancy of an Affordable Rental Unit and who have been denied an Affordable Rental Unit as a result of a lack of vacancy;

(d) where an Affordable Rental Unit becomes available for occupancy, offer the units to persons on the housing list in the order in which their applications were made, unless:

   (i) the person no longer meets the Eligibility Requirement; or

   (ii) the Owner does not consider the person to be an acceptable candidate for occupancy of that Affordable Rental Unit because the person does not satisfy the guidelines, criteria and procedures established by the Owner under subsection 2.09(a); and

(e) make the housing list the guidelines, criteria and procedures established by the Owner under subsection 2.09(a) available to the District upon request.

Compliance with Laws

2.10 The Owner will at all times ensure that the Affordable Rental Units are used and occupied in compliance with all statutes, laws, regulations, and orders of any authority having jurisdiction and without limiting the generality of the foregoing all bylaws of the District and all federal, provincial, municipal or local laws, statutes or ordinances relating to environmental matters, including all rules, regulations, policies, guidelines, criteria or the like promulgated under or pursuant to any such laws.

Duty to Account and Report

2.11 In addition to the other covenants and obligations to be performed by the Owner hereunder, the Owner covenants and agrees that it will:

(a) provide the District, by March 1 of each year, a full report on the rental of the Affordable Rental Units and revenue received therefrom during the preceding calendar year; and

(b) deliver to the District, on request of the District, copies of all current tenancy agreements in respect of the Affordable Rental Units.
Statutory Declaration

2.12 Within three days after receiving notice from the District, the Owner must deliver to the District a statutory declaration, substantially in the form attached as Schedule “B”, sworn by the Owner under oath before a commissioner for taking affidavits in British Columbia, containing all of the information required to complete the statutory declaration.

3. DEFAULT AND REMEDIES

Notice of Default

3.01 The District may, acting reasonably, give to the Owner written notice to cure a default under this Agreement within 90 days of receipt of notice. The notice must specify the nature of the default. The Owner must act with diligence to correct the default within the time specified.

Costs

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

Damages

3.03 The Owner acknowledges that the District requires affordable rental housing for the benefit of the community. The Owner therefore agrees that for each day the Lands are occupied in breach of this Agreement, the Owner must pay the District $100.00 (the “Daily Amount”), as liquidated damages and not as a penalty, due and payable at the offices of the District on the last day of the calendar month in which the breach occurred. The Daily Amount is increased on January 1 of each year by the amount calculated by multiplying the Daily Amount as of the previous January 1 by the percentage increase between that previous January 1 and the immediately preceding December 31 in the Consumer Price Index. The Owner agrees that payment may be enforced by the District in a court of competent jurisdiction as a contract debt.

Rent Charge

3.04 By this section, the Owner grants to the District a rent charge under section 219 of the Land Title Act, and at common law, securing payment by the Owner to the District of the amounts described in section 3.03. The District agrees that enforcement of the rent charge granted by this section is suspended until the date that is 30 days after the date on which any amount due under section 3.03 is due and payable to the District in accordance with section 3.03. The District may enforce the rent charge granted by this section by an action for an order for sale or by proceedings for the appointment of a receiver.

Specific Performance

3.05 The Owner agrees that, without affecting any other rights or remedies the District may have in respect of any breach of this Agreement, the District is entitled to obtain an order
for specific performance of this agreement and a prohibitory or mandatory injunction in respect of any breach by the Owner of this Agreement. The Owner agrees that this is reasonable given the public interest in restricting occupancy of the Lands in accordance with this Agreement.

No Penalty or Forfeiture

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

Cumulative Remedies

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

4. LIABILITY

Indemnity

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

Release

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

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

5. GENERAL PROVISIONS

District's Power Unaffected

5.01 Nothing in this Agreement:

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

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

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

Agreement for Benefit of District Only

5.02 The Owner and District agree that:

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

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any Occupant or any future owner, occupier or user of any part of the Proposed Buildings including any Dwelling Unit; and

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

Agreement Runs With the Lands

5.03 This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Dwelling Unit after the date of this Agreement. Notwithstanding anything contained herein, the Owner shall not be liable under any of the covenants and agreements contained herein where such liability arises by reason of an act or omission occurring on the Lands or a portion thereof after the Owner ceases to own the Lands or such portion thereof.
Release

5.04 The covenants and agreements on the part of the Owner and herein set forth in this Agreement have been made by the Owner as contractual obligations as well as being made pursuant to section 905 of the Local Government Act (British Columbia) and as such will be binding on the Owner, except that neither the Owner shall be liable for any default in the performance or observance of this Agreement occurring after the Owner ceases to own the Lands or the Affordable Rental Units as the case may be.

Priority of this Agreement

5.05 The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Dwelling Unit in the Proposed Building in priority to all financial charges, including any amendments to this Agreement as may be required by the LTO or the District to effect such registration, subject to the discharge provisions contained herein.

Agreement to Have Effect as Deed

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

Waiver

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

Time

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

Validity of Provisions

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

Extent of Obligations and Costs

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

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

If to the District:

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

Attention: Clerks Department
Facsimile: (604) 984-9637

If to the Owner:

Attention:
Facsimile: (604)

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request; if made by facsimile transmission, on the first business day after the date when the facsimile transmission was transmitted; and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

Further Assurances

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

Enuring Effect

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

6. INTERPRETATION

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

Construction

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

No Limitation

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

Terms Mandatory

The words “must” and “will” are to be construed as imperative.

Statutes

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

Entire Agreement

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

This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8210.

Governing Law

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

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

GIVEN THAT:

A. (the "Owner") is the Registered Owner of the Land described in Item 2 of Page 1 of the Form C (the "Land");

B. The Owner granted (the "Prior Chargeholder") a Mortgage and Assignment of Rents registered against title to the Land in the Lower Mainland Land Title Office (the "LTO") under Nos. ________, as extended by ________ and ________, as extended by ________ (together, the "Prior Charge");

C. The Owner granted THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER (the "District") a Covenant and Rent Charge attached to this Agreement and registered against title to the Land in the LTO immediately before registration of this Agreement (together, the "Subsequent Charge"); and

D. Section 207 of the Land Title Act permits the Prior Chargeholder to grant priority over a charge to the District as Subsequent Chargeholder.

THEREFORE this Agreement is evidence that in consideration of $1.00 and other good and valuable consideration received by the Prior Chargeholder from the District (the receipt and sufficiency of which the Prior Chargeholder acknowledges):

1. The Prior Chargeholder consents to the granting and registration of the Subsequent Charge and the Prior Chargeholder agrees that the Subsequent Charge shall be binding upon their interest in and to the Land.

2. The Prior Chargeholder grants to the District, as a Subsequent Chargeholder, priority for the Subsequent Charge over the Prior Chargeholder's right, title and interest in and to the Land, and the Prior Chargeholder postpones the Prior Charge and all of their right, title and interest thereunder to the Subsequent Charge as if the Subsequent Charge had been executed, delivered and registered prior to the execution, delivery and registration of the Prior Charge.

As evidence of its agreement to be bound by the terms of this instrument, the Prior Chargeholder has executed the Land Title Act Form C to which this Agreement is attached and which forms part of this Agreement.
SCHEDULE "A"

RIGHT OF FIRST REFUSAL

THIS AGREEMENT dated for reference the ___ day of ___________, 2013

BETWEEN:

(the “Owner”)

AND:

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER, a municipality incorporated under the Local Government Act and having its office at 355 West Queens Rd, North Vancouver, BC V7N 4N5

(the “District”)

THIS AGREEMENT is evidence that in consideration of payment of $10.00 by the District to the Owner and other and valuable consideration, the receipts of which is acknowledged by the Owner, the Owner grants to the District a right of first refusal (the “RFR”) to purchase the Strata Lots (hereinafter defined) on the following terms and conditions:

1. Definitions – In this Agreement:

   (a) “Arm’s length” has the same meaning as that term has in the Income Tax Act of Canada and amending Acts;

   (b) “Bona Fide Offer” means an offer to purchase the Strata Lots:

       (i) in writing;

       (ii) signed by an Outside Offeror;

       (iii) only in their entirety and no other property, rights or assets;

       (iv) in a form legally enforceable against the Outside Offeror and subject to no conditions which are not capable of being waived by the Outside Offeror;

       (v) providing for a deposit of not less than 10% of the proposed purchase price within 72 hours of the removal or waiver of all conditions; and

       (vi) providing that if the District does not exercise its right of first refusal as set forth in this Agreement, the Outside Offeror will grant to the District a right of first refusal (the “New RFR”) to purchase the Strata Lots upon the same terms and conditions as are set forth in this Agreement;
(c) "Business Day" means Monday to Friday inclusive except for those excluded days declared by lawful authority as holidays, excluding any day that the LTO is not open for business;

(d) "Expiry Time" with respect to any offer made by the Owner to the District under section 4, will be 5:00 PM in the afternoon on the 30th Business Day after receipt by the District of such offer. In determining such time the day such offer is received will be excluded;

(e) "LTO" means the Lower Mainland Land Title Office or its successor;

(f) "New RFR" has the meaning given to it in subsection 1(b)(vi);

(g) "Outside Offeror" means a purchaser or prospective purchaser of all ten of the Strata Lots who deals at arm's-length with the Owner;

(h) "Strata Lots" means the ten strata parcels described in Item 2 of the Form C General Instrument Part I to which this Agreement is attached and which forms part of this Agreement; and

(i) "Term" means that period of time from and after the date of this Agreement to and including January 1, 2114.

2. Restrictions on Sale – During the Term, the Owner will not sell, transfer or otherwise convey any of the Strata Lots except:

   (a) for consideration payable entirely in lawful money of Canada;

   (b) to an Outside Offeror;

   (c) pursuant to a Bona Fide Offer; and

   (d) in accordance with, and to the extent permitted by, the terms of this Agreement.

3. Notice of Bona Fide Offer – If, at any time and from time to time during the Term, the Owner receives a Bona Fide Offer from an Outside Offeror, which Bona Fide Offer the Owner is willing to accept, then the Owner will deliver written notice (the "Notice") immediately to the District that the Owner has received such Bona Fide Offer, and listing the liens, charges and encumbrances subject to which the Strata Lots are to be conveyed, and will deliver to the District with the Notice a photocopy of such Bona Fide Offer, certified by the Owner to be a true copy.

4. Notice as Offer – The Notice will be deemed to constitute an offer by the Owner to the District to sell the Strata Lots to the District on and subject to all the terms and conditions set forth in such Bona Fide Offer, except that if the Owner is not the first registered owner of the Strata Lots the purchase price will be the lesser of: (a) the price set forth in such Bona Fide Offer; or (b) $__________, being the actual price paid by ______________ for the Strata Lots.
5. **Offer Irrevocable** – The offer by the Owner to the District under section 4 will be irrevocable and may not be withdrawn by the Owner until after the Expiry Time.

6. **Acceptance of Offer** – Upon receipt of the Notice, the District will have the exclusive first right, exercisable up to and including but not after the Expiry Time, to deliver to the Owner written notice (the “Acceptance”) that the District will purchase the Strata Lots upon the terms and conditions set forth in such Bona Fide Offer for a purchase price equal to the price set forth in such Bona Fide Offer or, if the Owner is not the first registered owner of the Strata Lots, for a purchase price equal to the lesser of: (a) the price set forth in such Bona Fide Offer; or (b) $_____________, again being the actual price paid by _______ for the Strata Lots.

7. **Contract of Purchase and Sale** – Upon receipt by the Owner of the Acceptance, a binding contract of purchase and sale for the Strata Lots will be constituted between the Owner and the District, which contract will be completed in the manner provided in such Bona Fide Offer as if the District were the Outside Offeror.

8. **Sale to Outside Offeror** – If the Owner does not receive the Acceptance before the Expiry Time, then the Owner may complete the sale to the Outside Offeror as provided for in such Bona Fide Offer in strict compliance with the terms respectively set forth in the Bona Fide Offer. In such case, the District will cause its solicitors to deliver a discharge of this Agreement to the solicitors for the Owner on receipt of satisfactory undertaking from the solicitors for the Owner that the discharge will only be registered if that sale to the Outside Offeror is completed strictly in compliance with the terms of the Bona Fide Offer and as an all or nothing package including the New RFR. If the sale to the Outside Offeror is not so completed, then any subsequent sale to any person or corporation may be made only if all the requirements of the Agreement are again complied with, and the RFR will survive and continue in full force and effect.

9. **Notices** – All notices required or permitted to be given under this Agreement will be in writing and will be given by personal service or by prepaid registered post, at the following addresses:

(a) If to the Owner:

Attention:

(b) If to the District

The Corporation of the District of North Vancouver
355 West Queens Rd
North Vancouver, BC V7N 4N5

Attention: Municipal Clerk

Fax: (604) 984-9637
or to such other address as either party may provide in writing to the other under this Agreement. Any notice will be deemed to have been received by the party to whom it is addressed if personally served, when served, and if mailed, on the fourth Business Day after such mailing provided that if mailed, a mail strike, slowdown, labour or other dispute which might affect delivery of such notice by mails, then such notice will only be effective if actually delivered.

10. **Time** – Time is of the essence.

11. **Governing Law** – This Agreement will be governed and construed in accordance with the laws of the Province of British Columbia.

12. **References** – Wherever the singular or masculine is used in this Agreement the same will be deemed to include references to the plural, feminine or body corporate, as the case may be.

13. **Construction** – The division of this Agreement into sections, and the insertion of headings are for convenience or reference only and are not to effect the construction or interpretation of this Agreement.

14. **Enurement** - This Agreement will enure to the benefit of and be binding upon the respective successors, heirs, executors, administrators and assigns of the parties.

15. **Execution** - By executing and delivering this Agreement each of the parties intends to create both a contract and a deed executed and delivered under seal.

As evidence of their agreement to be bound by the terms of this instrument, the parties each have executed and delivered this Agreement under seal by executing Part 1 of the *Land Title Act* Form C to which this Agreement is attached and which forms part of this Agreement.
SCHEDULE “B”

Statutory Declaration

IN THE MATTER OF A HOUSING AGREEMENT with the District of North Vancouver ("Housing Agreement")

CANADA

PROVINCE OF BRITISH COLUMBIA

I, _______________ OF ___________________________ British Columbia, do solemnly declare:

1. That I am the Owner of the ten strata Lots legally described as [insert legal] and make this declaration to the best of my personal knowledge.

[or]

That I am the ________ (director, officer, employee) of the Owner of the ten strata lots legally described as [insert legal] and [make this declaration to the best of my personal knowledge] [have been informed by __________________ and believe the statement in this declaration to be true].

2. This declaration is made pursuant to the Housing Agreement in respect of the four strata lots.

3. For the period from ____________ to ____________, all of the aforesaid strata lots were occupied by Eligible Persons, whose names and addresses appear below, and in accordance with the Housing Agreement.

<table>
<thead>
<tr>
<th>Name of Eligible Person</th>
<th>Other Resident(s) of Dwelling Unit</th>
<th>Apt. No.</th>
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</tbody>
</table>

4. I make this solemn declaration, conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and pursuant to the Canada Evidence Act.

SWORN BEFORE ME at the ____________, in the Province of British Columbia, this __ day of _________________ 20__,

__________________________
Signature of person making declaration

A Commissioner for Taking Affidavits for British Columbia

- END OF DOCUMENT -
The Corporation of the District of North Vancouver

Bylaw 8238

A bylaw to enter into a Housing Agreement (229 Seymour River Place)

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

1. Citation

This bylaw may be cited as “No Rental Limit (except Short Term Rentals) Housing Agreement Bylaw 8238, 2017 (229 Seymour River Place).”

2. Authorization to Enter into Agreement

The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Fonnie International Investments Ltd. substantially in the form attached to this Bylaw as Schedule B with respect to the following lands:

a) Parcel Identifier 002-491-699 Lot G Block 18 District Lot 193 Plan 20080;

b) Parcel Identifier 002-491-702 Lot H Block 18 District Lot 193 Plan 20080; and

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A.

3. Execution of Documents

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

READ a first time

READ a second time

READ a third time

ADOPTED

Mayor ___________________________ Municipal Clerk ___________________________
Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8238
Schedule B to Bylaw 8238

SECTION 219 COVENANT – HOUSING AGREEMENT

(No Rental Limit)

SECTION 219 COVENANT – HOUSING AGREEMENT
{NO RENTAL LIMIT}

This agreement is dated for reference the ___ day of __________, 20__

BETWEEN:

FONNIE INTERNATIONAL INVESTMENTS LTD. (Inc. No. BC0255927) a company incorporated under the laws of the Province of British Columbia having an office at 2700 – 700 West Georgia Street, Vancouver, BC V7Y 1B8

(the "Developer")

AND:

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

(the "District")

WHEREAS:

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

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

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

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

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

1. **DEFINITIONS**

1.01 Definitions

In this agreement:

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

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

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

(d) "Proposed Development" means the proposed development containing not more than 195 units to be constructed on the Lands in accordance with the Development Permit;

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

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

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

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

2. **TERM**

This Agreement will commence upon adoption by District Council of Bylaw 8238 and remain in
effect until terminated by the District as set out in this Agreement.

3. **RENTAL ACCOMODATION**

3.01 Rental Disclosure Statement

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

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

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

3.02 Rental Accommodation

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

3.03 Binding on Strata Corporation

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

3.04 Strata Bylaw Invalid

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

3.05 No Bylaw

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

3.06 Vote

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

3.07 Notice

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

4.01 Notice of Default

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

4.02 Costs

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

4.03 Damages an Inadequate Remedy

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

4.04 Equitable Remedies

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

4.05 No Penalty or Forfeiture

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

4.06 Cumulative Remedies

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

5.01 **Indemnity**

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

5.02 **Survival**

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

6. **GENERAL PROVISIONS**

6.01 **District’s Power Unaffected**

Nothing in this Agreement:

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

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

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

6.02 **Agreement for Benefit of District Only**

The Owner and District agree that:

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

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any occupant of any Unit or any future owner, occupier or user of any part of the Proposed Development, including any Unit, or the interests of any third party, and the District has no obligation to anyone to enforce the terms of this Agreement; and
(c) The District may at any time terminate this Agreement, in whole or in part, and execute a release and discharge of this Agreement in respect of the Proposed Development or any Unit therein, without liability to anyone for doing so.

6.03 Agreement Runs With the Lands

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

6.04 Release

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

6.05 Priority Of This Agreement

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

6.06 Agreement to Have Effect as Deed

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

6.07 Waiver

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

6.08 Time

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

6.09 Validity of Provisions

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

6.10 Extent of Obligations and Costs

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

6.11 Notices

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

If to the District:

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

Attention: Planning Department

If to the Owner:

Fannie International Investments Ltd.
2700 – 700 West Georgia Street
Vancouver, BC V7Y 1B8

If to the Unit Owner:

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

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

6.12 Further Assurances

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

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

7. **INTERPRETATION**

7.01 **References**

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

7.02 **Construction**

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

7.03 **No Limitation**

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

7.04 **Terms Mandatory**

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

7.05 **Statutes**

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

7.06 **Entire Agreement**

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

(e) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8238.
7.07 **Governing Law**

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

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

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

(a) _________________________ (the "Charge");

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

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

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

REPORT TO COUNCIL

March 31, 2017
File: 08.3060.20/001.16

AUTHOR: Natasha Letchford, Development Planner

SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

RECOMMENDATION

THAT “The District of North Vancouver Official Community Plan Bylaw 7900, 2011, Amendment Bylaw 8208, 2016 (Amendment 22)” (Bylaw 8208), to amend the Official Community Plan (OCP) from Commercial Residential Mixed Use Level 1 (CRMU1) to Commercial Residential Mixed Use Level 2 (CRMU2) be given FIRST reading;

AND THAT “The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)” to rezone the subject site from General Commercial Zone 2 (C2) to Comprehensive Development Zone 99 (CD99) be given FIRST reading;

AND THAT “Housing Agreement Bylaw 8210, 2016 (229 Seymour River Place)” be given FIRST reading;

AND THAT “Housing Agreement Bylaw 8227, 2017 (229 Seymour River Place)” be given FIRST reading;

AND THAT “Housing Agreement Bylaw 8238, 2017 (229 Seymour River Place)” be given FIRST reading;

AND THAT pursuant to Section 475 and Section 476 of the Local Government Act, additional consultation is not required beyond that already undertaken with respect to Bylaw 8208;

AND THAT in accordance with Section 477 of the Local Government Act, Council has considered Bylaw 8208 in conjunction with its Financial Plan and applicable Waste Management Plans;

AND THAT Bylaw 8208 and Bylaw 8209 be referred to a Public Hearing.
SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

March 31, 2017

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REASON FOR REPORT

The proposed project requires Council’s consideration of:

- Bylaw 8208 to amend the Official Community Plan (OCP)
- Bylaw 8209 to amend the zoning bylaw to a new CD99 Zone
- Bylaw 8210 to authorize entry into a Housing Agreement to secure 28 rental units as market rental in perpetuity
- Bylaw 8227 to authorize entry into a Housing Agreement to secure an additional 10 rental units as affordable rental in perpetuity
- Bylaw 8238 to authorize entry into a Housing Agreement to ensure owners of strata units are not prevented from renting their units

SUMMARY

The applicant proposes to redevelop two commercial lots with 700 m² (7,500 sq ft) of commercial space and 28 rental units (Maplewood Plaza) into a six storey mixed-use building comprising 193 residential units (172 apartments and 21 townhouses) and approximately 10,470 sq. ft. (973 m²) of commercial space. Included in the proposed residential units are 38 rental units, 10 of which would be secured as affordable rental units at CMHC Level 2 rent levels.

The proposal addresses District objectives for Affordable Housing, Accessibility, green building, tenant assistance, housing diversity, increased commercial in the heart of Maplewood Village, the Maplewood Village charrette concept, land for pedestrian and road connections, off-site infrastructure improvements and flood construction.
BACKGROUND

Maplewood Planning Process

The ongoing Maplewood planning process has informed and directed the review and development of this project. The preliminary development application was received in 2013, prior to the start of the Maplewood process. The detailed application for Maplewood Plaza was received in December 2015 with the understanding that changes could be needed in the project during the review process arising from the Maplewood planning process. The project has evolved in conjunction with Maplewood Village Centre community workshop / design charrette and is consistent with the direction received through the community workshop.

The Maplewood planning process is in Phase 3 which involves refining the direction provided to date into an implementation plan. It is not expected that the final implementation plan will change the vision for this site.

PHASE 1

PROCESS

FEB - JUNE 2016

PURPOSE

Establish direction for design concept

ENGAGEMENT OPPORTUNITIES

- Community Workshop
- Stakeholder Consultation
- Questionnaire

PHASE 2

CONCEPT OPTION(S) DEVELOPMENT

JULY - DEC 2016

Develop concept option(s) based on the direction set in Phase 1

- Design Charrette
- Public Open House
- Online Questionnaire

PHASE 3

POLICY & PLAN DEVELOPMENT

FEB - JUN 2017 - Revised

Refine preferred concept based on review of feedback from Phase 2

- Public Open House
- Online Questionnaire
The site is 0.69 ha (1.7 acres) and shown by a yellow star in the image below. It is within the identified "Village Heart" shown by a faint red circle and is in good proximity to shops, services, and transit.

During the design charrette, the site was identified for a mix of live-work space, multi-family apartments, and commercial space. The project as proposed provides a mix of uses similar to those identified in the design charrette.

The project provides approximately 10,500 sq. ft. (975 m²) of commercial space near the corner of Front St. and the future shared pedestrian Seymour River Place. This results in an increase of commercial space on this site. This commercial space is important to help activate the Village Heart and will create a connection between the Village Heart and Northwoods Village to the south across Front St.
Retail and Commercial Need in Maplewood

To assist in reviewing this proposal relative to the anticipated need for commercial space in Maplewood, an economic study was conducted to examine the amount of commercial-retail that would be supported by the anticipated Maplewood population. A study on Maplewood Employment Lands was prepared by Rollo and Associates and Urban Systems in October 2016. The study found that 104,000 sq ft (9,662 m²) of retail and commercial space will be supportable in Maplewood by 2031. The current OCP projection for a need of 100,000 sq ft (9,290 m²) of commercial space is consistent with the findings of the Rollo and Associates and Urban Systems report. The 10,500 sq ft. (975 m²) of commercial space in this project represents an increase on this site and will contribute to the identified “Village Heart.” The new employees and residents brought to this area by this project will help support the emerging commercial area around Northwoods Village and Stong’s. Northwoods Village provides approximately 33,000 sq. ft. (3,066 m²) of commercial retail space.

Pedestrian-friendly Seymour River Place

An important concept that emerged in the design charrette was the need for a pedestrian friendly north-south extension of Seymour River Place to connect Front St. to Northwoods Village (see red arrow in adjacent image pointing to this link). This is a key connection in the OCP’s integrated mobility network to create a pedestrian and cyclist-friendly link for destinations in Maplewood such as Maplewood Farm, Kenneth Gordon Maplewood School, and Northwoods Village.

This development proposal delivers land dedication to achieve this extension of Seymour River Place.
SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

March 31, 2017

ANALYSIS AND PROJECT DESCRIPTION

Official Community Plan and Zoning Bylaw

The subject properties are designated Commercial Mixed Use Level 1 (CRMU1) in the OCP which allows for densities up to 1.75 FSR. The proposed OCP amendment bylaw (Bylaw 8208) would change the designation for these two properties to Commercial Mixed Use Level 2 (CRMU2) which allows for densities up to 2.50 FSR. Development with this designation may include residential or commercial uses, which encompass retail, office, and service uses.

The existing zoning is General Commercial Zone 2 (C2) which allows for a maximum FSR of 1.75. The floor space ratio (FSR) proposed is approximately 2.49.

In addition to an OCP amendment, a rezoning is required to accommodate the project and Bylaw 8209 proposes to create a new Comprehensive Development Zone 99 (CD99) tailored specifically to this project.

The OCP amendment and rezoning achieve the following:
- land dedications
- increase number of rental units
- 10 secured affordable rental units
- increased housing diversity
- community amenity contributions
- enhanced pedestrian and cycling connectivity
- accessible units

Site Plan and Building Description

The project consists of 193 residential units (21 townhouses and 172 apartments) and 10,473 sq. ft (973 m²) of commercial space. 7 of the 21 townhouses, located on Front St, are live-work units which respond well to the live-work units at Northwoods Village across the street. This project is separated into two six storey buildings over underground parking. The building adjacent to the north property line and the existing retail/commercial property to the north steps down to five storeys.
All residents in the buildings will have access to a large outdoor amenity and play space located on the second floor. This space is visible between the buildings in the site plan above.

Dwelling units are a mix of one to three bedroom layouts and range in size from 539 sq. ft. (52 m²) to 1,433 sq. ft. (133 m²). 85 units (44%) are 1 bedroom units, 99 units (51%) are 2 bedroom and 9 units (5%) are 3 bedroom.

The images below are photographs of the applicant's model of the project. These show the second floor outdoor amenity space as well as building entrances and building breaks along Old Dollarton and Front Street.

Image above is view north along Front St. showing building separation and parkade entrance

Image above is view northeast from corner of Old Dollarton Rd. & Front St.

Image above view east to main entry along Old Dollarton Rd.

Image above view southwest from Seymour River Pl. showing courtyard
The streetscape along Old Dollarton Rd is envisioned to have future AAA bicycle facilities and an animated street where neighbours can walk and meet each other. The location of live-work townhouses on the ground level is well placed in this location and the addition of wide sidewalks and boulevard planting will soften the 6 floor building. The building itself is articulated with a rhythm of decks and windows. The main entrance at the central portion along Old Dollarton creates a generous building break.

Rental and Affordable Housing Strategy

The proposed units are a mix of 1, 2, and 3 bedroom layouts, which will be attractive to individuals, families, and downsizers, responding to Goal #2 of the OCP to "encourage and enable a diverse mix of housing type, tenure, and affordability to accommodate the lifestyles and needs of people at all stages of life."
SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

March 31, 2017 Page 9

The District's recently adopted "Rental and Affordable Housing Strategy provides further direction on ways to achieve Goal #2 of the OCP, and this project addresses the six key areas of focus of the strategy in the following ways:

1. **Expand the supply and diversity of housing**
   - The number of residential units on this site is being increased from 28 units to 193 units. The existing units are all one bedroom units except for 1 two bedroom unit. The proposal provides a much greater mix of units than what is currently on site. Of the 193 proposed units, 108 or 56% of the units are 2 or 3 bedroom with the remaining 85 or 44% of the units being 1 bedroom units. The 38 rental units include 18 one bedroom units, 17 two bedroom units and 3 three bedroom units.

2. **Prioritize the retention of affordable housing outside centres**
   - This guideline does not apply as this project is within the Maplewood Village Centre.

3. **Enable the replacement of existing housing with conditions**
   - This project is providing a greater than 1:1 rental unit replacement. There are currently 28 rental units on site and the proposal includes 38 rental units, 10 of which will meet CMHC Level 2 affordability.

4. **Minimize impacts to tenants**
   - The applicant has worked closely with the existing tenants to provide tailored residential tenant relocation and assistance packages that address the requirements of the District's "Residential Tenant Relocation Assistance" Policy.

5. **Expand the supply of new rental and affordable housing**
   - The number of rental units on the site will increase from 28 to 38 rental units, 10 of which will meet CMHC Level 2 affordability;
   - The rental units meet the objective of creating homes with good access to frequent transit, community services, retail, and employment;
   - A mix of unit types provided: 20 or 53% of the rental units are 2 and 3 bedroom and 18 or 47% of the units are 1 bedroom.

6. **Partner with other agencies to deliver affordable housing**
   - This project does not include a partnership with other agencies or levels of government as the applicant is the landowner and intends to operate both the market and the affordable rental units.

The project meets the key areas of focus of the Rental and Affordable Housing Strategy.
SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

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Housing Agreement Bylaws

Three Housing Agreement Bylaws are proposed:
- Bylaw 8210 will secure 28 market rental units for rental in perpetuity;
- Bylaw 8227 will secure 10 rental units at CMHC Level 2 affordability in perpetuity; and,
- Bylaw 8238 implements the "Strata Rental Protection Policy" and ensures future strata bylaws do not prevent owners of the remaining 155 market strata units from renting their units.

Bylaw 8227 to secure the 10 affordable rental units uses the CMHC Level 2 affordability level. The 2016 CMHC Level 2 represents the 65th rent percentile of rents for a given area. The table below provides the CMHC Level 2 affordability and eligible household incomes where the rent represents no more than 30% of the household income. The average rent (as stated by CMHC Rental Market Report – 2016) in North Vancouver and the existing rents at Maplewood Plaza are provided for comparison.

<table>
<thead>
<tr>
<th></th>
<th>Average Rent (North Vancouver)</th>
<th>Existing Rent Maplewood Plaza</th>
<th>CMHC Level 2 Rent (Vancouver area)</th>
<th>Maximum Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 bedroom</td>
<td>$1,223</td>
<td>$911 – $1,025</td>
<td>$1,063</td>
<td>$42,520</td>
</tr>
<tr>
<td>2 bedroom</td>
<td>$1,449</td>
<td>$1,325</td>
<td>$1,220</td>
<td>$48,800</td>
</tr>
<tr>
<td>3 bedroom</td>
<td>$1,726</td>
<td>n/a</td>
<td>$1,525</td>
<td>$61,000</td>
</tr>
</tbody>
</table>

The "Strata Rental Protection Policy" applies to this project as the rezoning application would permit development of more than five units. The Housing Agreement Bylaw 8238 will ensure future strata bylaws do not prevent owners of the remaining 155 market strata units from renting their units.

Development Permit

The subject lots are included in the following Development Permit Areas:
- Form and Character of Multi-Family Development (Mixed Use Buildings)
- Creek Hazard
- Energy and Water Conservation and GHG Emission Reduction

Form and Character of Multi-Family Development (Mixed Use Buildings)

A detailed development permit report, outlining the project’s compliance with the applicable DPA guidelines, will be provided for Council’s consideration at the Development Permit stage should the OCP amendment, rezoning, and housing agreement bylaws be approved.

In addition, the project will be reviewed against the Maplewood Area Implementation Plan. The draft Maplewood Area Plan proposes an improved street cross-section for Old Dollarton Rd. to include a wide sidewalk, boulevard, and a AAA bike lane. The land dedications
proposed as part of this project will allow for the implementation of this vision for Old Dollarton Rd.

Creek Hazard

The site is included within the Development Permit area for Creek Hazard. The applicant has submitted a report from Northwest Hydraulic Consultants that details the flood construction level (FCL) and notes that no habitable space and mechanical or electrical equipment may be installed below the FCL. The District’s Manager for Public Safety has reviewed and accepted the Northwest Hydraulic Consultants report. The proposal is designed to meet the FCL identified by the consultant and flood protection requirements will be secured by covenant.

Energy and Water Conservation and GHG Emission Reduction

Compliance with the District’s Green Building Strategy is mandatory given the need for rezoning. The project must meet the ‘gold’ standard of a recognized green building, sustainability, and environmental design certification system. The project is targeting an energy performance rating of at least 5% improvement over baseline building performance rating based on ASHRAE 90.1 – 2010.

Landscape

Landscaping for the project is proposed around the perimeter of the site and within the courtyard at the second floor level. The streetscape design includes street trees, boulevard plantings and sidewalks. The project includes a small plaza at the south-east corner of the site is planned to expand in future if the properties to the east redevelop. All residents have access to a large outdoor courtyard which includes an outdoor kitchen area with BBQ, a fire ring, seating areas, pathways, and a natural play area with a timber playhouse.
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Parking

Parking is provided on three levels – two levels of underground and one enclosed level at grade. The proposal includes 255 residential stalls which results in 1.25 stalls per strata unit and 0.8 stalls per rental unit plus 0.1 stalls per unit (20 stalls) for visitors. The parking provided is consistent with the District’s policy for multifamily residential developments in town and village centres. The proposed commercial parking rate is 1/45m² of commercial space and the 22 spaces complies with Part 10 of the District Zoning Bylaw.

Bus service exists near the site along Old Dollarton Road, Riverside Drive, and Dollarton Hwy. The site is also within 400 m of a future frequent transit network as Old Dollarton Road is identified as a future frequent transit service route.

The parking structure is designed such that if the property to the north redevelops, access to that garage can be achieved via a knock-out panel. Signage on the knock-out panel will notify residents that future cross property access may occur.

All of the parking spaces will be wired for Electric Vehicle charging (level 1-110 V) and 20% of the parking spaces will have EV level 1 charging infrastructure installed. For the commercial component, 10% of the parking spaces will be wired for level 2 (240 V) charging and three parking spaces will have EV level 2 installed.

The proposal includes 201 residential Class 1 secure bicycle spaces (just over one space per unit) and 41 Class 2 (short term) bicycle spaces. The proposal also includes 17 Class 2 (short term) bicycle storage spaces for commercial use. An end of trip cycling facility is provided for the commercial units.

An area in the lower level of parking has been designated for the storage of oversized outdoor equipment such as kayaks or paddle boards.

In addition to the bicycle parking and storage noted above, and in recognition that many residents would prefer to have secure and accessible bicycle storage on the same level as their unit, the project includes 66 generously sized individual secure storage lockers on levels two through six. Within these bike spaces is a common area and work bench for individuals to work on their bicycles. The applicant anticipates that future residents would likely value this added amenity as the project is close to a large network of mountain bike trails and will be in the centre of an anticipated robust bike network in Maplewood. End of trip facilities and convenient bike storage will help facilitate this alternate mode of transportation.

Accessible Units

In response to the District’s “Accessible Design Policy for Multi-Family Housing”, all apartment units will meet the basic accessible criteria and 10 will meet the enhanced criteria. One townhouse is proposed to meet the enhanced accessible criteria. Fourteen accessible parking stalls are proposed. The proposal meets the District’s policy in that 100% of the
apartment units will meet the basic accessible requirements and 5% of apartment units will meet the enhanced requirement.

**Off-site improvements**

The application includes improved street frontages with street tree plantings and streetlight upgrades, sidewalks, curb, gutter and paving improvements along Dollarton Rd., Front St., and Seymour River Pl. The project also includes sanitary sewer and storm sewer improvements.

The image below shows the 818 m² (8,805 sq ft) of land dedication on Old Dollarton Rd, Front St and Seymour River Place.

The road dedications will allow for the implementation of the vision for the streetscape emerging through the draft Maplewood Area plan including space for sidewalks, boulevards, and a future separated AAA bike lane on Old Dollarton Rd. The land on the east edge of the site will facilitate the realignment of Seymour River Place, for the future development of a large plaza, and for the creation of a pedestrian and cyclist friendly north-south connection.
Hazard Risk Evaluation

In 2012, Doug McCutcheon and Associates completed a preliminary study on land use in Maplewood with respect to the potential chemical hazard arising from existing industrial activities to the south.

This study included a recommendation on how far away residential use had to be from existing chemical industrial activities, without any building safety and mitigation measures, to ensure the safety of residents. Residential use was determined to be safe north of the $1 \times 10^{-6}$ risk contour line (shown in blue above).

The site is north (outside) of the $1 \times 10^{-6}$ risk contour line and as such there is no restriction on residential use and density on this site. In order to update the 2012 findings, as part of the application submission for this project, a further study was conducted by Doug McCutcheon and Associates in 2016 and confirmed that the proposal is north (outside) of the $1 \times 10^{-6}$ risk contour line and no building design changes are needed to ensure the safety of the residents. The only restriction in regards to the chemical hazard on this site is that no sensitive institutions, such as hospitals and aged care facilities, can be located on this site (green line above). There will be a covenant registered on title for this project ensuring no sensitive institutions are permitted on site.

COMMUNITY AMENITY CONTRIBUTION

A density increase from 1.75 FSR to 2.5 FSR is proposed for this site. A proforma was reviewed that demonstrated that the provision of rental housing, 10 affordable rental units and off-site works resulted in an amenity contribution of approximately $20,000. The proposal includes 38 rental units, 10 of which will be affordable. Despite the results of the proforma analysis, the applicant is providing a voluntary community amenity (CAC) of $200,000. It is anticipated that the CAC from this development will be directed toward public
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art; park and trail improvements; the affordable housing fund; or, other public realm infrastructure improvements. The CAC is secured in Bylaw 8209.

IMPLEMENTATION

Implementation of this project requires consideration of an OCP amendment bylaw, (Bylaw 8208); a rezoning bylaw (Bylaw 8209); and three Housing Agreement bylaws (Bylaws 8210, 8227, and 8238) as well as issuance of a development permit and registration of legal agreements.

Bylaw 8208 (Attachment B) is an OCP amendment that would amend the designation for the site from Commercial Residential Mixed Use Level 1 (CRMU1) to Commercial Residential Mixed Use Level 2 (CRMU2).

Bylaw 8209 (Attachment C) rezones the subject site from General Commercial Zone 2 (C2) to a new comprehensive Development Zone 99 (CD99) which:
- Establishes the permitted residential and commercial uses;
- Establishes the maximum permitted floor area on the site;
- Establishes setback and building height regulations;
- Secures an amenity contribution of $200,000;
- Secures 38 rental units, including 10 affordable rental units;
- Incorporates acoustic requirements; and,
- Establishes parking regulations specific to this project.

Bylaws 8210 and 8227 (attachments D and E) authorize the District to enter into Housing Agreements to ensure that 38 of the proposed units remain available in perpetuity as rental and that 10 of those units remain available in perpetuity as affordable rental at CMHC Level 2. The third Housing Agreement Bylaw (Bylaw 8238) is to ensure that there are no rental restrictions placed on the remaining 155 units.

A legal framework will be required to support the project and it is anticipated that a development covenant will be used to secure items such as the details of off-site servicing. Additional legal documents required for the project will include:
- subdivision plan showing land dedications
- statutory right of way to secure public access to on-site plaza areas
- development covenant to reference the general form and layout of project as well as requirements for off-site servicing
- green building covenant
- stormwater management covenant
- creek hazard covenant
- chemical risk hazard covenant prohibiting any sensitive institutions
- covenant to secure accessible and acoustic design features
- covenant to specify that any unsold parking spaces be transferred to strata corporation
• registration of housing agreement regarding prohibition of rental restrictions for strata units
• registration of housing agreement regarding 28 market rental units
• registration of housing agreement regarding 10 affordable rental units
• an easement securing the rights for future access to underground parking for the property to the north
• construction management plan and engineering servicing

Construction Traffic Management Plan

Impacts of future construction at this site have been reviewed and the applicant will be required to submit a comprehensive traffic management plan.

The map on the following page highlights the mix of projects under construction and anticipated within the Maplewood area. A preliminary planning application has been submitted for the neighbouring site at 2131 Old Dollarton Rd, (Maplewood Gardens). This proposal envisions a mixed use project and it will be reviewed in conjunction with the Maplewood Plan. Depending on timing of approvals, the applicants for the two projects will be required to coordinate efforts with regards to construction should their construction periods overlap. The applicant has submitted a draft construction management plan and will be required to provide a finalized construction management plan prior to issuance of a building permit. This plan must:

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

CONCURRENCE

Staff

The project was reviewed by staff from Environment, Permits, Parks, Engineering, Community Planning, Urban Design, the Municipal Solicitor, Transportation Planning, Fire Department, Public Safety, and the Arts Office.

Advisory Design Panel

The application was considered by the Advisory Design Panel on July 7, 2016 and the Panel recommended that revisions be made to the project and that it be returned to the Panel for a second presentation. The Panel expressed concerns regarding massing and building length.

The applicant submitted a redesigned proposal to the Panel on November 10, 2016. The redesigned proposal included a reduction of the number of units from 201 to 193 to help address the Panel’s concerns regarding massing and building length. By reducing units the architect has created significant building breaks on Old Dollarton Rd and Front St. The resubmission also includes:

- improvements to the commercial and residential loading areas;
- improvements to the waste and recycling rooms;
- the addition of a second floor amenity space;
- an improved colour palette;
- the addition of resident courtyard pedestrian access from both Front St. and Seymour River Pl.; and,
- the inclusion of an end of trip commercial bike change room and shower.

Overall, the Panel was pleased with the revisions made in response to the July 7, 2016 Panel discussion. The Panel recommended approval of the project.
Staff are continuing to work with the applicant on design changes in advance of a Development Permit application proposal being submitted to Council for consideration.

PUBLIC INPUT:

Public Information Meeting

The applicant held a facilitated Public Information Meeting (PIM) on June 1, 2016. The meeting was attended by approximately 32 residents. A total of fourteen individuals spoke at the meeting. The overall tone was respectful and constructive.

Community members raised issues of concern including:
- building heights;
- timing of project in relation to the Maplewood planning process;
- loss of older rental units;
- potential for increased congestion; and,
- bicycle safety.

The facilitator’s report of the Public Information Meeting is included as Attachment A.

CONCLUSION

This project as proposed allows for the revitalization of a site near the proposed ‘Village Heart’ of Maplewood Village as well and assists in implementation of the District’s Official Community Plan objectives for diversity and affordability of housing. The project is consistent with the direction provided from Phase 1 and 2 of the Maplewood planning process.

The project is now ready for Council’s consideration.

Options

The following options are available for Council’s consideration:

1. Introduce Bylaws 8208, 8209, 8210, 8227, and 8238. Refer Bylaws 8208 and 8209 to a Public Hearing (staff recommendation); or,

2. Defeat the bylaws at First Reading and provide staff direction.

Natasha Letchford
Development Planner
SUBJECT: Bylaws 8208, 8209, 8210, 8227 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Pl. and 2015 Old Dollarton Rd.

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A. Facilitator’s Report – Public Information Meeting
B. Bylaw 8208 – OCP amendment bylaw
C. Bylaw 8209 – Rezoning bylaw (CD99)
D. Bylaw 8210 – Housing Agreement Bylaw (market rental units)
E. Bylaw 8227 – Housing Agreement Bylaw (affordable rental units)
F. Bylaw 8238 – No Rental Restrictions

REVIEWED WITH:

☐ Sustainable Community Dev. ☐ Clerk’s Office ☐ External Agencies:
☐ Development Services ☐ Communications ☐ Library Board
☐ Utilities ☐ Finance ☐ NS Health
☐ Engineering Operations ☐ Fire Services ☐ RCMP
☐ Parks ☐ ITS ☐ NVRC
☐ Environment ☐ Solicitor ☐ Museum & Arch.
☐ Facilities ☐ GIS ☐ Other:
☐ Human Resources ☐ Real Estate
Maplewood Ltd. Partnership – 229 Seymour River Place – Maplewood Plaza

Public Information Meeting – June 1, 2016

Executive Summary

On June 1, 2016, Maplewood Ltd. Partnership hosted a Public Information Meeting at Kenneth Gordon Maplewood School, North Vancouver, regarding their proposed project at 229 Seymour River Place. Approximately 32 members of the community were in attendance.

The meeting objectives were to:

- To provide an overview of the 229 Maplewood Plaza Project
- To provide an opportunity for community input and comment on this project
- To follow up on the Owner initiated discussions with current rental occupants

The Public Information Meeting was successful in achieving the above objectives. Many participants took the opportunity to discuss the Maplewood Plaza Project on a one-on-one basis with project team members during the 30 minute Open House before the meeting. The project team then provided participants with a project overview through a PowerPoint presentation at the beginning of the large group session.

Community members had the opportunity to pose questions or provide feedback during a Q&A session following the PowerPoint presentation. Approximately fourteen individuals asked questions, offered feedback or identified issues of concern during the Q&A session. Issues and feedback raised during the Q&A session are included below in the Public Information Meeting Summary Report. Participants were also invited to complete comment sheets and submit them at the end of the meeting or send them in after the meeting. The comment sheets were collected by the District of North Vancouver representative.

The meeting was constructive and remained respectful in tone. Community members were curious about the project and offered their feedback willingly.
Summary of Findings

Following the presentations, participants were invited to ask questions or offer comments on the project. Fourteen individuals offered their feedback.

Community members raised issues of concern including: building heights, the timing of this project’s approval process in relation to the Maplewood planning process, replacing rental stock and providing affordable housing, and various traffic related issues (impact on street parking, potential for increased congestion and ensuring bicycle safety).

A summary of findings follows including issues of concern and comments. The next section documents each question, answer and comment.

Issues of Concern

- Building heights:
  - Questions and concern about building height relative to adjacent buildings
  - Concern about loss of viewscapes (“ancient light”) due to increased building height
- Maplewood Area Planning process: Concern about the timing of the approval process for this project relative to the Maplewood Area Planning process.
- Rental and affordable housing: Concern about replacement of rental stock and provision of affordable housing
- Traffic management:
  - Concern about potential impact of project on street parking
  - Concern about contribution of new residents and retail traffic to congestion
  - Concern about provisions for bicycle routes and access given local volume of vehicle traffic.

Comments

- Comment: Curiosity about provisions for parking and bicycle amenities
- Comment: Question about considering building this project without parking
- Comment: Curiosity about communal spaces and potential for community gardens
- Comment: Curiosity about provisions for managing construction-related traffic
Public Information Meeting Summary

Welcome and Project Presentation

Keith Hemphill of Rositch Hemphill Architects provided an overview of the proposed site plan and building design and Daryl Tyacke of ETA Landscape Architects described the landscaping concept.

Question and Answer Session

Following the presentations, participants were invited to ask questions or offer comments on the project. The following questions, comments and issues were raised:

1. **Q1: Street Parking:** How much parking are you providing and what will the impact be on street parking?
   **A1:** We have had a thorough parking and traffic analysis study done by a consultant who works on these projects. The project will provide 286 parking stalls, broken down into with 22 commercial stalls, 243 residential stalls and 21 residential visitor stalls. All of that parking is contained within the site and within the parking levels already described. We don't rely on street parking for any of our projects. There is some parking on Front Street and on the future extension of Seymour. The future of this parking will depend in part on what the District decides about the Seymour River Place extension. They are currently proposing to have some street level parking. The development across the street with Strong's have substantial surface parking for commercial use.

2. **Comment: Street Parking:** Concern about insufficient street parking currently available on Front Street and whether this project will exacerbate an existing issue.
   **Response:** Street parking is up to the District. For this project, we have 3 levels of parking and all required parking is contained within the site. This is different than across the street which was developed under different rules. We are working on a project that is designed to accommodate a higher density. We are not advertising Front Street parking.

3. **Q2: Parking:** How many parking stalls per unit?
   **A2:** There are 243 residential parking stalls for 201 units (approx. 1.2 stalls per unit).

4. **Q3: Bicycles:** Are you going to provide amenities for bicycles?
   **A3:** We are meeting bylaw requirements for bicycle parking. We are also providing bicycle parking for commercial users.
5. **Q4: Commercial parking:** How many parking spots for commercial?
   **A4:** 22 commercial stalls for 10,545 square feet, as per the bylaw.

6. **Q5: Building Height:** This building has 6 floors when most other buildings have 4. Why is this?
   **A5:** We are working towards a rezoned FSR (floor space ratio of 2.5). This is the ratio of floor area to site area. Achieving this density cannot happen on one floor but rather needs to happen on a number floors. In this case, to get this density, we are working with 6 floors. We are also part of a rethinking of the Maplewood Village through the planning process just launched by the DNV. The OCP shows that there will be significant changes to density which will allow and require a larger number of storeys: more than 4. When we did the Great West Life site, we studied what all the proposed densities in the OCP would look like. The vast majority of those sites had 6 floors or more. So that’s a product of lots of new thinking and the planning of Maplewood Village.

   **Comment 5b:** I’m concerned that in trying to meet a FSR you will look for a building with greater height. (**More of the same – can’t hear clearly because of microphone issues**) People live around here because they like the scenery. They don’t want it to look like downtown Vancouver or Toronto. A 4-storey building would be more in keeping with what we are used to.

   **Response:** Your concerns relate to more than the building itself: they relate to the economics of the project, to the viability of the project, to the District goals for the densification of Maplewood Village (through the District’s process). The number of storeys is a result of the density. There are a number of ways to put density on a site, we could put a 26-storey building that is tall and skinny and have more green space, but when we hear from the public at these meetings, they don’t want tall, skinny buildings. So it is a matter of balancing the various forces to meet the District’s goals and the neighbourhood’s goals, etc. It is not just one project. But this project is early in the Maplewood process, and it is only one building. As a result, it stands out more than it would if it were seen in the context of what will ultimately be there when the District’s master plan is fulfilled.

7. **Q6: Gathering spaces:** Do all of the apartments have balconies. And within the landscaping and green spaces, are there benches and gathering places?
   **A6:** The generous centre area is geared towards a communal gathering space. We’re showing tables and benches, a fire pit, a play area for kids and a hard space for kids. The intention is that this is a community space. As well, there are terraces that front onto that space as well so that will be an added layer. Also, we have
layered back at the level above the commercial and at other upper storeys. So each unit will have a balcony and a substantial number of units will also have a broader terrace which is made bigger as a result of the setbacks. Please have a look at the model to see this.

8. **Comment: Community gardens:** You mentioned sustainability earlier. But I don’t see any mention of gardens or a place where people could teach children how to garden.

   **Response:** You are right. That is not currently shown. We have not developed the rooftops. There are a substantial number of balconies and terraces where people will have space to do this on their own. The main garden area is anticipated to be a fairly shady area and doesn’t lend itself to urban agriculture.

   **Comment:** Maplewood Farm has a community garden and I am sure that people who wanted that kind of thing could go there.

9. **Q7: Marketing this property without parking:** I wondered if you had considered marketing this property without parking. There is good transit nearby and people are complaining about parking. But from my point of view, you are adding a lot more cars to this area. I have looked at the DNV transportation plan. It says they don’t see an increase in traffic in 20 years’ time. But if you build it, they will come. If people buying these apartments and working downtown, it is pretty quick to get there by transit. We could market these areas close to central transit by forgoing the parking, reducing the price, and reducing the amount of concrete. And the transportation problems on the North Shore are not getting any better.

   **A7:** No, we didn’t consider doing the project without parking. We have considered that approach in other projects in areas where there is serious, transit oriented development. The transit system close to Maplewood is not sufficient to eliminate cars. In this area, people will still rely on their cars. The first reason we can’t do it is because it is required by the bylaw. But as we move towards more sustainable living principles, we can make improvements towards bicycle lanes that improve that method of transportation. And we can promote pedestrian traffic and walkability. We are also looking to concentrate amenities in areas close to development and only a pedestrian stroll away. Maplewood Farm is a stroll away. Other things we can do is encourage car-sharing so that we don’t have physical cars waiting around. It is difficult to consider these kinds of principles one project at a time. It is also important to consider the relationship between transit and the types of density and uses nearby. We are not ignoring sustainability, but we cannot do the project without parking.
10. Q8: Question for DNV: At the Maplewood planning meeting, I thought they said that Council wouldn’t approve any new projects until the Maplewood Planning process has been done. Also, I read in the Council meeting minutes that they wouldn’t approve any new projects beyond those already approved for development.

A8: The preliminary application for this project was received in 2009 and the most recent development permit application was received last year, long before the Maplewood planning process started. This application is being considered concurrently with the planning process. This project is early in the detailed stage so any feedback in relation to this project will inform that process. The next step will be having the project reviewed by the Advisory Design Panel.

11. Q9: Rental stock replacement: In your designs, are you going to replace the rental stock that will be removed? Will you be maintaining the same amount of square footage or the same number of units?

A9: There are currently 28 rental units. The proposal will replace all of those units and add ten more. There will be a greater number of rental units than there are now. The balance of the development will be condos.

12. Q10: Affordability: My first thought when I saw the notice about this meeting was what would happen to those people currently living in those apartments, presumably in affordable housing. What will happen to them?

A10: That is a big issue and a very big issue in the District. As a result, it triggered an affordable housing study to establish policy regarding affordable housing and other work in the District. Our clients have been working very closely with the current tenants to assist them with transition planning and financial questions, and to provide some financial assistance. There have been lots of meetings and discussions. Not all of the 28 units are currently occupied. But the client is working with those living there to assist them to implement the transition plan.

13. Q11: Construction parking: How will the parking of workers and movement of construction trucks during construction impact existing buildings and neighbours?

A11: There is an impact around a neighbourhood when a building is built. But developers must put together a construction traffic plan specific to the period of construction. This is designed by traffic consultants and reviewed and approved by the District. The developer must show that existing businesses are not going to be cut off. A lot of work goes into construction traffic planning. That has yet to yet to be completely implemented for this project.
14. Q12: Bicycle Routes: Turning from Dollarton Highway onto the Old Dollarton Road, making a left turn north, there is very little space allotted to bicycles. There is all this talk about cycle paths but it is difficult to negotiate these routes.

A12: In terms of other bike routes and special lanes for bikes, these issues come from the District. Much of that is dictated to us. Because your District is implementing the Maplewood process, that is the time and place to voice and discuss these concerns. For this project, we cannot directly address these issues. But you can have more influence at that planning process.

Comment: (Longer explanation and request for more thought to pedestrian and bicycle access and safety in this area – hard to hear) I compliment you for putting your entrance off of Front Street and not on Dollarton which would involve trying to dart across that road.

15. Q13: Affordable Housing: Any plans for social or affordable housing for disabled or disenfranchised residents?

A13: Yes, part of the plan is finding a partner to assist in managing the 10 units of affordable housing. Our clients have agreed to provide 10 units. These are in addition to the other rental units.

16. Q14a: Building height: I am not in favour of the height of this building; the extra two storeys. Has there been any thought to acquiring the additional piece of property at the north east end that is privately owned. Couldn’t the footprint be enlarged by purchasing that property to reduce the height?

A14: Every effort was made to do that. But the owner of that property and the owner of this development were not able to come to agreement about how to do that. What we did do was ensure that if and when that piece of land is ever developed in the future, that they could potentially share the driveway access to the underground to minimize the impact to the neighbours. But that is as much as they can do without owning the property.

Comment 14b: I am very concerned about the loss of ancient light. This property is 6 storeys tall and the next one could be 8 storeys tall. In this area, this isn’t fair to the neighbours.

Response: That is why the DNV is doing the Maplewood area plan. So by all means, go to those meetings.
Next Steps and Closing Comments

Natasha Letchford, Community Planner with the DNV, outlined the next steps in this process. The next steps for this project is to go to the Advisory Design Panel which is a council appointed committee who will review the design of this building at a meeting this summer. This project is also following in step with the Maplewood process and any input in relation to this project will also inform the Maplewood planning process.

Participants were reminded to submit comments via the written comment forms, email or fax to Natasha Letchford at the District of North Vancouver (nletchford@dnv.org) by June 17, 2016.
The Corporation of the District of North Vancouver

Bylaw 8208

A bylaw to amend the District of North Vancouver Official Community Plan Bylaw 7900, 2011

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

1. Citation

This bylaw may be cited as "The District of North Vancouver Official Community Plan Bylaw 7900, 2011, Amendment Bylaw 8208, 2016 (Amendment 22)".

2. Amendments

2.1 The District of North Vancouver Official Community Plan Bylaw 7900, 2011 is amended as follows:

a) Map 2 Land Use by changing the land use designation from Commercial Residential Mixed-Use Level 1 to Commercial Residential Mixed-Use Level 2 as illustrated on Schedule B with respect to the following lands:

i. Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702;

ii. Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699; and,

iii. the portion of closed roads shown outlined in bold on the plan attached hereto as Schedule A

b) Map 2 Land Use: as illustrated on Schedule B, by changing the land use designation of the properties on Map 2 from Commercial Residential Mixed-Use Level 1 to Commercial Residential Mixed-Use Level 2

READ a first time by a majority of all Council members.

PUBLIC HEARING held

READ a second time by a majority of all Council members.

READ a third time by a majority of all Council members.

ADOPTED by a majority of all Council members.
Mayor

Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8208

Sketch Plan
Schedule B to Bylaw 8208

BYLAW 8208
The District of North Vancouver Official Community Plan Bylaw 7900 (2011)
Amendment Bylaw 8208, 2016 (Amendment 12)

COMMERCIAL RESIDENTIAL MIXED USE LEVEL 1 (CRMU 1) TO COMMERCIAL RESIDENTIAL MIXED USE LEVEL 2 (CRMU 2)
The Corporation of the District of North Vancouver

Bylaw 8209

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

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

a) Citation

This bylaw may be cited as "The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)".

b) Amendments

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

a) Part 2A, Definitions is amended by adding CD 99 to the list of zones that Part 2A applies to.

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

"Comprehensive Development Zone 99 CD 99"

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

"4B99 Comprehensive Development Zone 99 CD 99"

The CD 99 zone is applied to:

225 to 247 Seymour River Place and 2015 to 2029 Old Dollarton Road

Legally described as:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702

b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule C
4B 99-1 Intent

The purpose of the CD 99 Zone is to establish specific land use and development regulations to permit a medium density commercial and residential mixed use development.

4B 99-2 Permitted Uses:

The following principal uses shall be permitted in the CD 99 Zone:

a) Uses Permitted Without Conditions:
   Not applicable.

b) Conditional Uses:
   The following principal uses are permitted when the conditions outlined in Section 4B 99-3 Conditions of Use, are met:

   i) live-work use;
   ii) office use;
   iii) personal service use;
   iv) residential use;
   v) restaurant use;
   vi) retail use; and,
   vii) service use.

4B 99-3 Conditions of Use

a) All conditional uses: All uses of land, buildings and structures are only permitted when the following condition of use is met:

   i) All aspects of the use are completely contained within an enclosed building except for:

      (1) Parking and loading areas;
      (2) Outdoor customer services areas;
      (3) The display of goods; and,
      (4) Outdoor amenity areas (plazas, roof decks, play areas, and private or semi-private outdoor space).

b) Residential and live-work: Residential uses and live-work uses are only permitted when the following conditions are met:

   i) A minimum of seven live work units are provided on Front St;
   ii) Each dwelling unit has access to private or semi-private outdoor space; and,
iii) Balcony enclosures are not permitted.
iv) Each dwelling unit has exclusive access to a private storage space of a minimum size of 4.6 m² (50 sq. ft.).

c) **Live-work**: Live-work use is only permitted when the following condition is met:
i) A direct outside public entrance is provided; or
ii) An entrance onto a corridor that is open to the public, as in a commercial building, is provided.

d) **Office use; personal service use; restaurant use; retail use; and, service use** are limited to the ground floor.

e) **Residential uses** are only permitted when a minimum of 10,400 sq. ft. (966 m²) of ground floor commercial is provided in accordance with Schedule B.

**4B 99 - 4 Accessory Use**

a) **Home occupations** are permitted in residential dwelling units.

**4B 99 - 5 Density:**

a) The maximum permitted density in the CD 99 Zone is limited to a 1.75 floor space ratio and 40 residential units for a total floor space maximum of 4,645 m² (50,000 sq. ft.), inclusive of any density bonus for energy performance.

b) For the purpose of calculating **gross floor area** the following are exempted:

i) a common indoor amenity area that is accessory to the residential buildings permitted in this zone of up to 91 m² (980 sq. ft.) gross floor area; and,

ii) individually secured bicycle storage lockers co-located with a bicycle work and repair station of up to 137 m² (1,475 sq. ft.) on each floor to a maximum of 592 m² (6,380 sq.ft.) gross floor area in total;

iii) underground storage;

iv) above grade mechanical areas up to a maximum of 41 m² (448 sq. ft.);

v) area within parking garages, parking access areas, covered loading areas, roof deck areas, and common heating, mechanical, electrical, service and utility rooms; and,

vi) The area of private balconies and covered patios in a building to a maximum area equal to 10% of the residential floor area in that building.
4B 99 - 6 Amenities:

a) Despite Subsection 4B99-5, permitted density in the CD 99 Zone may be increased to a maximum of 17,284 m$^2$ (186,050 sq. ft.) and a maximum of 195 residential units, inclusive of a minimum of any live-work units; and, inclusive of any density bonus for energy performance, if the owner completes the following:

i) Contributes $200,000 to the municipality to be used for any or all of the following amenities (with allocation and timing of expenditure to be determined by the municipality in its sole discretion):

   a. Improvements to public parks, plazas, trails and greenways, or other public realm improvements;
   b. Municipal facilities and facility improvements;
   c. Public art and other beautification projects; and,
   d. Affordable or special needs housing.

ii) A minimum of 964 m$^2$ (10,376 sq. ft.) of the total permissible gross floor area must be used for commercial purposes provided in accordance with Schedule B where commercial purposes includes any of the following permitted uses singly or in combination: personal service use, restaurant use, live-work and retail use.

iii) Enters into a Housing Agreement prohibiting any restrictions preventing the owners in the project from renting their units;

iv) Enters into a Housing Agreement securing a minimum of 38 residential rental units, of which a minimum of 10 residential rental units are secured as affordable;

v) All residential units meet the basic accessible design criteria; at least 11 units must meet the enhanced accessible design criteria as outlined in the District of North Vancouver Council Policy: 'Accessible Design Policy for Multi-Family Housing'; and,

4B 99-7 Setbacks

a) Buildings shall be set back from property lines to the closest building face, excluding any partially exposed underground parking structure, window wells, balcony columns, or projecting balconies, said projecting balconies not to exceed 0.9 m (3.0 ft) as established by development permit and in accordance with Figure 1:
4B 99-8 Coverage:

a) Maximum building coverage is 85%, not including parking or patios; and,

b) Maximum site coverage is 90%, not including parking or patios.

4B 99 - 9 Height

a) Maximum permitted height for any building in the CD 99 Zone, inclusive of a 15% bonus for any sloping roofs, shall be 22.5 m (74.0 ft) and may not exceed 6
storeys. For the purposes of this section building height shall be measured from the average grade to the highest point of the roof surface.

4B 99 - 10 Landscaping:

a) All land areas not occupied by buildings and patios must be landscaped in accordance with a landscape plan approved by the District of North Vancouver; and,

b) All electrical kiosks and garbage and recycling container facilities not located underground or within a building must be screened.

4B 99 - 11 Parking and Loading Regulations:

a) A minimum of 255 residential parking spaces are required and must be apportioned as follows:
   i. a minimum of 20 designated visitor parking spaces are required;
   ii. a minimum of 18 accessible parking spaces are required; and,
   iii. a maximum of 89 parking spaces may be small car spaces.

b) A minimum of 22 commercial parking spaces are required and must be apportioned as follows:
   i. a minimum of 1 accessible parking space is required.

c) All parking spaces shall meet the minimum width and length standards established in Part 10 of the Zoning Bylaw, exclusive of building support columns;

d) A minimum of 201 class 1 (long term secure) resident bicycle storage spaces must be provided;

e) A minimum of 58 class 2 (short term) visitor bicycle parking spaces must be provided and must be apportioned as follows:
   i. a minimum of 17 bicycle parking spaces for commercial use; and,
   ii. a minimum of 41 bicycle parking spaces for residential use.

2.2 The Zoning Map is amended in the case of the lands illustrated on the attached map (Schedule A) by rezoning the land from the General Commercial Zone 2 (C2) to Comprehensive Development Zone 99 (CD 99).
READ a first time

PUBLIC HEARING held

READ a second time

READ a third time

Certified a true copy of "Rezoning Bylaw 1347 (Bylaw 8209)" as at Third Reading

___________________________________________________________________
Municipal Clerk

APPROVED by the Ministry of Transportation and Infrastructure on

ADOPTED

___________________________________________________________________
Mayor                                      Municipal Clerk

Certified a true copy

___________________________________________________________________
Municipal Clerk
Schedule B to Bylaw 8209

Sketch plan showing location of commercial use

Location of commercial use

Minimum 966 m² (10,400 sq. ft.)
Schedule C to Bylaw 8209

Sketch Plan
The Corporation of the District of North Vancouver

Bylaw 8210

A bylaw to enter into a Housing Agreement (229 Seymour River Place)

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

1. Citation

This bylaw may be cited as “Market Rental Housing Agreement Bylaw 8210, 2016 (229 Seymour River Place)".

2. Authorization to Enter into Agreement

The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Fonnie International Investments Ltd. substantially in the form attached to this Bylaw as Schedule "B" with respect to the following lands:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702;

b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699; and,

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A.

3. Execution of Documents

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

READ a first time

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk
Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8210

SKETCH PLAN
Schedule B to Bylaw 8210

HOUSING AGREEMENT

HOUSING AGREEMENT
(28 Market Rental Units)

This agreement dated for reference the ___ day of ____________, 20___ is

BETWEEN:

FONNIE INTERNATIONAL INVESTMENTS LTD. (Inc. No. BC0255927),
a company incorporated under the laws of the Province of British Columbia
having an office at 2700 – 700 West Georgia Street, Vancouver, BC V7Y 1B8

(the “Owner”)

AND:

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

(the “District”)

WHEREAS:

A. The Owner is the registered owner of the parcels of land in the District of North
Vancouver legally described as:

(a) Parcel Identifier 002-491-699 Lot G Block 18 District lot 193 Plan 20080;
(b) Parcel Identifier 002-491-702 Lot H Block 18 District lot 193 Plan 20080; and
(c) [Insert legal description for the portion of closed road].

(collectively, referred to herein as the “Lands”);

B. The Owner wishes to obtain development permissions with respect to the Lands and
wishes to create a development containing a range of residential and commercial uses and
associated civic and community uses, including 28 market rental units;

C. Section 219 of the Land Title Act permits the registration of a covenant of a negative or
positive nature in favour of the District in respect of the use of land, construction on land
or the subdivisions of land;

D. Section 483 of the Local Government Act permits the District to enter into a housing
agreement with an owner of land, which agreement may include terms and conditions
regarding the occupancy, tenure and availability of dwelling units located on the Land; and

E. The Owner and the District wish to enter into this Agreement to restrict the use of, and construction on, the Lands on the terms and conditions of this agreement, to have effect as a housing agreement under section 483 of the *Local Government Act*.

NOW THEREFORE in consideration of the sum of $10.00 now paid by the District to the Owner and other good and valuable consideration, the receipt and sufficiency of which the Owner hereby acknowledges, the parties covenant and agree pursuant to Section 219 of the *Land Title Act* (British Columbia) as follows:

1. **DEFINITIONS**

**Definitions**

1.01 In this agreement:

   (a) "Development Covenant" means the section 219 covenant registered under number ____ at the LTO against the Owners title to the Lands in favour of the District;

   (b) "Director" means the District’s General Manager of Planning, Properties and Permits and his or her designate;

   (c) "Discharges" has the meaning given to it in section 2.02 herein;

   (d) "Dwelling Unit" means a residential strata lot in the Proposed Buildings;

   (e) "Gross Floor Area" has the meaning given to it in the District’s Zoning Bylaw 3210, 1965, as amended and consolidated from time to time;

   (f) "Lands" has the meaning given to it in Recital B herein;

   (g) "LTO" means the Lower Mainland Land Title Office and any successor of that office;

   (h) "Market Rental Units" means 28 Dwelling Units, consisting of 12 one-bedroom units, 14 two-bedroom units and 2 three-bedroom units, said rental units to be designed, located and configured in accordance with the requirements and approvals set out in this Agreement and in the Development Covenant;

   (i) "Proposed Buildings" means the proposed buildings to be constructed on the Lands as described in the Development Covenant; and

   (j) "Strata Corporation" means the strata corporation established pursuant to the *Strata Property Act* (British Columbia) upon registration at the LTO of a strata plan to stratify the Proposed Buildings, once constructed.

2. **THE MARKET RENTAL UNITS**

Owner’s Covenants
2.01 The Owner covenants and agrees with the District that:

(a) the Lands will not be developed for residential purposes and no residential building or structure will be constructed on the Lands unless as part of the construction and development of any such building or structure, the Owner also designs and constructs to completion, in accordance with a building permit issued by the District and in accordance with the Development Covenant and a development permit issued by the District, the Market Rental Units;

(b) the Market Rental Units must be designed and constructed to the same standard, in terms of Gross Floor Area, layout, workmanship and materials, as the balance of the Dwelling Units in the Proposed Buildings on the Lands;

(c) the accessibility features as set out in the Development Covenant will be incorporated in each of the Market Rental Units; and

(d) the Owner will do everything necessary, at the Owner’s expense, to ensure that this Agreement will be registered as a section 219 covenant and rent charge against title to the Lands in priority to all financial charges and encumbrances at the earliest possible opportunity after execution and delivery by the District.

Discharge Provision

2.02 At the request of the Owner and at the Owner’s sole expense, the District will deliver to the Owner discharges (collectively, the “Discharges”) in registrable form discharging this Agreement from each Dwelling Unit and any other strata lot created by the strata subdivision of the Proposed Buildings that is not a Market Rental Unit, provided that the District may withhold delivery of the Discharges until after the District has received from the Strata Corporation its duly authorized agreement that it will not take any action that would result in an inability to rent the Market Rental Unit in accordance with this Agreement or would render such rental a breach of the Strata Corporation bylaws.

Limitation on Discharges

2.03 The District will be under no obligation to provide the Discharges unless the Director is satisfied that the Owner has met all of its obligations under section 2.02 of this Agreement, has completed the construction of the Market Rental Units in accordance with the requirements in section 2.01 and the Development Covenant, and has obtained occupancy permits for all of the Dwelling Units, including the Market Rental Units, in the Proposed Buildings.

Effect of Discharge

2.04 Any Dwelling Unit against which this section 219 Housing Agreement Covenant remains as a charge after deposit at the LTO of the Discharges will be deemed to be an Market Rental Unit under this Agreement

No Separate Sale

2.05 The Market Rental Units are not to be sold or otherwise transferred separately.
2.06 The Market Rental Units may not be used or occupied for any purpose whatsoever save and except for the purpose of providing rental accommodation (and ancillary services such as parking and storage) to tenants pursuant to month-to-month residential tenancy agreements or residential tenancy agreement with terms not exceeding one year in duration, where said tenancy agreements comply with all of the requirements of this Agreement.

Tenancy Agreements

2.07 The Owner shall not suffer, cause or permit occupancy of any Market Rental Unit except pursuant to a residential tenancy agreement that:

(a) does not require the rent to be prepaid at an interval greater than monthly; and

(b) prohibits the tenant from subletting the unit, assigning the tenancy agreement, or operating the unit on a short term rental basis (less than one month).

3. DEFAULT AND REMEDIES

Notice of Default

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

Costs

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

Damages

3.03 The Owner acknowledges that the District requires rental housing for the benefit of the community. The Owner therefore agrees that for each day the Lands are occupied in breach of this Agreement, the Owner must pay the District $100.00 (the “Daily Amount”), as liquidated damages and not as a penalty, due and payable at the offices of the District on the last day of the calendar month in which the breach occurred. The Daily Amount is increased on January 1 of each year by the amount calculated by multiplying the Daily Amount as of the previous January 1 by the percentage increase between that previous January 1 and the immediately preceding December 31 in the Consumer Price Index. The Owner agrees that payment may be enforced by the District in a court of competent jurisdiction as a contract debt.

Rent Charge
3.04 By this section, the Owner grants to the District a rent charge under section 219 of the Land Title Act, and at common law, securing payment by the Owner to the District of the amounts described in section 3.03. The District agrees that enforcement of the rent charge granted by this section is suspended until the date that is 30 days after the date on which any amount due under section 3.03 is due and payable to the District in accordance with section 3.03. The District may enforce the rent charge granted by this section by an action for an order for sale or by proceedings for the appointment of a receiver.

Specific Performance

3.05 The Owner agrees that, without affecting any other rights or remedies the District may have in respect of any breach of this Agreement, the District is entitled to obtain an order for specific performance of this agreement and a prohibitory or mandatory injunction in respect of any breach by the Owner of this Agreement. The Owner agrees that this is reasonable given the public interest in restricting occupancy of the Lands in accordance with this Agreement.

No Penalty or Forfeiture

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

Cumulative Remedies

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

4. LIABILITY

Indemnity

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

Release

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

Survival

4.03 The covenants of the Owner set out in Sections 4.01 and 4.02 will survive termination of this Agreement and continue to apply to any breach of the Agreement or claim arising under this Agreement during the ownership by the Owner of the Lands or any Dwelling Unit therein, as applicable.

5. GENERAL PROVISIONS

District’s Power Unaffected

5.01 Nothing in this Agreement:

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

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

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

Agreement for Benefit of District Only

5.02 The Owner and District agree that:

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

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any Occupant or any future owner, occupier or user of any part of the Proposed Buildings including any Dwelling Unit; and

(c) The District may at any time execute a release and discharge of this Agreement in respect of the Proposed Buildings or any Dwelling Unit therein, without liability to anyone for doing so.
Agreement Runs With the Lands

5.03 This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Dwelling Unit after the date of this Agreement. Notwithstanding anything contained herein, the Owner shall not be liable under any of the covenants and agreements contained herein where such liability arises by reason of an act or omission occurring on the Lands or a portion thereof after the Owner ceases to own the Lands or such portion thereof.

Release

5.04 The covenants and agreements on the part of the Owner and herein set forth in this Agreement have been made by the Owner as contractual obligations as well as being made pursuant to Section 905 of the Local Government Act (British Columbia) and as such will be binding on the Owner, except that neither the Owner shall be liable for any default in the performance or observance of this Agreement occurring after the Owner ceases to own the Lands or the Market Rental Units as the case may be.

Priority of this Agreement

5.05 The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Dwelling Unit in the Proposed Building in priority to all financial charges, including any amendments to this Agreement as may be required by the LTO or the District to effect such registration, subject to the discharge provisions contained herein.

Agreement to Have Effect as Deed

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

Waiver

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

Time

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

Validity of Provisions

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

Extent of Obligations and Costs

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

Notices

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

If to the District:

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

Attention: Clerks Department
Faesimile: (604) 984-9637

If to the Owner:

Attention:
Faesimile: (604)

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request; if made by facsimile transmission, on the first business day after the date when the facsimile transmission was transmitted; and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

Further Assurances

5.12 Upon request by the District, the Owner will promptly do such acts and execute such documents as may be reasonably necessary, in the opinion of the District, to give effect to this Agreement.
5.13 This Agreement will enure to the benefit of and be binding upon each of the parties and their successors and permitted assigns.

6. INTERPRETATION

References

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

Construction

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

No Limitation

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

Terms Mandatory

6.04 The words “must” and “will” are to be construed as imperative.

Statutes

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

Entire Agreement

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

6.07 This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw ________.
Governing Law

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

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

END OF DOCUMENT
The Corporation of the District of North Vancouver

Bylaw 8227

A bylaw to enter into a Housing Agreement (229 Seymour River Place)

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

1. Citation

This bylaw may be cited as “Affordable Rental Housing Agreement Bylaw 8227, 2017 (229 Seymour River Place)”.

2. Authorization to Enter into Agreement

The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Fonnie International Investments Ltd. substantially in the form attached to this Bylaw as Schedule "B" with respect to the following lands:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702;

b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699; and

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A.

3. Execution of Documents

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

READ a first time

READ a second time

READ a third time

ADOPTED

Mayor ___________________________ Municipal Clerk ___________________________
Certified a true copy

______________________________
Municipal Clerk
Schedule B to Bylaw 8227

HOUSING AGREEMENT

(10 Affordable Rental Units)

This agreement dated for reference the ___ day of ______________, 20___ is

BETWEEN:

FONNIE INTERNATIONAL INVESTMENTS LTD. (Inc. No. BC0255927), a company incorporated under the laws of the Province of British Columbia having an office at 2700 – 700 West Georgia Street, Vancouver, BC V7Y 1B8 (the “Owner”)

AND:

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

WHEREAS:

A. The Owner is the registered owner of the parcels of land in the District of North Vancouver legally described as:

   (a) Parcel Identifier 002-491-699 Lot G Block 18 District lot 193 Plan 20080;
   (b) Parcel Identifier 002-491-702 Lot H Block 18 District lot 193 Plan 20080; and
   (c) [Insert legal description for the portion of closed road].

(collectively, referred to herein as the “Lands”);

B. The Owner wishes to obtain development permissions with respect to the Lands and wishes to create a development containing a range of residential and commercial uses and associated civic and community uses, including ten affordable rental units;

C. Section 219 of the Land Title Act permits the registration of a covenant of a negative or positive nature in favour of the District in respect of the use of land, construction on land or the subdivisions of land;

D. Section 483 of the Local Government Act permits the District to enter into a housing agreement with an owner of land, which agreement may include terms and conditions
regarding the occupancy, tenure and availability of dwelling units located on the Lands;
and

E. The Owner and the District wish to enter into this Agreement to restrict the use of, and
construction on, the Lands on the terms and conditions of this agreement, to have effect
as a housing agreement under section 483 of the Local Government Act,

NOW THEREFORE in consideration of the sum of $10.00 now paid by the District to the
Owner and other good and valuable consideration, the receipt and sufficiency of which the
Owner hereby acknowledges, the parties covenant and agree pursuant to section 219 of the Land
Title Act (British Columbia) as follows:

1. DEFINITIONS

Definitions

1.01 In this agreement:

(a) “Affordable Rental Units” means 10 Dwelling Units, consisting of 5 one-
bedroom units, 4 two-bedroom units and 1 three-bedroom unit, said affordable
rental units to be designed, located and configured in accordance with the
requirements and approvals set out in this Agreement and in the Development
Covenant;

(b) “Consumer Price Index” means the all-items consumer price index published by
Statistics Canada, or its successor in function, for Vancouver, where ___ = 100;

(c) “Development Covenant” means the section 219 covenant registered under
number ____ at the LTO against the Owner’s title to the Lands in favour of the
District, which said Development Covenant stipulates, among other things, that:
occupancy permit will be issued for any Dwelling Unit unless and until the
Owner has granted to the District the RFR and the RFR is registered at the LTO
against the title to the Affordable Rental Units in priority to all financial charges
and encumbrances;

(d) “Director” means the District’s General Manager of Planning, Properties and
Permits and his or her designate;

(e) “Discharges” has the meaning given to it in section 2.02 herein;

(f) “Dwelling Unit” means a residential strata lot in the Proposed Buildings;

(g) “Eligibility Requirement” means aggregate annual household gross income that is
less than or equal to 333% of the annual rent for the unit proposed to be rented
(which rent, for greater certainty, may not be greater than the Maximum Rent for
the unit), where said aggregate income is established by way of true copies of the
previous year’s income tax forms for each household member or individual who
will reside in the unit;
(h) "First Occupancy" means the first occupancy of each of the Affordable Rental Units pursuant to residential tenancy agreements in accordance with section 2.08, which said First Occupancy continues until the tenant vacates the premises whether or not the tenant has entered into a new or revised residential tenancy agreement with the Owner and whether or not the term of the residential tenancy agreement is otherwise extended or renewed;

(i) "Gross Floor Area" has the meaning given to it in the District's Zoning Bylaw 3210, 1965, as amended and consolidated from time to time;

(j) "Lands" has the meaning given to it in Recital B herein;

(k) "LTO" means the Lower Mainland Land Title Office and any successor of that office;

(l) "Maximum Rate" means:

(i) for the first year of each First Occupancy and for the first year of each Subsequent Occupancy monthly rent for each of the Affordable Rental Units equal to the 65th percentile of monthly market rent for one, two or three bedroom Dwelling Units, as applicable, in Vancouver as determined by CMHC for the most recent six month period, or if CMHC no longer provides this information then as determined by an appropriate replacement real estate market data gathering organization acceptable to the District;

(ii) in the second and subsequent years of each First Occupancy and each Subsequent Occupancy, an amount equal to the rent for the preceding year of the occupancy multiplied by a fraction the numerator of which is the Consumer Price Index for the month immediately prior to the commencement of the Lease Year and the denominator of which is the Consumer Price Index for the same month one year earlier; and

(iii) Notwithstanding subsections 1.01 (l)(i) and 1.01(l)(ii) above, if the rent mandated by any potential rental rate ceiling established by a senior level of government is less than the rent calculated in accordance with said subsections, then Maximum Rent shall mean the mandated rent;

(m) "Proposed Buildings" means the proposed buildings to be constructed on the Lands as described in the Development Covenant;

(n) "RFR" means the right of first refusal to purchase the Affordable Rental Units to be granted by the Owner to the District in accordance with the Development Covenant and this Agreement, which said RFR will be substantially in the form attached hereto as Schedule "A";
(o) "Strata Corporation” means the strata corporation established pursuant to the
Strata Property Act (British Columbia) upon registration at the LTO of a strata
plan to stratify the Proposed Buildings, once constructed; and

(p) “Subsequent Occupancy” means any occupancy of an Affordable Rental Unit
after the First Occupancy pursuant to residential tenancy agreements in
accordance with this section 2.08, which said Subsequent Occupancy continues
until the tenant vacates the premises whether or not the tenant has entered into a
new or revised residential tenancy agreement with the Owner and whether or not
the term of the residential tenancy agreement is otherwise extended or renewed.

2. THE AFFORDABLE RENTAL UNITS

Owner’s Covenants

2.01 The Owner covenants and agrees with the District that:

(a) the Lands will not be developed for residential purposes and no residential
building or structure will be constructed on the Lands unless as part of the
construction and development of any such building or structure, the Owner also
designs and constructs to completion, in accordance with a building permit issued
by the District and in accordance with the Development Covenant and a
development permit issued by the District, the Affordable Rental Units;

(b) the Affordable Rental Units must be designed and constructed to the same
standard, in terms of Gross Floor Area, layout, workmanship and materials, as the
balance of the Dwelling Units in the Proposed Buildings on the Lands;

(c) the accessibility features as set out in the Development Covenant will be
incorporated in each of the Affordable Rental Units;

(d) the Owner will do everything necessary, at the Owner’s expense, to ensure that
this Agreement will be registered as a section 219 covenant and rent charge
against title to the Lands in priority to all financial charges and encumbrances at
the earliest possible opportunity after execution and delivery by the District; and

(e) the Owner will do everything necessary, at the Owner’s expense, to ensure that
the RFR will be registered against title to the Affordable Rental Units in priority
to all financial charges and encumbrances in accordance with the Development
Covenant and this Agreement.

Discharge Provision

2.02 At the request of the Owner and at the Owner’s sole expense, the District will deliver to
the Owner discharges (collectively, the “Discharges”) in registrable form discharging this
Agreement from each Dwelling Unit and any other strata lot created by the strata
subdivision of the Proposed Buildings that is not an Affordable Rental Unit, provided that
the District may withhold delivery of the Discharges until after the District has received
from the Strata Corporation its duly authorized agreement that it will not take any action that would result in an inability to rent the Affordable Rental Unit in accordance with this Agreement or would render such rental a breach of the Strata Corporation bylaws.

Limitation on Discharges

2.03 The District will be under no obligation to provide the Discharges unless the Director is satisfied that the Owner has met all of its obligations under section 2.02 of this Agreement, has completed the construction of the Affordable Rental Units in accordance with the requirements in section 2.01 and the Development Covenant, and has obtained occupancy permits for all of the Dwelling Units, including the Affordable Rental Units, in the Proposed Buildings.

Effect of Discharge

2.04 Any Dwelling Unit against which this section 219 Housing Agreement Covenant remains as a charge after deposit at the LTO of the Discharges will be deemed to be an Affordable Rental Unit under this Agreement.

No Separate Sale

2.05 The Affordable Rental Units are not to be sold or otherwise transferred separately.

Rental Housing

2.06 The Affordable Rental Units may not be used for any purpose whatsoever save and except for the purpose of providing rental accommodation (and ancillary services such as parking and storage) to tenants meeting the Eligibility Requirement pursuant to month-to-month residential tenancy agreements or residential tenancy agreements with terms not exceeding one year in duration, where said tenancy agreements comply with all of the requirements of this Agreement.

Occupancy Restriction

2.07 No Affordable Rental Unit may be occupied except by:

(a) a person meeting the Eligibility Requirement pursuant to month-to-month residential tenancy agreements or residential tenancy agreement with terms not exceeding one year in duration that complies with section 2.08; and

(b) the other members of the person’s household, provided that the income of all members is included in the determination of eligibility under the Eligibility Requirement.

Tenancy Agreements
2.08 The Owner shall not suffer, cause or permit occupancy of any Affordable Rental Unit except pursuant to a residential tenancy agreement that:

(a) is entered into by the Owner and, as tenant, a person at arm’s length from the Owner. For the purpose of this Agreement, “at arm’s length” means:

(i) not in any other contractual relationship with the Owner or any director, officer or other senior employee of the Owner;

(ii) unrelated by blood, marriage or personal relationship to any director, officer or other senior employee of the Owner; and

(iii) not employed by any corporate entity that is an affiliate of the Owner, as that term is defined in the British Columbia Business Corporations Act as of the date of this Agreement,

provided that the District may, in its sole discretion, relax the restrictions contained in this subsection 2.08(a) upon the written request of the Owner on a case-by-case basis. Any such relaxation in relation to any particular residential tenancy agreement is not to be construed as or constitute a waiver of the requirements in relation to any other residential tenancy agreement. No relaxation of the restrictions in this subsection 2.08(a) will be effective unless it is granted in writing by the District prior to the execution and delivery of the residential tenancy agreement to which the relaxation relates;

(b) does not require payment of rent or any other consideration for the Affordable Rental Unit directly or indirectly that exceeds the Maximum Rate for the unit;

(c) does not require the rent to be prepaid at an interval greater than monthly;

(d) prohibits the tenant from subletting the unit, assigning the tenancy agreement, or operating the unit on a short term rental basis (less than one month);

(e) requires the tenant to provide within 30 days of demand true copies of the most recent filed income tax returns or assessment notices from Canada Revenue Agency for each occupant of the unit; and

(f) contains a provision that, if the tenant ceases to qualify for the Affordable Rental Unit because he or she no longer meets the Eligibility Requirement, the Owner may end the tenancy agreement by giving the tenant a clear month’s notice to end the tenancy in accordance with section 49.1 of the Residential Tenancy Act (or successor legislation).

Housing List and Guidelines

2.09 The Owner must:
(a) prepare guidelines, criteria and procedures for determining eligibility for occupancy of an Affordable Rental Unit, which may include a minimum household income requirements of not less than 200% of the rent for the unit in question (which rent, for greater certainty, may not be greater than the Maximum Rent for that unit);

(b) accept applications for Affordable Rental Units from all applicants who meet the Eligibility Requirement and satisfy the guidelines, criteria and procedures established by the Owner under subsection 2.09(a);

(c) maintain a housing list of eligible applicants from whom the Owner has accepted applications for residential occupancy of an Affordable Rental Unit and who have been denied an Affordable Rental Unit as a result of a lack of vacancy;

(d) where an Affordable Rental Unit becomes available for occupancy, offer the units to persons on the housing list in the order in which their applications were made, unless:

   (i) the person no longer meets the Eligibility Requirement; or

   (ii) the Owner does not consider the person to be an acceptable candidate for occupancy of that Affordable Rental Unit because the person does not satisfy the guidelines, criteria and procedures established by the Owner under subsection 2.09(a); and

(e) make the housing list the guidelines, criteria and procedures established by the Owner under subsection 2.09(a) available to the District upon request.

Compliance with Laws

2.10 The Owner will at all times ensure that the Affordable Rental Units are used and occupied in compliance with all statutes, laws, regulations, and orders of any authority having jurisdiction and without limiting the generality of the foregoing all bylaws of the District and all federal, provincial, municipal or local laws, statutes or ordinances relating to environmental matters, including all rules, regulations, policies, guidelines, criteria or the like promulgated under or pursuant to any such laws.

Duty to Account and Report

2.11 In addition to the other covenants and obligations to be performed by the Owner hereunder, the Owner covenants and agrees that it will:

(a) provide the District, by March 1 of each year, a full report on the rental of the Affordable Rental Units and revenue received therefrom during the preceding calendar year; and

(b) deliver to the District, on request of the District, copies of all current tenancy agreements in respect of the Affordable Rental Units.
Statutory Declaration

2.12 Within three days after receiving notice from the District, the Owner must deliver to the District a statutory declaration, substantially in the form attached as Schedule “B”, sworn by the Owner under oath before a commissioner for taking affidavits in British Columbia, containing all of the information required to complete the statutory declaration.

3. DEFAULT AND REMEDIES

Notice of Default

3.01 The District may, acting reasonably, give to the Owner written notice to cure a default under this Agreement within 90 days of receipt of notice. The notice must specify the nature of the default. The Owner must act with diligence to correct the default within the time specified.

Costs

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

Damages

3.03 The Owner acknowledges that the District requires affordable rental housing for the benefit of the community. The Owner therefore agrees that for each day the Lands are occupied in breach of this Agreement, the Owner must pay the District $100.00 (the “Daily Amount”), as liquidated damages and not as a penalty, due and payable at the offices of the District on the last day of the calendar month in which the breach occurred. The Daily Amount is increased on January 1 of each year by the amount calculated by multiplying the Daily Amount as of the previous January 1 by the percentage increase between that previous January 1 and the immediately preceding December 31 in the Consumer Price Index. The Owner agrees that payment may be enforced by the District in a court of competent jurisdiction as a contract debt.

Rent Charge

3.04 By this section, the Owner grants to the District a rent charge under section 219 of the Land Title Act, and at common law, securing payment by the Owner to the District of the amounts described in section 3.03. The District agrees that enforcement of the rent charge granted by this section is suspended until the date that is 30 days after the date on which any amount due under section 3.03 is due and payable to the District in accordance with section 3.03. The District may enforce the rent charge granted by this section by an action for an order for sale or by proceedings for the appointment of a receiver.

Specific Performance

3.05 The Owner agrees that, without affecting any other rights or remedies the District may have in respect of any breach of this Agreement, the District is entitled to obtain an order
for specific performance of this agreement and a prohibitory or mandatory injunction in respect of any breach by the Owner of this Agreement. The Owner agrees that this is reasonable given the public interest in restricting occupancy of the Lands in accordance with this Agreement.

No Penalty or Forfeiture

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

Cumulative Remedies

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

4. LIABILITY

Indemnity

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

Release

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

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

5. GENERAL PROVISIONS

District’s Power Unaffected

5.01  Nothing in this Agreement:

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

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

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

Agreement for Benefit of District Only

5.02  The Owner and District agree that:

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

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any Occupant or any future owner, occupier or user of any part of the Proposed Buildings including any Dwelling Unit; and

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

Agreement Runs With the Lands

5.03  This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Dwelling Unit after the date of this Agreement. Notwithstanding anything contained herein, the Owner shall not be liable under any of the covenants and agreements contained herein where such liability arises by reason of an act or omission occurring on the Lands or a portion thereof after the Owner ceases to own the Lands or such portion thereof.
Release

5.04 The covenants and agreements on the part of the Owner and herein set forth in this Agreement have been made by the Owner as contractual obligations as well as being made pursuant to section 905 of the Local Government Act (British Columbia) and as such will be binding on the Owner, except that neither the Owner shall be liable for any default in the performance or observance of this Agreement occurring after the Owner ceases to own the Lands or the Affordable Rental Units as the case may be.

Priority of this Agreement

5.05 The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Dwelling Unit in the Proposed Building in priority to all financial charges, including any amendments to this Agreement as may be required by the LTO or the District to effect such registration, subject to the discharge provisions contained herein.

Agreement to Have Effect as Deed

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

Waiver

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

Time

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

Validity of Provisions

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

Extent of Obligations and Costs

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

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

If to the District:

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

Attention: Clerks Department
Facsimile: (604) 984-9637

If to the Owner:

Attention:
Facsimile: (604)

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request; if made by facsimile transmission, on the first business day after the date when the facsimile transmission was transmitted; and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

Further Assurances

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

Enuring Effect

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

6. INTERPRETATION

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

Construction

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

No Limitation

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

Terms Mandatory

6.04 The words “must” and “will” are to be construed as imperative.

Statutes

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

Entire Agreement

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

6.07 This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8210.

Governing Law

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

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

GIVEN THAT:

A. __________________________________________ (the “Owner”) is the Registered Owner of the Land described in Item 2 of Page 1 of the Form C (the “Land”);

B. The Owner granted ___________________________________________ (the “Prior Chargeholder”) a Mortgage and Assignment of Rents registered against title to the Land in the Lower Mainland Land Title Office (the “LTO”) under Nos. ____________, as extended by ___________ and ____________, as extended by ___________ (together, the “Prior Charge”);

C. The Owner granted to THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER (the “District”) a Covenant and Rent Charge attached to this Agreement and registered against title to the Land in the LTO immediately before registration of this Agreement (together, the “Subsequent Charge”); and

D. Section 207 of the Land Title Act permits the Prior Chargeholder to grant priority over a charge to the District as Subsequent Chargeholder.

THEREFORE this Agreement is evidence that in consideration of $1.00 and other good and valuable consideration received by the Prior Chargeholder from the District (the receipt and sufficiency of which the Prior Chargeholder acknowledges):

1. The Prior Chargeholder consents to the granting and registration of the Subsequent Charge and the Prior Chargeholder agrees that the Subsequent Charge shall be binding upon their interest in and to the Land.

2. The Prior Chargeholder grants to the District, as a Subsequent Chargeholder, priority for the Subsequent Charge over the Prior Chargeholder’s right, title and interest in and to the Land, and the Prior Chargeholder postpones the Prior Charge and all of their right, title and interest thereunder to the Subsequent Charge as if the Subsequent Charge had been executed, delivered and registered prior to the execution, delivery and registration of the Prior Charge.

As evidence of its agreement to be bound by the terms of this instrument, the Prior Chargeholder has executed the Land Title Act Form C to which this Agreement is attached and which forms part of this Agreement.
SCHEDULE “A”
RIGHT OF FIRST REFUSAL

THIS AGREEMENT dated for reference the ___ day of ____________, 2013

BETWEEN:

(the “Owner”)

AND:

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER, a municipality incorporated under the Local Government Act and having its office at 355 West Queens Rd, North Vancouver, BC V7N 4N5

(the “District”)

THIS AGREEMENT is evidence that in consideration of payment of $10.00 by the District to the Owner and other and valuable consideration, the receipts of which is acknowledged by the Owner, the Owner grants to the District a right of first refusal (the “RFR”) to purchase the Strata Lots (hereinafter defined) on the following terms and conditions:

1. Definitions – In this Agreement:
   (a) “Arm’s length” has the same meaning as that term has in the Income Tax Act of Canada and amending Acts;
   (b) “Bona Fide Offer” means an offer to purchase the Strata Lots:
      (i) in writing;
      (ii) signed by an Outside Offeror;
      (iii) only in their entirety and no other property, rights or assets;
      (iv) in a form legally enforceable against the Outside Offeror and subject to no conditions which are not capable of being waived by the Outside Offeror;
      (v) providing for a deposit of not less than 10% of the proposed purchase price within 72 hours of the removal or waiver of all conditions; and
      (vi) providing that if the District does not exercise its right of first refusal as set forth in this Agreement, the Outside Offeror will grant to the District a right of first refusal (the “New RFR”) to purchase the Strata Lots upon the same terms and conditions as are set forth in this Agreement;
(c) "Business Day" means Monday to Friday inclusive except for those excluded days declared by lawful authority as holidays, excluding any day that the LTO is not open for business;

(d) "Expiry Time" with respect to any offer made by the Owner to the District under section 4, will be 5:00 PM in the afternoon on the 30th Business Day after receipt by the District of such offer. In determining such time the day such offer is received will be excluded;

(e) "LTO" means the Lower Mainland Land Title Office or its successor;

(f) "New RFR" has the meaning given to it in subsection 1(b)(vi);

(g) "Outside Offeror" means a purchaser or prospective purchaser of all ten of the Strata Lots who deals at arm's-length with the Owner;

(h) "Strata Lots" means the ten strata parcels described in Item 2 of the Form C General Instrument Part 1 to which this Agreement is attached and which forms part of this Agreement; and

(i) "Term" means that period of time from and after the date of this Agreement to and including January 1, 2114.

2. Restrictions on Sale – During the Term, the Owner will not sell, transfer or otherwise convey any of the Strata Lots except:

   (a) for consideration payable entirely in lawful money of Canada;

   (b) to an Outside Offeror;

   (c) pursuant to a Bona Fide Offer; and

   (d) in accordance with, and to the extent permitted by, the terms of this Agreement.

3. Notice of Bona Fide Offer – If, at any time and from time to time during the Term, the Owner receives a Bona Fide Offer from an Outside Offeror, which Bona Fide Offer the Owner is willing to accept, then the Owner will deliver written notice (the "Notice") immediately to the District that the Owner has received such Bona Fide Offer, and listing the liens, charges and encumbrances subject to which the Strata Lots are to be conveyed, and will deliver to the District with the Notice a photocopy of such Bona Fide Offer, certified by the Owner to be a true copy.

4. Notice as Offer – The Notice will be deemed to constitute an offer by the Owner to the District to sell the Strata Lots to the District on and subject to all the terms and conditions set forth in such Bona Fide Offer, except that if the Owner is not the first registered owner of the Strata Lots the purchase price will be the lesser of: (a) the price set forth in such Bona Fide Offer; or (b) $________________, being the actual price paid by _________________ for the Strata Lots.
5. **Offer Irrevocable** – The offer by the Owner to the District under section 4 will be irrevocable and may not be withdrawn by the Owner until after the Expiry Time.

6. **Acceptance of Offer** – Upon receipt of the Notice, the District will have the exclusive first right, exercisable up to and including but not after the Expiry Time, to deliver to the Owner written notice (the "Acceptance") that the District will purchase the Strata Lots upon the terms and conditions set forth in such Bona Fide Offer for a purchase price equal to the price set forth in such Bona Fide Offer or, if the Owner is not the first registered owner of the Strata Lots, for a purchase price equal to the lesser of: (a) the price set forth in such Bona Fide Offer; or (b) $________$, again being the actual price paid by __________ for the Strata Lots.

7. **Contract of Purchase and Sale** – Upon receipt by the Owner of the Acceptance, a binding contract of purchase and sale for the Strata Lots will be constituted between the Owner and the District, which contract will be completed in the manner provided in such Bona Fide Offer as if the District were the Outside Offeror.

8. **Sale to Outside Offeror** – If the Owner does not receive the Acceptance before the Expiry Time, then the Owner may complete the sale to the Outside Offeror as provided for in such Bona Fide Offer in strict compliance with the terms respectively set forth in the Bona Fide Offer. In such case, the District will cause its solicitors to deliver a discharge of this Agreement to the solicitors for the Owner on receipt of satisfactory undertaking from the solicitors for the Owner that the discharge will only be registered if that sale to the Outside Offeror is completed strictly in compliance with the terms of the Bona Fide Offer and as an all or nothing package including the New RFR. If the sale to the Outside Offeror is not so completed, then any subsequent sale to any person or corporation may be made only if all the requirements of the Agreement are again complied with, and the RFR will survive and continue in full force and effect.

9. **Notices** – All notices required or permitted to be given under this Agreement will be in writing and will be given by personal service or by prepaid registered post, at the following addresses:

   (a) If to the Owner:

   Attention:

   (b) If to the District

   The Corporation of the District of North Vancouver
   355 West Queens Rd
   North Vancouver, BC V7N 4N5

   Attention: Municipal Clerk

   Fax: (604) 984-9637
or to such other address as either party may provide in writing to the other under this Agreement. Any notice will be deemed to have been received by the party to whom it is addressed if personally served, when served, and if mailed, on the fourth Business Day after such mailing provided that if mailed, a mail strike, slowdown, labour or other dispute which might affect delivery of such notice by mails, then such notice will only be effective if actually delivered.

10. **Time** – Time is of the essence.

11. **Governing Law** – This Agreement will be governed and construed in accordance with the laws of the Province of British Columbia.

12. **References** – Wherever the singular or masculine is used in this Agreement the same will be deemed to include references to the plural, feminine or body corporate, as the case may be.

13. **Construction** – The division of this Agreement into sections, and the insertion of headings are for convenience or reference only and are not to affect the construction or interpretation of this Agreement.

14. **Enurement** - This Agreement will enure to the benefit of and be binding upon the respective successors, heirs, executors, administrators and assigns of the parties.

15. **Execution** - By executing and delivering this Agreement each of the parties intends to create both a contract and a deed executed and delivered under seal.

As evidence of their agreement to be bound by the terms of this instrument, the parties each have executed and delivered this Agreement under seal by executing Part 1 of the *Land Title Act* Form C to which this Agreement is attached and which forms part of this Agreement.
SCHEDULE “B”

Statutory Declaration

CANADA

PROVINCE OF BRITISH COLUMBIA

IN THE MATTER OF A HOUSING AGREEMENT with the District of North Vancouver ("Housing Agreement")

1. _____________________, OF _____________________, British Columbia, do solemnly declare:

1. That I am the Owner of the ten strata Lots legally described as [insert legal] and make this declaration to the best of my personal knowledge.

2. This declaration is made pursuant to the Housing Agreement in respect of the four strata lots.

3. For the period from ____________, _________ to ____________, _________, all of the aforesaid strata lots were occupied by Eligible Persons, whose names and addresses appear below, and in accordance with the Housing Agreement.

<table>
<thead>
<tr>
<th>Name of Eligible Person</th>
<th>Other Resident(s) of Dwelling Unit</th>
<th>Apt. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

4. I make this solemn declaration, conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and pursuant to the Canada Evidence Act.

SWORN BEFORE ME at the ____________, in the Province of British Columbia, this ______ day of ______________, 20___.

______________________________
A Commissioner for Taking Affidavits for British Columbia
The Corporation of the District of North Vancouver

Bylaw 8238

A bylaw to enter into a Housing Agreement (229 Seymour River Place)

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

1. Citation

This bylaw may be cited as “No Rental Limit (except Short Term Rentals) Housing Agreement Bylaw 8238, 2017 (229 Seymour River Place)”. 

2. Authorization to Enter into Agreement

The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Fonnie International Investments Ltd. substantially in the form attached to this Bylaw as Schedule B with respect to the following lands:

a) Parcel Identifier 002-491-699 Lot G Block 18 District Lot 193 Plan 20080;

b) Parcel Identifier 002-491-702 Lot H Block 18 District Lot 193 Plan 20080; and

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A.

3. Execution of Documents

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

READ a first time

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk

Document: 3152901
Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8238
Schedule B to Bylaw 8238

SECTION 219 COVENANT – HOUSING AGREEMENT

(No Rental Limit)

SECTION 219 COVENANT – HOUSING AGREEMENT
(No Rental Limit)

This agreement is dated for reference the ___ day of ____________, 20__

BETWEEN:

FONNIE INTERNATIONAL INVESTMENTS LTD. (Inc. No. BC0255927) a company
incorporated under the laws of the Province of British Columbia having an office at 2700
– 700 West Georgia Street, Vancouver, BC V7Y 1B8

(the “Developer”)

AND:

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

(the “District”)

WHEREAS:

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

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

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

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

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

1. **DEFINITIONS**

1.01 Definitions

In this agreement:

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

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

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

(d) "Proposed Development" means the proposed development containing not more than 195 units to be constructed on the Lands in accordance with the Development Permit;

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

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

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

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

2. **TERM**

This Agreement will commence upon adoption by District Council of Bylaw 8238 and remain in effect until terminated by the District as set out in this Agreement.

3. **RENTAL ACCOMODATION**

3.01 Rental Disclosure Statement

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

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

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

3.02 Rental Accommodation

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

3.03 Binding on Strata Corporation

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

3.04 Strata Bylaw Invalid

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

3.05 No Bylaw

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

3.06 Vote

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

3.07 Notice

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

4.01 **Notice of Default**

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

4.02 **Costs**

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

4.03 **Damages an Inadequate Remedy**

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

4.04 **Equitable Remedies**

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

4.05 **No Penalty or Forfeiture**

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

4.06 **Cumulative Remedies**

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

5.01 Indemnity

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

5.02 Survival

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

6. GENERAL PROVISIONS

6.01 District’s Power Unaffected

Nothing in this Agreement:

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

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

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

6.02 Agreement for Benefit of District Only

The Owner and District agree that:

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

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any occupant of any Unit or any future owner, occupier or user of any part of the Proposed Development, including any Unit, or the interests of any third party, and the District has no obligation to anyone to enforce the terms of this Agreement; and
(c) The District may at any time terminate this Agreement, in whole or in part, and execute a release and discharge of this Agreement in respect of the Proposed Development or any Unit therein, without liability to anyone for doing so.

6.03 Agreement Runs With the Lands

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

6.04 Release

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

6.05 Priority of This Agreement

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

6.06 Agreement to Have Effect as Deed

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

6.07 Waiver

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

6.08 Time

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

6.09 Validity of Provisions

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

6.10 Extent of Obligations and Costs

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

6.11 Notices

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

If to the District:

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

Attention: Planning Department

If to the Owner:

Fonnie International Investments Ltd.
2700 – 700 West Georgia Street
Vancouver, BC V7Y 1B8

If to the Unit Owner:

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

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

6.12 Further Assurances

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

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

7. **INTERPRETATION**

7.01 **References**

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

7.02 **Construction**

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

7.03 **No Limitation**

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

7.04 **Terms Mandatory**

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

7.05 **Statutes**

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

7.06 **Entire Agreement**

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

(e) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8238.
7.07 **Governing Law**

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

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

WHEREAS ______________________ (the “Chargeholder”) is the holder of the following charge which is registered in the Land Title Office:

(a) ______________________ (the “Charge”);

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

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

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

Minutes of the Regular Meeting of the Council for the District of North Vancouver held at 7:00 pm on Monday, April 10, 2017 in the Council Chambers of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

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

Staff: Mr. D. Stuart, Chief Administrative Officer
Mr. G. Joyce, General Manager – Engineering, Parks & Facilities
Mr. D. Milburn, General Manager – Planning, Properties & Permits
Mr. J. Gordon, Manager – Administrative Services
Mr. T. Lancaster, Manager – Community Planning
Ms. J. Paton, Manager – Development Planning
Mr. W. Maskall, Section Manager – Natural Parkland
Ms. C. Archer, Confidential Council Clerk
Ms. C. Rucci, Social Planner

1. ADOPTION OF THE AGENDA

1.1. April 10, 2017 Regular Meeting Agenda

MOVED by Councillor MACKAY-DUNN
SECONDED by Councillor BASSAM
THAT the agenda for the April 10, 2017 Regular Meeting of Council for the District of North Vancouver is adopted as circulated.

CARRIED

2. PUBLIC INPUT

2.1. Mr. Rodney Brickell, 200 Block West Windsor Road:
- Spoke in support of item 9.6 regarding the keeping of backyard hens;
- Noted other North Shore municipalities allow residents to keep hens;
- Opined that hens are already kept in the District and urged Council to regulate the practice; and,
- Commented on beekeeping, bird feeders and fruit trees as existing bear attractants.
2.2. Ms. Judith Brook, 2400 Block Lauralynn Drive:
- Spoke in support of item 9.6 regarding the keeping of backyard hens;
- Commented on the construction of chicken coops to prevent access by bears and other predators; and,
- Commented on other municipalities where residents are allowed to keep hens.

2.3. Ms. Christine Miller, 1400 Block Emerson Way:
- Noted she is a representative of the North Shore Black Bear Society (NSBBS);
- Reported that NSBBS recommends electric fencing, mandatory inspection and a registration fee for backyard chicken coops; and,
- Expressed concern that bears will seek new sources of food with the introduction of locking waste carts in the District.

2.4. Mr. Farzad Rahnamoon, 1500 Block Mountain Highway:
- Spoke in support of item 9.6 regarding the keeping of backyard hens;
- Opined that guidelines will provide safety for hens, residents and bears; and,
- Commented on the environmental impact and educational opportunities.

2.5. Ms. Jennifer Meilleur, 1800 Block Purcell Way:
- Advised she is the Coordinator of the North Shore Table Matters Network;
- Spoke in support of item 9.6 regarding the keeping of backyard hens; and,
- Commented on community engagement regarding bear attractants.

2.6. Ms. Heidi De Lazzer, 400 Block West Queens Road:
- Spoke in support of item 9.6 regarding the keeping of backyard hens;
- Commented on her family’s past experience keeping chickens; and,
- Opined that bears will not eat chickens.

2.7. Mr. James Gill, 500 Block West Kings Road:
- Spoke in support of item 9.6 regarding the keeping of backyard hens;
- Urged Council to amend the bylaw to require an application fee and mandatory inspection; and,
- Commented on the keeping of hens in other North Shore municipalities.

2.8. Mr. Scott Rowe, 1800 Block Bewicke Ave:
- Advised he is a member of the North Shore Table Matters Steering Committee; and,
- Commented on food systems and sustainability.

2.9. Mr. Hazen Colbert, 1100 Block East 27th:
- Requested information on possible development applications;
- Commented on item 9.2 regarding Bylaws 8230, 8231 and 8232; and,
- Commented regarding backyard hens.

2.10. Mr. Bruce R. Lindsay, 4100 Block St. Pauls Avenue:
- Provided a slide presentation in opposition to item 9.6 regarding the keeping of backyard hens, noting large predators including bears, cougars and coyotes are attracted by chicken coops and transit neighbouring properties; and,
- Provided examples of wildlife interactions resulting from the keeping of hens.
2.11. Ms. Stephanie Imhoff, 2300 Block Chesterfield Avenue:
- Spoke in support of item 9.6 regarding the keeping of backyard hens;
- Commended staff on their work on the bylaw and thanked Council for their consideration.

3. PROCLAMATIONS

Nil

4. RECOGNITIONS

Nil

5. DELEGATIONS

5.1. Jenny Beazley and Vince Beasse, North Shore Mountain Bike Association
Re: 2016 Year End Presentation

Ms. Jenny Beazley, President and Mr. Vince Beasse, Vice President, North Shore Mountain Bike Association (NSMBA), provided an overview of the organization’s 2016 activities as part of a three-year trail maintenance partnership, as well as membership growth and general finances. Ms. Beazley reported that a full-time Executive Director has been hired, with other positions reduced to contain staffing costs. Ms. Beazley and Mr. Beasse also reviewed NSMBA’s 2017 priorities and goals, including greater accountability, improved communications and increasing membership to 80% of regular trail users residing on the North Shore.

MOVED by Councillor HICKS
SECONDED by Councillor BASSAM
THAT the delegation of the North Shore Mountain Bike Association is received.

CARRIED

Councillor BASSAM left the meeting at 7:52 pm and returned at 7:55 pm.

6. ADOPTION OF MINUTES

6.1. April 3, 2017 Regular Council Meeting

MOVED by Councillor HICKS
SECONDED by Councillor MURI
THAT the minutes of the April 3, 2017 Regular Council meeting are adopted.

CARRIED

7. RELEASE OF CLOSED MEETING DECISIONS

Nil
8. COUNCIL WORKSHOP REPORT

Nil

9. REPORTS FROM COUNCIL OR STAFF

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

9.6 Bylaw 8211, 8222 and 8224: Proposed Bylaw and Amendments for the Keeping of Backyard Hens

File No. 10.4900.30/002

MOVED by Councillor MURI
SECONDED by Councillor HICKS
THAT "Keeping of Domestic Hens Bylaw 8211, 2016" is given FIRST Reading and referred to a Public Hearing;

AND THAT "Bylaw Notice Enforcement Bylaw 7458, 2004, Amendment Bylaw 8222, 2017 (Amendment 31)" is given FIRST Reading;

AND THAT "District of North Vancouver Fees and Charges Bylaw 6481, 1992, Amendment Bylaw 8224, 2017 (Amendment 52)" is given FIRST Reading.

CARRIED

9.5 Acting Mayor Schedule Change – April 21 – May 21, 2017

File No. 01.0115.30/002.000

MOVED by Councillor BASSAM
SECONDED by Councillor MURI
THAT Councillor Bond is designated as Acting Mayor for the period April 21 to May 21, 2017 inclusive;

AND THAT Councillor Hicks is designated as Acting Mayor for the period September 23 to October 23, 2017 inclusive.

CARRIED
9.1 Bylaws 8208, 8209, 8210 and 8238: OCP Amendment, Rezoning, and Housing Agreements for a mixed use project at 229 Seymour River Place and 2015 Old Dollarton Road
File No. 08.3060.20/001.16

MOVED by Councillor BASSAM
SECONDED by Councillor HICKS
THAT "The District of North Vancouver Official Community Plan Bylaw 7900, 2011, Amendment Bylaw 8208, 2016 (Amendment 22)" is given FIRST Reading;

AND THAT "The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)" is given FIRST Reading;

AND THAT "Market Rental Housing Agreement Bylaw 8210, 2016 (229 Seymour River Place)" is given FIRST Reading;

AND THAT "Affordable Rental Housing Agreement Bylaw 8227, 2017 (229 Seymour River Place)" is given FIRST Reading;

AND THAT "No Rental Limit (except Short Term Rentals) Housing Agreement Bylaw 8238, 2017 (229 Seymour River Place)" is given FIRST Reading;

AND THAT pursuant to Section 475 and Section 476 of the Local Government Act, additional consultation is not required beyond that already undertaken with respect to Bylaw 8208;

AND THAT in accordance with Section 477 of the Local Government Act, Council has considered Bylaw 8208 in conjunction with its Financial Plan and applicable Waste Management Plans;

AND THAT Bylaw 8208 and Bylaw 8209 are referred to a Public Hearing.

CARRIED
Opposed: Councillors HANSON and MURI

9.2 Bylaws 8230, 8231 and 8232: OCP Amendment, Rezoning, and Housing Agreement: Townhouse Development at 1886-1956 Belle Isle Place and 2046 Curling Road
File No. 08.3060.20/048.16

Public Input:
Ms. Rebecca Nguyen, Development Manager, Citimark:
- Advised she represents the applicant;
- Commented on neighbourhood walkability;
- Discussed affordability and suitability of the proposed development for families, downsizers and those requiring accessible homes; and,
- Noted the site's proximity to the Frequent Transit Network and the Park Royal Shopping Centre.
MOVED by Councillor BASSAM
SECONDED by Councillor BOND
THAT "District of North Vancouver Official Community Plan Bylaw 7900, 2011, Amendment Bylaw 8230, 2017 (Amendment 24)" is given FIRST Reading;

AND THAT "District of North Vancouver Rezoning Bylaw 1352 (Bylaw 8231)" is given FIRST Reading;

AND THAT "Housing Agreement Bylaw 8232, 2017 (1886-1956 Belle Isle Place and 2046 Curling Road)" is given FIRST Reading;

AND THAT pursuant to Section 475 and Section 476 of the Local Government Act, additional consultation is not required beyond that already undertaken with respect to Bylaw 8230;

AND THAT in accordance with Section 477 of the Local Government Act, Council has considered Bylaw 8230 in conjunction with its Financial Plan and applicable Waste Management Plans;

AND THAT Bylaw 8230 and Bylaw 8231 are referred to a Public Hearing.

CARRIED
Opposed: Councillors HANSON and MURI

9.3 Bylaws 8183 and 8184: 467 Mountain Highway
File No. 08.3060.20/046.15

MOVED by Councillor BASSAM
SECONDED by Councillor BOND
THAT "The District of North Vancouver Rezoning Bylaw 1342 (Bylaw 8183)" is ADOPTED;

AND THAT "Housing Agreement Bylaw 8184, 2016 (467 Mountain Highway)" is ADOPTED.

CARRIED
Opposed: Councillor MURI

9.4 Development Permit 46.15- 467 Mountain Highway (Mixed-Use Development)
File No. 08.3060.20/046.15

MOVED by Councillor MACKAY-DUNN
SECONDED by Councillor BASSAM
THAT Development Permit 46.15, for a mixed-use building at 467 Mountain Highway, is ISSUED.

CARRIED
10. REPORTS

10.1. Mayor

Mayor Walton reported on his attendance at the opening days for the Mount Seymour Little League and Challenger Baseball League.

10.2. Chief Administrative Officer

Nil

10.3. Councillors

10.3.1. Councillor Hanson reported on his attendance as Acting Mayor at the Vimy Ridge Memorial event on April 9, 2017.

10.3.2. Councillor Bassam reported on his attendance at the North Shore Sport Awards on March 28, 2017.

10.4. Metro Vancouver Committee Appointees

10.4.1. Aboriginal Relations Committee – Councillor Hanson

Nil

10.4.2. Housing Committee – Councillor MacKay-Dunn

Nil

10.4.3. Regional Parks Committee – Councillor Muri

Nil

10.4.4. Utilities Committee – Councillor Hicks

Councillor Hicks reported on the award of the contract for the new Lions Gate Secondary Wastewater Treatment Plant by Metro Vancouver, noting future utility rates will likely be impacted by the cost of construction.

10.4.5. Zero Waste Committee – Councillor Bassam

Nil

10.4.6. Mayors Council – TransLink – Mayor Walton

Nil

11. ANY OTHER BUSINESS

Nil
12. ADJOURNMENT

MOVED by Councillor MURI
SECONDED by Councillor MACKAY-DUNN
THAT the April 10, 2017 Regular Meeting of Council for the District of North Vancouver is adjourned.

CARRIED
(9:14 pm)

__________________________  __________________________
Mayor                        Municipal Clerk
The Corporation of the District of North Vancouver

Bylaw 8209

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

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

a) Citation

This bylaw may be cited as “The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)".

b) Amendments

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

a) Part 2A, Definitions is amended by adding CD 99 to the list of zones that Part 2A applies to.

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

“Comprehensive Development Zone 99 CD 99”

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

“4B99 Comprehensive Development Zone 99 CD 99”

The CD 99 zone is applied to:

225 to 247 Seymour River Place and 2015 to 2029 Old Dollarton Road

Legally described as:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702

b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule C
4B 99-1 Intent

The purpose of the CD 99 Zone is to establish specific land use and development regulations to permit a medium density commercial and residential mixed use development.

4B 99-2 Permitted Uses:

The following principal uses shall be permitted in the CD 99 Zone:

a) Uses Permitted Without Conditions:
   Not applicable.

b) Conditional Uses:
   The following principal uses are permitted when the conditions outlined in Section 4B 99-3 Conditions of Use, are met:

   i) live-work use;
   ii) office use;
   iii) personal service use;
   iv) residential use;
   v) restaurant use;
   vi) retail use; and,
   vii) service use.

4B 99-3 Conditions of Use

a) All conditional uses: All uses of land, buildings and structures are only permitted when the following condition of use is met:

   i) All aspects of the use are completely contained within an enclosed building except for:

      (1) Parking and loading areas;
      (2) Outdoor customer services areas;
      (3) The display of goods; and,  
      (4) Outdoor amenity areas (plazas, roof decks, play areas, and private or semi-private outdoor space).

b) Residential and live-work: Residential uses and live-work uses are only permitted when the following conditions are met:

   i) A minimum of seven live work units are provided on Front St and 14 on Old Dollarton Road;
   ii) Each dwelling unit has access to private or semi-private outdoor space;
iii) Balcony enclosures are not permitted; and,  
iv) Each dwelling unit has exclusive access to a private storage space of a 
minimum size of 4.6 m² (50 sq. ft.).

c) Live-work: Live-work use is only permitted when the following condition is met:  
i) A direct outside public entrance is provided; or  
ii) An entrance onto a corridor that is open to the public, as in a commercial 
building, is provided.

d) Office use; personal service use; restaurant use; retail use; and, service use  
are limited to the ground floor.

e) Residential uses are only permitted when a minimum of 10,400 sq. ft. (966 m²) of  
ground floor commercial is provided in accordance with Schedule B.

4B 99 - 4 Accessory Use

a) Home occupations are permitted in residential dwelling units.

4B 99 - 5 Density:

a) The maximum permitted density in the CD 99 Zone is limited to a 1.75 floor space  
ratio and 40 residential units for a total floor space maximum of 4,645 m² (50,000  
sq. ft.), inclusive of any density bonus for energy performance

b) For the purpose of calculating gross floor area the following are exempted:

i) a common indoor amenity area that is accessory to the residential buildings  
   permitted in this zone of up to 91 m² (980 sq. ft.) gross floor area; and,

ii) individually secured bicycle storage lockers co-located with a bicycle work 
   and repair station of up to 137 m² (1,475 sq. ft.) on each floor to a maximum 
   of 592 m² (6,380 sq.ft.) gross floor area in total;

iii) underground storage;

iv) above grade mechanical areas up to a maximum of 41 m² (448 sq. ft.);

v) area within parking garages, parking access areas, covered loading areas, 
   roof deck areas, and common heating, mechanical, electrical, service and 
   utility rooms; and,

vi) The area of private balconies and covered patios in a building to a maximum 
   area equal to 10% of the residential floor area in that building.
4B 99-6 Amenities:

a) Despite Subsection 4B99-5, permitted density in the CD 99 Zone may be increased to a maximum of 17,284 m² (186,050 sq. ft.) and a maximum of 195 residential units, inclusive of a minimum of any live-work units; and, inclusive of any density bonus for energy performance, if the owner completes the following:

i) Contributes $500,000 to the municipality to be used for any or all of the following amenities (with allocation and timing of expenditure to be determined by the municipality in its sole discretion):

a. Improvements to public parks, plazas, trails and greenways, or other public realm improvements;

b. Municipal facilities and facility improvements;

c. Public art and other beautification projects; and,

d. Affordable or special needs housing.

ii) A minimum of 964 m² (10,376 sq. ft.) of the total permissible gross floor area must be used for commercial purposes provided in accordance with Schedule B where commercial purposes includes any of the following permitted uses singly or in combination: personal service use, restaurant use, live-work and retail use.

iii) Enters into a Housing Agreement prohibiting any restrictions preventing the owners in the project from renting their units;

iv) Enters into a Housing Agreement securing a minimum of 38 residential rental units, of which a minimum of 10 residential rental units are secured as affordable;

v) All residential units meet the basic accessible design criteria; at least 11 units must meet the enhanced accessible design criteria as outlined in the District of North Vancouver Council Policy: ‘Accessible Design Policy for Multi-Family Housing’; and,

4B 99-7 Setbacks

a) Buildings shall be set back from property lines to the closest building face, excluding any partially exposed underground parking structure, window wells, balcony columns, or projecting balconies, said projecting balconies not to exceed 0.9 m (3.0 ft) as established by development permit and in accordance with Figure 1:
4B 99-8 Coverage:

a) Maximum building coverage is 85%, not including parking or patios; and,

b) Maximum site coverage is 90%, not including parking or patios.

4B 99 - 9 Height

a) Maximum permitted height for any building in the CD 99 Zone, inclusive of a 15% bonus for any sloping roofs, shall be 22.5 m (74.0 ft) and may not exceed 6 storeys.
For the purposes of this section building height shall be measured from the average grade to the highest point of the roof surface.

**4B 99 - 10 Landscaping:**

a) All land areas not occupied by buildings and patios must be landscaped in accordance with a landscape plan approved by the District of North Vancouver; and,

b) All electrical kiosks and garbage and recycling container facilities not located underground or within a building must be screened.

**4B 99 - 11 Parking and Loading Regulations:**

a) A minimum of 255 residential parking spaces are required and must be apportioned as follows:

   i. a minimum of 20 designated visitor parking spaces are required;
   ii. a minimum of 18 accessible parking spaces are required; and,
   iii. a maximum of 89 parking spaces may be small car spaces.

b) A minimum of 22 commercial parking spaces are required and must be apportioned as follows:

   i. a minimum of 1 accessible parking space is required.

c) All parking spaces shall meet the minimum width and length standards established in Part 10 of the Zoning Bylaw, exclusive of building support columns;

d) A minimum of 201 class 1 (long term secure) resident bicycle storage spaces must be provided;

e) A minimum of 58 class 2 (short term) visitor bicycle parking spaces must be provided and must be apportioned as follows:

   i. a minimum of 17 bicycle parking spaces for commercial use; and,
   ii. a minimum of 41 bicycle parking spaces for residential use.”

2.2 The Zoning Map is amended in the case of the lands illustrated on the attached map (Schedule A) by rezoning the land from the General Commercial Zone 2 (C2) to Comprehensive Development Zone 99 (CD 99).
READ a first time April 10th, 2017.

READ a second time as amended May 28, 2018

PUBLIC HEARING held

READ a third time

Certified a true copy of “Rezoning Bylaw 1347 (Bylaw 8209)” as at Third Reading.

________________________________________
Municipal Clerk

APPROVED by the Ministry of Transportation and Infrastructure on

ADOPTED

________________________________________  ________________________________
Mayor                                      Municipal Clerk

Certified a true copy

________________________________________
Municipal Clerk
Schedule A to Bylaw 8209

BYLAW 8209
The District of North Vancouver Rezoning Bylaw 1347 (Bylaw 8209)

GENERAL COMMERCIAL ZONE 2 (C2) TO
COMPREHENSIVE DEVELOPMENT ZONE 99 (CD99)
Schedule B to Bylaw 8209

Sketch plan showing location of commercial use

Location of commercial use

Minimum 966 m² (10,400 sq. ft.)
Schedule C to Bylaw 8209

Sketch Plan
What: A Public Hearing for Bylaw 8209, a proposed amendment to the Zoning Bylaw, to permit the development of a 6 storey mixed-use building.

When: 7 pm, Tuesday, June 19, 2018

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

What changes? Bylaw 8209 proposes to amend the District’s Zoning Bylaw by creating a new Comprehensive Development Zone 99 (CD99) and rezone the subject site from General Commercial Zone 2 (C2) to CD99. The CD99 Zone addresses use and accessory use, density, amenities, setbacks, site and building coverage, building height, landscaping and parking.

When can I speak? We welcome your input Tuesday, June 19, 2018, at 7 pm. You can speak in person by signing up at the hearing, or you can provide a written submission to the Municipal Clerk at input@dnv.org or by mail to Municipal Clerk, District of North Vancouver, 355 West Queens Road, North Vancouver, BC, V7N 4N5, before the conclusion of the hearing. Please note that Council may not receive further submissions from the public concerning this application after the conclusion of the public hearing.

Need more info? Relevant background material and copies of the bylaws are available for review at the Municipal Clerk’s Office or online at dnv.org/public_hearing from June 5 to June 19. Office hours are Monday to Friday 8 am to 4:30 pm, except statutory holidays.

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

*Provided by applicant for illustrative purposes only. The actual development, if approved, may differ.
The Corporation of the District of North Vancouver

Bylaw 8210

A bylaw to enter into a Housing Agreement (229 Seymour River Place)

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

1. Citation

This bylaw may be cited as "Market Rental Housing Agreement Bylaw 8210, 2016 (229 Seymour River Place)".

2. Authorization to Enter into Agreement

The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Fonnie International Investments Ltd. substantially in the form attached to this Bylaw as Schedule “B” with respect to the following lands:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702;

b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699; and,

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A.

3. Execution of Documents

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

READ a first time April 10\textsuperscript{th}, 2017.

READ a second time

READ a third time

ADOPTED

_________________________________________  _______________________________________
Mayor                                           Municipal Clerk
Certified a true copy

__________________________
Municipal Clerk
Schedule A to Bylaw 8210

SKETCH PLAN
Schedule B to Bylaw 8210

HOUSING AGREEMENT

(28 Market Rental Units)

This agreement dated for reference the ____ day of _______________, 20____ is

BETWEEN:

FONNIE INTERNATIONAL INVESTMENTS LTD. (Inc. No. BC0255927), a company incorporated under the laws of the Province of British Columbia having an office at 2700 – 700 West Georgia Street, Vancouver, BC V7Y 1B8

(the “Owner”)

AND:

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

(the “District”)

WHEREAS:

A. The Owner is the registered owner of the parcels of land in the District of North Vancouver legally described as:

   (a) Parcel Identifier 002-491-699 Lot G Block 18 District lot 193 Plan 20080;

   (b) Parcel Identifier 002-491-702 Lot H Block 18 District lot 193 Plan 20080; and

   (c) [Insert legal description for the portion of closed road].

(collectively, referred to herein as the “Lands”);

B. The Owner wishes to obtain development permissions with respect to the Lands and wishes to create a development containing a range of residential and commercial uses and associated civic and community uses, including 28 market rental units;

C. Section 219 of the Land Title Act permits the registration of a covenant of a negative or positive nature in favour of the District in respect of the use of land, construction on land or the subdivisions of land;

D. Section 483 of the Local Government Act permits the District to enter into a housing agreement with an owner of land, which agreement may include terms and conditions
regarding the occupancy, tenure and availability of dwelling units located on the Land;
and

E. The Owner and the District wish to enter into this Agreement to restrict the use of, and
construction on, the Lands on the terms and conditions of this agreement, to have effect
as a housing agreement under section 483 of the Local Government Act,

NOW THEREFORE in consideration of the sum of $10.00 now paid by the District to the
Owner and other good and valuable consideration, the receipt and sufficiency of which the
Owner hereby acknowledges, the parties covenant and agree pursuant to Section 219 of the Land
Title Act (British Columbia) as follows:

1. DEFINITIONS

Definitions

1.01 In this agreement:

(a) “Development Covenant” means the section 219 covenant registered under number
_______ at the LTO against the Owners title to the Lands in favour of the District;

(b) “Director” means the District’s General Manager of Planning, Properties and Permits
and his or her designate;

(c) “Discharges” has the meaning given to it in section 2.02 herein;

(d) “ Dwelling Unit” means a residential strata lot in the Proposed Buildings;

(e) “Gross Floor Area” has the meaning given to it in the District’s Zoning Bylaw 3210,
1965, as amended and consolidated from time to time;

(f) “Lands” has the meaning given to it in Recital B herein;

(g) “LTO” means the Lower Mainland Land Title Office and any successor of that office;

(h) “Market Rental Units” means 28 Dwelling Units, consisting of 12 one-bedroom
units, 14 two-bedroom units and 2 three-bedroom units, said rental units to be
designed, located and configured in accordance with the requirements and
approvals set out in this Agreement and in the Development Covenant;

(i) “Proposed Buildings” means the proposed buildings to be constructed on the Lands as
described in the Development Covenant; and

(j) “Strata Corporation” means the strata corporation established pursuant to the Strata
Property Act (British Columbia) upon registration at the LTO of a strata plan to stratify
the Proposed Buildings, once constructed.

2. THE MARKET RENTAL UNITS

Owner’s Covenants
2.01 The Owner covenants and agrees with the District that:

(a) the Lands will not be developed for residential purposes and no residential building or structure will be constructed on the Lands unless as part of the construction and development of any such building or structure, the Owner also designs and constructs to completion, in accordance with a building permit issued by the District and in accordance with the Development Covenant and a development permit issued by the District, the Market Rental Units;

(b) the Market Rental Units must be designed and constructed to the same standard, in terms of Gross Floor Area, layout, workmanship and materials, as the balance of the Dwelling Units in the Proposed Buildings on the Lands;

(c) the accessibility features as set out in the Development Covenant will be incorporated in each of the Market Rental Units; and

(d) the Owner will do everything necessary, at the Owner’s expense, to ensure that this Agreement will be registered as a section 219 covenant and rent charge against title to the Lands in priority to all financial charges and encumbrances at the earliest possible opportunity after execution and delivery by the District.

Discharge Provision

2.02 At the request of the Owner and at the Owner’s sole expense, the District will deliver to the Owner discharges (collectively, the “Discharges”) in registrable form discharging this Agreement from each Dwelling Unit and any other strata lot created by the strata subdivision of the Proposed Buildings that is not a Market Rental Unit, provided that the District may withhold delivery of the Discharges until after the District has received from the Strata Corporation its duly authorized agreement that it will not take any action that would result in an inability to rent the Market Rental Unit in accordance with this Agreement or would render such rental a breach of the Strata Corporation bylaws.

Limitation on Discharges

2.03 The District will be under no obligation to provide the Discharges unless the Director is satisfied that the Owner has met all of its obligations under section 2.02 of this Agreement, has completed the construction of the Market Rental Units in accordance with the requirements in section 2.01 and the Development Covenant, and has obtained occupancy permits for all of the Dwelling Units, including the Market Rental Units, in the Proposed Buildings.

Effect of Discharge

2.04 Any Dwelling Unit against which this section 219 Housing Agreement Covenant remains as a charge after deposit at the LTO of the Discharges will be deemed to be an Market Rental Unit under this Agreement

No Separate Sale

2.05 The Market Rental Units are not to be sold or otherwise transferred separately.
Rental Housing

2.06 The Market Rental Units may not be used or occupied for any purpose whatsoever save and except for the purpose of providing rental accommodation (and ancillary services such as parking and storage) to tenants pursuant to month-to-month residential tenancy agreements or residential tenancy agreement with terms not exceeding one year in duration, where said tenancy agreements comply with all of the requirements of this Agreement.

Tenancy Agreements

2.07 The Owner shall not suffer, cause or permit occupancy of any Market Rental Unit except pursuant to a residential tenancy agreement that:

(a) does not require the rent to be prepaid at an interval greater than monthly; and

(b) prohibits the tenant from subletting the unit, assigning the tenancy agreement, or operating the unit on a short term rental basis (less than one month).

3. DEFAULT AND REMEDIES

Notice of Default

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

Costs

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

Damages

3.03 The Owner acknowledges that the District requires rental housing for the benefit of the community. The Owner therefore agrees that for each day the Lands are occupied in breach of this Agreement, the Owner must pay the District $100.00 (the “Daily Amount”), as liquidated damages and not as a penalty, due and payable at the offices of the District on the last day of the calendar month in which the breach occurred. The Daily Amount is increased on January 1 of each year by the amount calculated by multiplying the Daily Amount as of the previous January 1 by the percentage increase between that previous January 1 and the immediately preceding December 31 in the Consumer Price Index. The Owner agrees that payment may be enforced by the District in a court of competent jurisdiction as a contract debt.

Rent Charge
3.04 By this section, the Owner grants to the District a rent charge under section 219 of the Land Title Act, and at common law, securing payment by the Owner to the District of the amounts described in section 3.03. The District agrees that enforcement of the rent charge granted by this section is suspended until the date that is 30 days after the date on which any amount due under section 3.03 is due and payable to the District in accordance with section 3.03. The District may enforce the rent charge granted by this section by an action for an order for sale or by proceedings for the appointment of a receiver.

Specific Performance

3.05 The Owner agrees that, without affecting any other rights or remedies the District may have in respect of any breach of this Agreement, the District is entitled to obtain an order for specific performance of this agreement and a prohibitory or mandatory injunction in respect of any breach by the Owner of this Agreement. The Owner agrees that this is reasonable given the public interest in restricting occupancy of the Lands in accordance with this Agreement.

No Penalty or Forfeiture

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

Cumulative Remedies

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

4. LIABILITY

Indemnity

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

Release

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

Survival

4.03 The covenants of the Owner set out in Sections 4.01 and 4.02 will survive termination of this Agreement and continue to apply to any breach of the Agreement or claim arising under this Agreement during the ownership by the Owner of the Lands or any Dwelling Unit therein, as applicable.

5. GENERAL PROVISIONS

District’s Power Unaffected

5.01 Nothing in this Agreement:

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

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

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

Agreement for Benefit of District Only

5.02 The Owner and District agree that:

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

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any Occupant or any future owner, occupier or user of any part of the Proposed Buildings including any Dwelling Unit; and

(c) The District may at any time execute a release and discharge of this Agreement in respect of the Proposed Buildings or any Dwelling Unit therein, without liability to anyone for doing so.
Agreement Runs With the Lands

5.03 This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Dwelling Unit after the date of this Agreement. Notwithstanding anything contained herein, the Owner shall not be liable under any of the covenants and agreements contained herein where such liability arises by reason of an act or omission occurring on the Lands or a portion thereof after the Owner ceases to own the Lands or such portion thereof.

Release

5.04 The covenants and agreements on the part of the Owner and herein set forth in this Agreement have been made by the Owner as contractual obligations as well as being made pursuant to Section 905 of the Local Government Act (British Columbia) and as such will be binding on the Owner, except that neither the Owner shall be liable for any default in the performance or observance of this Agreement occurring after the Owner ceases to own the Lands or the Market Rental Units as the case may be.

Priority of this Agreement

5.05 The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Dwelling Unit in the Proposed Building in priority to all financial charges, including any amendments to this Agreement as may be required by the LTO or the District to effect such registration, subject to the discharge provisions contained herein.

Agreement to Have Effect as Deed

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

Waiver

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

Time

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

Validity of Provisions

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

**Extent of Obligations and Costs**

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

**Notices**

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

If to the District:

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

  Attention: Clerks Department  
  Facsimile: (604) 984-9637

If to the Owner:

  Attention:  
  Facsimile: (604)

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request; if made by facsimile transmission, on the first business day after the date when the facsimile transmission was transmitted; and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

**Further Assurances**

5.12 Upon request by the District, the Owner will promptly do such acts and execute such documents as may be reasonably necessary, in the opinion of the District, to give effect to this Agreement.
5.13 This Agreement will enure to the benefit of and be binding upon each of the parties and their successors and permitted assigns.

6. **INTERPRETATION**

**References**

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

**Construction**

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

**No Limitation**

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

**Terms Mandatory**

6.04 The words “must” and “will” are to be construed as imperative.

**Statutes**

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

**Entire Agreement**

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

6.07 This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw __________.
Governing Law

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

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

END OF DOCUMENT
The Corporation of the District of North Vancouver

Bylaw 8227

A bylaw to enter into a Housing Agreement (229 Seymour River Place)

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

1. Citation

This bylaw may be cited as “Affordable Rental Housing Agreement Bylaw 8227, 2017 (229 Seymour River Place)”.  

2. Authorization to Enter into Agreement

The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Fonnie International Investments Ltd. substantially in the form attached to this Bylaw as Schedule “B” with respect to the following lands:

a) Lot G Block 18 District Lot 193 New Westminster District Plan 20080; PID: 002-491-702;

b) Lot H Block 18 and 20 District Lot 193 New Westminster District Plan 20080; PID: 002-491-699; and

c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A.

3. Execution of Documents

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

READ a first time April 10th, 2017.

READ a second time

READ a third time

ADOPTED

________________________________________________________________________
Mayor                                        Municipal Clerk
Certified a true copy

__________________________________________
Municipal Clerk
Schedule A to Bylaw 8227
Sketch Plan
Schedule B to Bylaw 8227

HOUSING AGREEMENT

(10 Affordable Rental Units)

This agreement dated for reference the ___ day of _______________, 20____ is

BETWEEN:

FONNIE INTERNATIONAL INVESTMENTS LTD. (Inc. No. BC0255927),
a company incorporated under the laws of the Province of British Columbia
having an office at 2700 – 700 West Georgia Street, Vancouver, BC  V7Y 1B8

(the “Owner”)

AND:

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

(the “District”)

WHEREAS:

A. The Owner is the registered owner of the parcels of land in the District of North
   Vancouver legally described as:

   (a) Parcel Identifier 002-491-699 Lot G Block 18 District lot 193 Plan 20080;
   (b) Parcel Identifier 002-491-702 Lot H Block 18 District lot 193 Plan 20080; and
   (c) [Insert legal description for the portion of closed road].

   (collectively, referred to herein as the “Lands”);

B. The Owner wishes to obtain development permissions with respect to the Lands and
   wishes to create a development containing a range of residential and commercial uses and
   associated civic and community uses, including ten affordable rental units;

C. Section 219 of the Land Title Act permits the registration of a covenant of a negative or
   positive nature in favour of the District in respect of the use of land, construction on land
   or the subdivisions of land;

D. Section 483 of the Local Government Act permits the District to enter into a housing
   agreement with an owner of land, which agreement may include terms and conditions
regarding the occupancy, tenure and availability of dwelling units located on the Lands;
and

E. The Owner and the District wish to enter into this Agreement to restrict the use of, and
construction on, the Lands on the terms and conditions of this agreement, to have effect
as a housing agreement under section 483 of the Local Government Act,

NOW THEREFORE in consideration of the sum of $10.00 now paid by the District to the
Owner and other good and valuable consideration, the receipt and sufficiency of which the
Owner hereby acknowledges, the parties covenant and agree pursuant to section 219 of the Land
Title Act (British Columbia) as follows:

1. DEFINITIONS

Definitions

1.01 In this agreement:

   (a) “Affordable Rental Units” means 10 Dwelling Units, consisting of 5 one-
       bedroom units, 4 two-bedroom units and 1 three-bedroom unit, said affordable
       rental units to be designed, located and configured in accordance with the
       requirements and approvals set out in this Agreement and in the Development
       Covenant;

   (b) “Consumer Price Index” means the all-items consumer price index published by
       Statistics Canada, or its successor in function, for Vancouver, where ____ = 100;

   (c) “Development Covenant” means the section 219 covenant registered under
       number ______ at the LTO against the Owner’s title to the Lands in favour of the
       District, which said Development Covenant stipulates, among other things, that:
       no occupancy permit will be issued for any Dwelling Unit unless and until the
       Owner has granted to the District the RFR and the RFR is registered at the LTO
       against the title to the Affordable Rental Units in priority to all financial charges
       and encumbrances;

   (d) “Director” means the District’s General Manager of Planning, Properties and
       Permits and his or her designate;

   (e) “Discharges” has the meaning given to it in section 2.02 herein;

   (f) “Dwelling Unit” means a residential strata lot in the Proposed Buildings;

   (g) “Eligibility Requirement” means aggregate annual household gross income that is
       less than or equal to 333% of the annual rent for the unit proposed to be rented
       (which rent, for greater certainty, may not be greater than the Maximum Rent for
       the unit), where said aggregate income is established by way of true copies of the
       previous year’s income tax forms for each household member or individual who
       will reside in the unit;
(h) "First Occupancy" means the first occupancy of each of the Affordable Rental Units pursuant to residential tenancy agreements in accordance with section 2.08, which said First Occupancy continues until the tenant vacates the premises whether or not the tenant has entered into a new or revised residential tenancy agreement with the Owner and whether or not the term of the residential tenancy agreement is otherwise extended or renewed;

(i) "Gross Floor Area" has the meaning given to it in the District’s Zoning Bylaw 3210, 1965, as amended and consolidated from time to time;

(j) "Lands" has the meaning given to it in Recital B herein;

(k) "LTO" means the Lower Mainland Land Title Office and any successor of that office;

(l) "Maximum Rate" means:

(i) for the first year of each First Occupancy and for the first year of each Subsequent Occupancy monthly rent for each of the Affordable Rental Units equal to the 65th percentile of monthly market rent for one, two or three bedroom Dwelling Units, as applicable, in Vancouver as determined by CMHC for the most recent six month period, or if CMHC no longer provides this information then as determined by an appropriate replacement real estate market data gathering organization acceptable to the District;

(ii) in the second and subsequent years of each First Occupancy and each Subsequent Occupancy, an amount equal to the rent for the preceding year of the occupancy multiplied by a fraction the numerator of which is the Consumer Price Index for the month immediately prior to the commencement of the Lease Year and the denominator of which is the Consumer Price Index for the same month one year earlier; and

(iii) Notwithstanding subsections 1.01 (l)(i) and 1.01(l)(ii) above, if the rent mandated by any potential rental rate ceiling established by a senior level of government is less than the rent calculated in accordance with said subsections, then Maximum Rent shall mean the mandated rent;

(m) "Proposed Buildings" means the proposed buildings to be constructed on the Lands as described in the Development Covenant;

(n) "RFR" means the right of first refusal to purchase the Affordable Rental Units to be granted by the Owner to the District in accordance with the Development Covenant and this Agreement, which said RFR will be substantially in the form attached hereto as Schedule “A”;

Document: 3148860
(o) “Strata Corporation” means the strata corporation established pursuant to the Strata Property Act (British Columbia) upon registration at the LTO of a strata plan to stratify the Proposed Buildings, once constructed; and

(p) “Subsequent Occupancy” means any occupancy of an Affordable Rental Unit after the First Occupancy pursuant to residential tenancy agreements in accordance with this section 2.08, which said Subsequent Occupancy continues until the tenant vacates the premises whether or not the tenant has entered into a new or revised residential tenancy agreement with the Owner and whether or not the term of the residential tenancy agreement is otherwise extended or renewed.

2. THE AFFORABLE RENTAL UNITS

Owner’s Covenants

2.01 The Owner covenants and agrees with the District that:

(a) the Lands will not be developed for residential purposes and no residential building or structure will be constructed on the Lands unless as part of the construction and development of any such building or structure, the Owner also designs and constructs to completion, in accordance with a building permit issued by the District and in accordance with the Development Covenant and a development permit issued by the District, the Affordable Rental Units;

(b) the Affordable Rental Units must be designed and constructed to the same standard, in terms of Gross Floor Area, layout, workmanship and materials, as the balance of the Dwelling Units in the Proposed Buildings on the Lands;

(c) the accessibility features as set out in the Development Covenant will be incorporated in each of the Affordable Rental Units;

(d) the Owner will do everything necessary, at the Owner’s expense, to ensure that this Agreement will be registered as a section 219 covenant and rent charge against title to the Lands in priority to all financial charges and encumbrances at the earliest possible opportunity after execution and delivery by the District; and

(e) the Owner will do everything necessary, at the Owner’s expense, to ensure that the RFR will be registered against title to the Affordable Rental Units in priority to all financial charges and encumbrances in accordance with the Development Covenant and this Agreement.

Discharge Provision

2.02 At the request of the Owner and at the Owner’s sole expense, the District will deliver to the Owner discharges (collectively, the “Discharges”) in registrable form discharging this Agreement from each Dwelling Unit and any other strata lot created by the strata subdivision of the Proposed Buildings that is not an Affordable Rental Unit, provided that the District may withhold delivery of the Discharges until after the District has received
from the Strata Corporation its duly authorized agreement that it will not take any action that would result in an inability to rent the Affordable Rental Unit in accordance with this Agreement or would render such rental a breach of the Strata Corporation bylaws.

Limitation on Discharges

2.03 The District will be under no obligation to provide the Discharges unless the Director is satisfied that the Owner has met all of its obligations under section 2.02 of this Agreement, has completed the construction of the Affordable Rental Units in accordance with the requirements in section 2.01 and the Development Covenant, and has obtained occupancy permits for all of the Dwelling Units, including the Affordable Rental Units, in the Proposed Buildings.

Effect of Discharge

2.04 Any Dwelling Unit against which this section 219 Housing Agreement Covenant remains as a charge after deposit at the LTO of the Discharges will be deemed to be an Affordable Rental Unit under this Agreement.

No Separate Sale

2.05 The Affordable Rental Units are not to be sold or otherwise transferred separately.

Rental Housing

2.06 The Affordable Rental Units may not be used for any purpose whatsoever save and except for the purpose of providing rental accommodation (and ancillary services such as parking and storage) to tenants meeting the Eligibility Requirement pursuant to month-to-month residential tenancy agreements or residential tenancy agreements with terms not exceeding one year in duration, where said tenancy agreements comply with all of the requirements of this Agreement.

Occupancy Restriction

2.07 No Affordable Rental Unit may be occupied except by:

   (a) a person meeting the Eligibility Requirement pursuant to month-to-month residential tenancy agreements or residential tenancy agreement with terms not exceeding one year in duration that complies with section 2.08; and

   (b) the other members of the person’s household, provided that the income of all members is included in the determination of eligibility under the Eligibility Requirement.

Tenancy Agreements
2.08 The Owner shall not suffer, cause or permit occupancy of any Affordable Rental Unit except pursuant to a residential tenancy agreement that:

(a) is entered into by the Owner and, as tenant, a person at arm’s length from the Owner. For the purpose of this Agreement, “at arm’s length” means:

(i) not in any other contractual relationship with the Owner or any director, officer or other senior employee of the Owner;

(ii) unrelated by blood, marriage or personal relationship to any director, officer or other senior employee of the Owner; and

(iii) not employed by any corporate entity that is an affiliate of the Owner, as that term is defined in the British Columbia Business Corporations Act as of the date of this Agreement,

provided that the District may, in its sole discretion, relax the restrictions contained in this subsection 2.08(a) upon the written request of the Owner on a case-by-case base. Any such relaxation in relation to any particular residential tenancy agreement is not to be construed as or constitute a waiver of the requirements in relation to any other residential tenancy agreement. No relaxation of the restrictions in this subsection 2.08(a) will be effective unless it is granted in writing by the District prior to the execution and delivery of the residential tenancy agreement to which the relaxation relates;

(b) does not require payment of rent or any other consideration for the Affordable Rental Unit directly or indirectly that exceeds the Maximum Rate for the unit;

(c) does not require the rent to be prepaid at an interval greater than monthly;

(d) prohibits the tenant from subletting the unit, assigning the tenancy agreement, or operating the unit on a short term rental basis (less than one month);

(e) requires the tenant to provide within 30 days of demand true copies of the most recent filed income tax returns or assessment notices from Canada Revenue Agency for each occupant of the unit; and

(f) contains a provision that, if the tenant ceases to qualify for the Affordable Rental Unit because he or she no longer meets the Eligibility Requirement, the Owner may end the tenancy agreement by giving the tenant a clear month’s notice to end the tenancy in accordance with section 49.1 of the Residential Tenancy Act (or successor legislation).

Housing List and Guidelines

2.09 The Owner must:
(a) prepare guidelines, criteria and procedures for determining eligibility for occupancy of an Affordable Rental Unit, which may include a minimum household income requirements of not less than 200% of the rent for the unit in question (which rent, for greater certainty, may not be greater than the Maximum Rent for that unit);

(b) accept applications for Affordable Rental Units from all applicants who meet the Eligibility Requirement and satisfy the guidelines, criteria and procedures established by the Owner under subsection 2.09(a);

(c) maintain a housing list of eligible applicants from whom the Owner has accepted applications for residential occupancy of an Affordable Rental Unit and who have been denied an Affordable Rental Unit as a result of a lack of vacancy;

(d) where an Affordable Rental Unit becomes available for occupancy, offer the units to persons on the housing list in the order in which their applications were made, unless:

   (i) the person no longer meets the Eligibility Requirement; or

   (ii) the Owner does not consider the person to be an acceptable candidate for occupancy of that Affordable Rental Unit because the person does not satisfy the guidelines, criteria and procedures established by the Owner under subsection 2.09(a); and

(e) make the housing list the guidelines, criteria and procedures established by the Owner under subsection 2.09(a) available to the District upon request.

Compliance with Laws

2.10 The Owner will at all times ensure that the Affordable Rental Units are used and occupied in compliance with all statutes, laws, regulations, and orders of any authority having jurisdiction and without limiting the generality of the foregoing all bylaws of the District and all federal, provincial, municipal or local laws, statutes or ordinances relating to environmental matters, including all rules, regulations, policies, guidelines, criteria or the like promulgated under or pursuant to any such laws.

Duty to Account and Report

2.11 In addition to the other covenants and obligations to be performed by the Owner hereunder, the Owner covenants and agrees that it will:

(a) provide the District, by March 1 of each year, a full report on the rental of the Affordable Rental Units and revenue received therefrom during the preceding calendar year; and

(b) deliver to the District, on request of the District, copies of all current tenancy agreements in respect of the Affordable Rental Units.
Statutory Declaration

2.12 Within three days after receiving notice from the District, the Owner must deliver to the District a statutory declaration, substantially in the form attached as Schedule “B”, sworn by the Owner under oath before a commissioner for taking affidavits in British Columbia, containing all of the information required to complete the statutory declaration.

3. DEFAULT AND REMEDIES

Notice of Default

3.01 The District may, acting reasonably, give to the Owner written notice to cure a default under this Agreement within 90 days of receipt of notice. The notice must specify the nature of the default. The Owner must act with diligence to correct the default within the time specified.

Costs

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

Damages

3.03 The Owner acknowledges that the District requires affordable rental housing for the benefit of the community. The Owner therefore agrees that for each day the Lands are occupied in breach of this Agreement, the Owner must pay the District $100.00 (the “Daily Amount”), as liquidated damages and not as a penalty, due and payable at the offices of the District on the last day of the calendar month in which the breach occurred. The Daily Amount is increased on January 1 of each year by the amount calculated by multiplying the Daily Amount as of the previous January 1 by the percentage increase between that previous January 1 and the immediately preceding December 31 in the Consumer Price Index. The Owner agrees that payment may be enforced by the District in a court of competent jurisdiction as a contract debt.

Rent Charge

3.04 By this section, the Owner grants to the District a rent charge under section 219 of the Land Title Act, and at common law, securing payment by the Owner to the District of the amounts described in section 3.03. The District agrees that enforcement of the rent charge granted by this section is suspended until the date that is 30 days after the date on which any amount due under section 3.03 is due and payable to the District in accordance with section 3.03. The District may enforce the rent charge granted by this section by an action for an order for sale or by proceedings for the appointment of a receiver.

Specific Performance

3.05 The Owner agrees that, without affecting any other rights or remedies the District may have in respect of any breach of this Agreement, the District is entitled to obtain an order
for specific performance of this agreement and a prohibitory or mandatory injunction in respect of any breach by the Owner of this Agreement. The Owner agrees that this is reasonable given the public interest in restricting occupancy of the Lands in accordance with this Agreement.

No Penalty or Forfeiture

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

Cumulative Remedies

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

4. LIABILITY

Indemnity

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

Release

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

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

5. GENERAL PROVISIONS

District’s Power Unaffected

5.01 Nothing in this Agreement:

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

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

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

Agreement for Benefit of District Only

5.02 The Owner and District agree that:

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

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any Occupant or any future owner, occupier or user of any part of the Proposed Buildings including any Dwelling Unit; and

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

Agreement Runs With the Lands

5.03 This Agreement burdens and runs with the Lands and any part into which any of them may be subdivided or consolidated, by strata plan or otherwise. All of the covenants and agreements contained in this Agreement are made by the Owner for itself, its successors and assigns, and all persons who acquire an interest in the Lands or in any Dwelling Unit after the date of this Agreement. Notwithstanding anything contained herein, the Owner shall not be liable under any of the covenants and agreements contained herein where such liability arises by reason of an act or omission occurring on the Lands or a portion thereof after the Owner ceases to own the Lands or such portion thereof.
Release

5.04 The covenants and agreements on the part of the Owner and herein set forth in this Agreement have been made by the Owner as contractual obligations as well as being made pursuant to section 905 of the *Local Government Act* (British Columbia) and as such will be binding on the Owner, except that neither the Owner shall be liable for any default in the performance or observance of this Agreement occurring after the Owner ceases to own the Lands or the Affordable Rental Units as the case may be.

Priority of this Agreement

5.05 The Owner will, at its expense, do or cause to be done all acts reasonably necessary to ensure this Agreement is registered against the title to each Dwelling Unit in the Proposed Building in priority to all financial charges, including any amendments to this Agreement as may be required by the LTO or the District to effect such registration, subject to the discharge provisions contained herein.

Agreement to Have Effect as Deed

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

Waiver

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

Time

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

Validity of Provisions

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

Extent of Obligations and Costs

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

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

If to the District:

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

Attention: Clerks Department
Facsimile: (604) 984-9637

If to the Owner:

Attention:  
Facsimile: (604)

Service of any such notice, demand, or request will be deemed complete, if made by registered mail, 72 hours after the date and hour of mailing, except where there is a postal service disruption during such period, in which case service will be deemed to be complete only upon actual delivery of the notice, demand or request; if made by facsimile transmission, on the first business day after the date when the facsimile transmission was transmitted; and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

Further Assurances

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

Enuring Effect

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

6. INTERPRETATION

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

Construction

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

No Limitation

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

Terms Mandatory

6.04 The words “must” and “will” are to be construed as imperative.

Statutes

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

Entire Agreement

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

6.07 This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8210.

Governing Law

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

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

GIVEN THAT:

A. _____________________________________ (the “Owner”) is the Registered Owner of the Land described in Item 2 of Page 1 of the Form C (the “Land”);

B. The Owner granted ____________________ (the “Prior Chargeholder”) a Mortgage and Assignment of Rents registered against title to the Land in the Lower Mainland Land Title Office (the “LTO”) under Nos. _____________, as extended by ___________ and ________________, as extended by _____________ (together, the “Prior Charge”);

C. The Owner granted to THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER (the “District”) a Covenant and Rent Charge attached to this Agreement and registered against title to the Land in the LTO immediately before registration of this Agreement (together, the “Subsequent Charge”); and

D. Section 207 of the Land Title Act permits the Prior Chargeholder to grant priority over a charge to the District as Subsequent Chargeholder.

THEREFORE this Agreement is evidence that in consideration of $1.00 and other good and valuable consideration received by the Prior Chargeholder from the District (the receipt and sufficiency of which the Prior Chargeholder acknowledges):

1. The Prior Chargeholder consents to the granting and registration of the Subsequent Charge and the Prior Chargeholder agrees that the Subsequent Charge shall be binding upon their interest in and to the Land.

2. The Prior Chargeholder grants to the District, as a Subsequent Chargeholder, priority for the Subsequent Charge over the Prior Chargeholder’s right, title and interest in and to the Land, and the Prior Chargeholder postpones the Prior Charge and all of their right, title and interest thereunder to the Subsequent Charge as if the Subsequent Charge had been executed, delivered and registered prior to the execution, delivery and registration of the Prior Charge.

As evidence of its agreement to be bound by the terms of this instrument, the Prior Chargeholder has executed the Land Title Act Form C to which this Agreement is attached and which forms part of this Agreement.
SCHEDULE “A”

RIGHT OF FIRST REFUSAL

THIS AGREEMENT dated for reference the ___ day of ____________, 2013

BETWEEN:

(the “Owner”)

AND:

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER, a municipality incorporated under the Local Government Act and having its office at 355 West Queens Rd, North Vancouver, BC V7N 4N5

(the “District”)

THIS AGREEMENT is evidence that in consideration of payment of $10.00 by the District to the Owner and other and valuable consideration, the receipts of which is acknowledged by the Owner, the Owner grants to the District a right of first refusal (the “RFR”) to purchase the Strata Lots (hereinafter defined) on the following terms and conditions:

1. Definitions – In this Agreement:

(a) “Arm’s length” has the same meaning as that term has in the Income Tax Act of Canada and amending Acts;

(b) “Bona Fide Offer” means an offer to purchase the Strata Lots:

(i) in writing;

(ii) signed by an Outside Offeror;

(iii) only in their entirety and no other property, rights or assets;

(iv) in a form legally enforceable against the Outside Offeror and subject to no conditions which are not capable of being waived by the Outside Offeror;

(v) providing for a deposit of not less than 10% of the proposed purchase price within 72 hours of the removal or waiver of all conditions; and

(vi) providing that if the District does not exercise its right of first refusal as set forth in this Agreement, the Outside Offeror will grant to the District a right of first refusal (the “New RFR”) to purchase the Strata Lots upon the same terms and conditions as are set forth in this Agreement;
(c) “Business Day” means Monday to Friday inclusive except for those excluded days declared by lawful authority as holidays, excluding any day that the LTO is not open for business;

(d) “Expiry Time” with respect to any offer made by the Owner to the District under section 4, will be 5:00 PM in the afternoon on the 30th Business Day after receipt by the District of such offer. In determining such time the day such offer is received will be excluded;

(e) “LTO” means the Lower Mainland Land Title Office or its successor;

(f) “New RFR” has the meaning given to it in subsection 1(b)(vi);

(g) "Outside Offeror" means a purchaser or prospective purchaser of all ten of the Strata Lots who deals at arm’s-length with the Owner;

(h) “Strata Lots” means the ten strata parcels described in Item 2 of the Form C General Instrument Part 1 to which this Agreement is attached and which forms part of this Agreement; and

(i) “Term” means that period of time from and after the date of this Agreement to and including January 1, 2114.

2. Restrictions on Sale – During the Term, the Owner will not sell, transfer or otherwise convey any of the Strata Lots except:

(a) for consideration payable entirely in lawful money of Canada;

(b) to an Outside Offeror;

(c) pursuant to a Bona Fide Offer; and

(d) in accordance with, and to the extent permitted by, the terms of this Agreement.

3. Notice of Bona Fide Offer – If, at any time and from time to time during the Term, the Owner receives a Bona Fide Offer from an Outside Offeror, which Bona Fide Offer the Owner is willing to accept, then the Owner will deliver written notice (the “Notice”) immediately to the District that the Owner has received such Bona Fide Offer, and listing the liens, charges and encumbrances subject to which the Strata Lots are to be conveyed, and will deliver to the District with the Notice a photocopy of such Bona Fide Offer, certified by the Owner to be a true copy.

4. Notice as Offer – The Notice will be deemed to constitute an offer by the Owner to the District to sell the Strata Lots to the District on and subject to all the terms and conditions set forth in such Bona Fide Offer, except that if the Owner is not the first registered owner of the Strata Lots the purchase price will be the lesser of: (a) the price set forth in such Bona Fide Offer; or (b) $______________, being the actual price paid by ______________ for the Strata Lots.
5. **Offer Irrevocable** – The offer by the Owner to the District under section 4 will be irrevocable and may not be withdrawn by the Owner until after the Expiry Time.

6. **Acceptance of Offer** – Upon receipt of the Notice, the District will have the exclusive first right, exercisable up to and including but not after the Expiry Time, to deliver to the Owner written notice (the “Acceptance”) that the District will purchase the Strata Lots upon the terms and conditions set forth in such Bona Fide Offer for a purchase price equal to the price set forth in such Bona Fide Offer or, if the Owner is not the first registered owner of the Strata Lots, for a purchase price equal to the lesser of: (a) the price set forth in such Bona Fide Offer; or (b) $__________, again being the actual price paid by ____________ for the Strata Lots.

7. **Contract of Purchase and Sale** – Upon receipt by the Owner of the Acceptance, a binding contract of purchase and sale for the Strata Lots will be constituted between the Owner and the District, which contract will be completed in the manner provided in such Bona Fide Offer as if the District were the Outside Offeror.

8. **Sale to Outside Offeror** – If the Owner does not receive the Acceptance before the Expiry Time, then the Owner may complete the sale to the Outside Offeror as provided for in such Bona Fide Offer in strict compliance with the terms respectively set forth in the Bona Fide Offer. In such case, the District will cause its solicitors to deliver a discharge of this Agreement to the solicitors for the Owner on receipt of satisfactory undertaking from the solicitors for the Owner that the discharge will only be registered if that sale to the Outside Offeror is completed strictly in compliance with the terms of the Bona Fide Offer and as an all or nothing package including the New RFR. If the sale to the Outside Offeror is not so completed, then any subsequent sale to any person or corporation may be made only if all the requirements of the Agreement are again complied with, and the RFR will survive and continue in full force and effect.

9. **Notices** – All notices required or permitted to be given under this Agreement will be in writing and will be given by personal service or by prepaid registered post, at the following addresses:

   (a) If to the Owner:

       Attention:

   (b) If to the District

       The Corporation of the District of North Vancouver
       355 West Queens Rd
       North Vancouver, BC  V7N 4N5

       Attention:  Municipal Clerk

       Fax: (604) 984-9637
or to such other address as either party may provide in writing to the other under this Agreement. Any notice will be deemed to have been received by the party to whom it is addressed if personally served, when served, and if mailed, on the fourth Business Day after such mailing provided that if mailed, a mail strike, slowdown, labour or other dispute which might affect delivery of such notice by mails, then such notice will only be effective if actually delivered.

10. **Time** – Time is of the essence.

11. **Governing Law** – This Agreement will be governed and construed in accordance with the laws of the Province of British Columbia.

12. **References** – Wherever the singular or masculine is used in this Agreement the same will be deemed to include references to the plural, feminine or body corporate, as the case may be.

13. **Construction** – The division of this Agreement into sections, and the insertion of headings are for convenience or reference only and are not to affect the construction or interpretation of this Agreement.

14. **Enurement** - This Agreement will enure to the benefit of and be binding upon the respective successors, heirs, executors, administrators and assigns of the parties.

15. **Execution** - By executing and delivering this Agreement each of the parties intends to create both a contract and a deed executed and delivered under seal.

As evidence of their agreement to be bound by the terms of this instrument, the parties each have executed and delivered this Agreement under seal by executing Part 1 of the *Land Title Act* Form C to which this Agreement is attached and which forms part of this Agreement.
IN THE MATTER OF A HOUSING AGREEMENT with
the District of North Vancouver ("Housing Agreement")

I, ____________________________, OF ____________________________, British Columbia, do solemnly declare:

1. That I am the Owner of the ten strata Lots legally described as [insert legal] and make this declaration to the best of my personal knowledge.
[or]
That I am the ________ (director, officer, employee) of the Owner of the ten strata lots legally described as [insert legal] and [make this declaration to the best of my personal knowledge] [have been informed by ________________ and believe the statement in this declaration to be true].

2. This declaration is made pursuant to the Housing Agreement in respect of the four strata lots.

3. For the period from ________________, __________ to __________, __________, all of the aforesaid strata lots were occupied by Eligible Persons, whose names and addresses appear below, and in accordance with the Housing Agreement.

<table>
<thead>
<tr>
<th>Name of Eligible Person</th>
<th>Other Resident(s) of Dwelling Unit</th>
<th>Apt. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. I make this solemn declaration, conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and pursuant to the Canada Evidence Act.

SWORN BEFORE ME at the ____________, in the Province of British Columbia, this _____day of ________________, 20____.

______________________________
Signature of person making declaration

A Commissioner for Taking Affidavits for British Columbia

- END OF DOCUMENT -
The Corporation of the District of North Vancouver

Bylaw 8238

A bylaw to enter into a Housing Agreement (229 Seymour River Place)

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

1. Citation

This bylaw may be cited as “No Rental Limit (except Short Term Rentals) Housing Agreement Bylaw 8238, 2017 (229 Seymour River Place)”.

2. Authorization to Enter into Agreement

The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and Fonnie International Investments Ltd. substantially in the form attached to this Bylaw as Schedule B with respect to the following lands:

a) Parcel Identifier 002-491-699 Lot G Block 18 District Lot 193 Plan 20080;
b) Parcel Identifier 002-491-702 Lot H Block 18 District Lot 193 Plan 20080; and
c) the portion of closed road shown outlined in bold on the plan attached hereto as Schedule A.

3. Execution of Documents

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

READ a first time April 10th, 2017.

READ a second time

READ a third time

ADOPTED

______________________________________  _________________________________
Mayor                                              Municipal Clerk
Certified a true copy

Municipal Clerk
Schedule A to Bylaw 8238
Schedule B to Bylaw 8238

SECTION 219 COVENANT – HOUSING AGREEMENT

(No Rental Limit)

SECTION 219 COVENANT – HOUSING AGREEMENT

(NO RENTAL LIMIT)

This agreement is dated for reference the ____ day of ____________, 20____

BETWEEN:

FONNIE INTERNATIONAL INVESTMENTS LTD. (Inc. No. BC0255927) a company
incorporated under the laws of the Province of British Columbia having an office at 2700
– 700 West Georgia Street, Vancouver, BC  V7Y 1B8

(the “Developer”)

AND:

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

(the “District”)

WHEREAS:

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

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

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

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

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

1. **DEFINITIONS**

1.01 Definitions

In this agreement:

(a) "Development Permit" means development permit No. [redacted] issued by the District;

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

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

(d) “Proposed Development” means the proposed development containing not more than 195 units to be constructed on the Lands in accordance with the Development Permit;

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

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

(g) “Unit” means a residential dwelling strata unit in the Proposed Development;

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

2. **TERM**

This Agreement will commence upon adoption by District Council of Bylaw 8238 and remain in effect until terminated by the District as set out in this Agreement.

3. **RENTAL ACCOMODATION**

3.01 Rental Disclosure Statement

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

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

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

3.02 Rental Accommodation

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

3.03 Binding on Strata Corporation

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

3.04 Strata Bylaw Invalid

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

3.05 No Bylaw

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

3.06 Vote

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

3.07 Notice

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

4.01 **Notice of Default**

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

4.02 **Costs**

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

4.03 **Damages an Inadequate Remedy**

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

4.04 **Equitable Remedies**

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

4.05 **No Penalty or Forfeiture**

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

4.06 **Cumulative Remedies**

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

5.01 **Indemnity**

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

5.02 **Survival**

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

6. **GENERAL PROVISIONS**

6.01 **District’s Power Unaffected**

Nothing in this Agreement:

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

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

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

6.02 **Agreement for Benefit of District Only**

The Owner and District agree that:

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

(b) this Agreement is not intended to protect the interests of the Owner, any Unit Owner, any occupant of any Unit or any future owner, occupier or user of any part of the Proposed Development, including any Unit, or the interests of any third party, and the District has no obligation to anyone to enforce the terms of this Agreement; and
(c) The District may at any time terminate this Agreement, in whole or in part, and execute a release and discharge of this Agreement in respect of the Proposed Development or any Unit therein, without liability to anyone for doing so.

6.03 Agreement Runs With the Lands

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

6.04 Release

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

6.05 Priority of This Agreement

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

6.06 Agreement to Have Effect as Deed

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

6.07 Waiver

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

6.08 Time

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

6.09 Validity of Provisions

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

6.10 **Extent of Obligations and Costs**

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

6.11 **Notices**

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

If to the District:

District Municipal Hall  
355 West Queens Road  
North Vancouver, BC V7N 4N5  
Attention: Planning Department

If to the Owner:

Fonnie International Investments Ltd.  
2700 – 700 West Georgia Street  
Vancouver, BC V7Y 1B8

If to the Unit Owner:

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

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

6.12 **Further Assurances**

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

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

7. **INTERPRETATION**

7.01 **References**

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

7.02 **Construction**

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

7.03 **No Limitation**

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

7.04 **Terms Mandatory**

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

7.05 **Statutes**

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

7.06 **Entire Agreement**

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

(e) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8238.
7.07 **Governing Law**

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

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

WHEREAS ________________ (the “Chargeholder”) is the holder of the following charge which is registered in the Land Title Office:

(a) ______________________ (the “Charge”);

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

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

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

Bylaw 8223

A bylaw to close and remove highway dedication

WHEREAS under the Community Charter the Council may close to traffic and remove the dedication of a highway; and,

WHEREAS the Council has posted and published notices of its intention to close the highway referred to in this Bylaw and remove its dedication, and has provided an opportunity for persons who consider they are affected to make representations to the Council; and,

WHEREAS the Council does not consider that the closure will affect the transmission or distribution facilities or works of utility operators;

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

1. Citation

   This bylaw may be cited as “229 Seymour River Place Highway Closure Bylaw 8223 2017”.

2. Bylaw to close and remove highway dedication

   2.1 The portion of highway dedicated by Plan 1587, shown in the attached plan hereto as Schedule “A” is closed to all types of traffic and the dedication as highway is removed.

   2.2 The Mayor and Clerk are authorized to execute and delivered such transfers, deeds of land, plans and other documents as are required to effect the aforesaid closure and removal of highway dedication.

READ a first time April 3rd, 2017

NOTICE given under Section 94 of the Community Charter on February 14th, 2018 and February 21st, 2018

OPPORTUNITY for representations to Council provided in accordance with Section 40 of the Community Charter on February 26th, 2018

READ a second time February 26th, 2018

READ a third time February 26th, 2018
Certified a true copy of “Bylaw 8223” as at Third Reading

________________________________________
Municipal Clerk

APPROVED by the Ministry of Transportation and Infrastructure on April 4, 2018

ADOPTED

________________________________________  _______________________________________
Mayor                                           Municipal Clerk

Certified a true copy

________________________________________
Municipal Clerk
Schedule A to Bylaw 8223
Road Closure Plan
MAPLEWOOD AREA PLAN
PHASE 2 CHARRETTE REPORT
November 16, 2016
ACKNOWLEDGEMENTS

The District of North Vancouver would like to acknowledge and thank all those who participated in the Maplewood Area Plan Charrette and provided technical support and professional expertise throughout the charrette process. The time, knowledge and contribution to the development of the concept made by each of the charrette participants is greatly appreciated.

Charrette Participants – October 18 and 19, 2016

Eric Aderneck, Metro Vancouver
Patricia M. Banning-Lover, Conservation of Maplewood Flats & Wild Bird Trust
Mike Chapman, North Vancouver School District
Joanna Clark, TransLink
Frank Ducote, Urban Designer, Darwin Properties
Dr. Ali Forghani, Resident
Ross Forman, Commercial/Industrial Realtor, Remax
Val Hammerberg, Resident, Maplewood Community Association
Robert Jennings, Mayfair Commercial RE Advisor
Mika Johnson, Resident
Laurie Kohl, Family Services North Shore
Nelson Lacharity, Transportation Advisory Committee and HUB
Edwin Leung, Citimark
Don Liu, Property owner, Maplewood Ltd. Partnership
Karen Marler, HCMA Architecture + Design, Darwin Properties
Sharon Porter, Resident, Maplewood Community Association
Stuart Porter, Resident, Maplewood Community Association
Bryce Rositch, RHA, Darwin Properties
Mark Sager, Goodwood Property Investments Ltd.
Ryan Schwartz, Commercial Realtor, Remax
Rocky Sethi, Anthem Properties
Patrick Stafford-Smith, Economic Partnership North Vancouver (EPNV)
Julia Staub-French, Family Services North Shore
Matt Thomas, Tsleil-Waututh Nation
Brett, Thornburn, Goodwood Property Investments Ltd.
Fiona Walsh, BC Cycling Coalition
Oliver Webbe, Property owner, Darwin Properties
Erin Williams, Resident
Ben Williams, Commercial Broker
Harry Wong, Tsleil-Waututh Nation

Regrets:

Amy Amantea, Advisory Panel on Disability Issues (ACDI)
Erin Black, Vancouver Coastal Health
Marc Corbeil, Resident
Costa Dimakis, Resident
Don Peters, Community Housing Action Committee (CHAC)

District of North Vancouver Council

Acting Mayor Doug Mackay-Dunn (opening remarks)

District of North Vancouver Staff

Dan Milburn, General Manager, Planning, Properties & Permits
Sarah Dal Santo, Section Manager, Policy Planner
Karen Rendek, Policy Planner (Lead Planner)
Andy Bell, Section Manager, Development Engineering
Richard Boase, Environmental Protection Officer
Nicola Chevallier, Section Manager, Facilities & Special Projects
Angele Clarke, Planning Assistant
Fiona Dercole, Section Manager, Public Safety
David Desrochers, Manager Engineering Projects & Development Services
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Nicole Foth, Planner
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The Maplewood planning area, outlined in red, is bounded by the Seymour River to the west, Mount Seymour Parkway and the Windridge escarpment to the north, Blueridge Creek to the east, and the industrial area, Spicer Road alignment and Dollarton Highway to the south. There are three main areas recognized:

1) The Village Centre (east and west)
2) District-Owned lands and Northlands (east of the village area)
3) Light industrial/business lands south of Dollarton Hwy
PART 1: Introduction & Context

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OVERVIEW

Maplewood Area Planning Process

The District of North Vancouver is undertaking a collaborative, community and stakeholder based planning and design process to develop a conceptual plan and implementation program for Maplewood Village and Area. The process is to be completed in three phases, as outlined below.

Charrette Format and Purpose

The Maplewood Village and Area charrette (an intensive design workshop) was held on October 18th and 19th, 2016 at the Holiday Inn, 700 Lillooet Rd. in North Vancouver. The charrette team included design and planning professionals, community stakeholders representing a variety of interests, external agencies and District resource staff. Participants had expressed an interest to work with the team and had been involved in previous Maplewood planning events.

The intent of the charrette process was to identify:

- proposed land uses (including any that may be different from the OCP and options and uses for District owned lands);
- outline housing forms, including innovative options, and potential opportunities to establish rental and affordable housing within the community;
- a plan for community space to meet community and service needs;
- an access and circulation network outlining future changes and option for all modes (pedestrians, cyclists, transit, vehicular, goods movement);
- an interconnected network of greenspaces (parks, recreation, urban greens, plazas, trails), and;
- environmentally sensitive areas and how they will be integrated and protected with future development, restoration and enhancement opportunities and low impact development measures.
Charrette Considerations

WHO ARE STAKEHOLDERS?

Stakeholders included those who had expressed interest in the project and had attended or been involved in previous events. Invited stakeholders represented a variety of interests, including:

- Maplewood Community Service Groups
- Maplewood Area Residents
- Special Interest Groups within the North Shore (environmental, recreation, climate change, etc.)
- Maplewood Land Owners or Investors
- Maplewood business owners and operators
- Real Estate Brokers
- External Agencies and First Nations

WHAT INFORMATION WAS CONSIDERED DURING THE CHARRETTE?

Review of background information, analysis of the area and several input opportunities and events were held prior to the design charrette. This information helped to guide directions within the design charrette, design principles, and concept development overall.

1. Engagement activities in Phase 1 included:

   - Community workshop: this workshop was the initial public launch for the project and was held primarily for residents, community groups and interested general public to obtain information about the project process and provide early input. This provided the District and team with information about what’s important in the community, what residents like and dislike and future ideas for the area.
   - Online questionnaire: this questionnaire was based on the community workshop content. It was posted for those interested but who could not attend the workshop, yet wanted to provide input.
• **Stakeholder group meeting:** representatives from active local community organizations or community based services were invited to attend a group meeting to learn more about the planning process and provide specific input on key issues and topics related to their organizations interests. This provided the team with more targeted understanding of interests and identified specific needs in the community.

• **Stakeholder phone interviews:** stakeholders with a specific interest or investment in the Maplewood area (e.g. Metro Vancouver, local developers, etc.) were contacted by phone and email to learn about the planning process and provide specific input on their interests or area of jurisdiction.

A summary of Maplewood Engagement from Phase 1 can be found on the project webpage: http://www.dnv.org/property-and-development/maplewood-village-centre.

2. **Technical Studies:** In addition, a number of technical studies were completed to provide additional background and baseline information on environmentally sensitive areas, hydrogeological conditions, and employment land study as well as interviews with local business and industry.

3. **Inventory and Analysis:** A review of the Maplewood Area today was undertaken, including: population, mix of housing, parks and greenspace, transportation, water access, floodplain, community designations, business and industry, undeveloped and recently developed property, and environment and landscape.

All information was summarized in the Maplewood Area Plan Charrette Brief, and available on the project webpage: http://www.dnv.org/property-and-development/maplewood-village-centre.
VISION FOR MAPLEWOOD VILLAGE

“A complete and balanced community with local jobs equaling the local labour force. In particular, jobs for local people and especially jobs for local young people should be encouraged and this will also have the merit of increasing the municipal tax base. New employment areas will reflect a high environmental standard and will also have high aesthetic standards, reflecting the community’s outstanding natural environment. There will be a variety of housing for all ages and incomes and family circumstances centered on a newly invigorated, walkable Maplewood village centre. Old Dollarton Road will become a key focus of pedestrian activity, a street lined with new retail businesses with apartments and live/work units above. The Maplewood village centre will be convenient for transit and pedestrians and will be the nerve centre of an extensive system of trails, which wind through the community stretching from the Seymour River to Windridge and from Hogan’s Pool to Burrard Inlet.”

(Maplewood Local Plan, 2002 and OCP, 2011).
DAY 1: EXERCISE 1A - IDEAS & INSPIRATION

To kick off the charrette process, participants were asked to discuss and share general or specific interests or ideas for the Maplewood area and how these ideas might be realized through the design charrette process. These ideas were recorded on sticky notes and posted to the ideas board for the design teams reference when drafting the design concept directions.

KEY THEMES IDENTIFIED:

The following are common themes and ideas identified and used as information to guide concept development and key elements in the design:

- strong centre and gathering places in the village centre (a square, plaza, or park)
- density to support a great village centre, some higher building heights is ok in suitable locations
- a variety of housing options for a diversity of residents (incl. families, seniors, youth, affordable, rental, etc.)
- walkable, fine grain, interesting and creative public realm, focusing on the pedestrian and pedestrian scale for the village centre in particular
- strengthen access to the river
- an expansion of community services, in particular for youth, a community centre-school,
- flood protection
- ensuring industrial uses are maintained, even enhanced or expanded as a part of the design concept
- prioritizing walking, biking and transit over car and truck use
- enhance connectivity, shown clearly within the design concept
DAY 1: EXERCISE 1B - DRAFT DESIGN PRINCIPLES

The following draft design principles reflect the OCP vision and what we heard in consultation with stakeholders and the public during Phase 1 of the project. These principles were reviewed at the charrette and input provided is outlined here.

- **Compact Village Core**: the highest development density should be contained within the village centre area and directly adjacent to the core commercial area

- **Strong Commercial Centre and Clustered Community Services**: the village serves as the primary commercial and service area for the Maplewood Area and location for community services

- **Distinct Neighbourhoods**: foster distinct, yet connected neighbourhoods within the Maplewood Area with their own unique purpose, character and image

- **Walkable Community**: buildings present a friendly face to the street, with architectural details, and site design elements that are inviting and friendly to pedestrians; centre includes a pedestrian-friendly high street/mews

- **Connected and Diverse Public Realm and Greenspace**: As an organizing feature of the area, there exists an integrated park and trail system – with series of community and smaller active neighbourhood parks that interconnect, linking both the urban and natural park areas.

- **A “Green & Innovative” Sense of Place and Character**: foster an authentic character of place centered on integrating natural elements and places, green infrastructure, green building design, and options to support a sustainable lifestyle (transit density, walkable neighbourhoods, complete community, live-work-recreation, etc.)

- **Diverse Development and Housing Types**: allow for development at various scales, types and forms to offer a range of choices and tenures, options for business and housing choice.

- **Connect to the Water**: where opportunities exist, uncover public connections to the waterfront (River or Inlet), respect and acknowledge river and coastal floodplain in the design of new development.

- **Clear Hierarchy of Streets, Improved Access & Multi-Modal Options**: focus on improving transportation and flow of traffic and multi-modal options (cycling, pedestrians, transit, vehicle).
INPUT PROVIDED AT THE CHARRETTE TO REFINE DRAFT DESIGN PRINCIPLES:

Participants provide feedback by answering the question: “What’s missing, needs to be added, or changed?”

The following input was provided:

**General changes, comments or considerations, some of which may reflect the need for new principles or changes to existing:**
- design principles should include a firm definition of “village” as context
- central plaza spaces (in the village centre) is missing and should be included
- reword “neighbourhood” to “district” or “community” that reflects areas of similar cultures (eg. Housing, commercial & innovation)
- downstream impacts of Northlands development to Maplewood conservation area and sensitive habitat (salt marsh & mud flats)
- opportunity for new hydro based work in DNV land with Park Street Marsh to facilitate drainage & enhance features in the marsh
- follow upon DNV commitment (1996/7) to capture, filter & redirect stormwater from area 3 (industrial) into Park Street Marsh area
- need to identify & acknowledge groundwater impact from deep foundations and model how foundations with the water table impacts
- opportunity to connect area with watermain under Burrard Inlet to the Seymour Greenway for public waterfront access
- plan should promote permanent ownership of MP conservation area (acquire sensitive lands for biodiversity)
- do not focus on a compact core; density and higher buildings should be permitted in all suitable locations, in particular along the northern area planning boundary
- draw on heritage to create distinct neighbourhoods border
- set environmental boundaries and allow development around this

**Additions to Existing Principles:**
- ‘complete streets’ model to principle on transportation
- transit connections and access to/from the community, including emergency routes and flood protection
- limits to density and height of buildings
- a connection of northlands to the centre village
- “…including models for car free development” to “diverse levels & housing types” or pilot projects
- housing types that reflect workforce needs (for residents that want to live near their employment)

**New Principles to be Added:**
- a new principle supporting shared utilities or integrating utilities as part of engineering design needs to be added
- a new principle specific to trails is required
- prioritize environment - enhance protection of sensitive areas and enhance wildlife corridors (eg. Over Dollarton Highway)
- new industry and what is targeted, recognizing different needs and standards for industry
- education of the environment and preserve, retain and enhance natural areas and wildlife corridor, daylighting of creeks
• focus on local business
• create a live/work/play community
• connect lands east to west in a walkable way (safe, lit, paved trails)

Several key themes emerged, these included a stronger principle or language for environmental protection and enhancement, specific principle(s) for direction on local business and industry, a need for new principle(s) that address risks, infrastructure and emergency, and adjustments to language or focus of the existing draft design principles.

This input provided will be used to refine the draft design principles and/or add new principles where needed within Phase 3 - Policy & Plan Development.
INVENTORY & ANALYSIS

In preparation for Exercise 2: Big Ideas and Design Directions, a presentation was provided to review key highlights on the Maplewood Area. Each group was also provided with a set of reference maps. These maps are available in the Maplewood Design Brief, and available on the project webpage: http://www.dnv.org/property-and-development/maplewood-village-centre.

- **Population:** approx. 1,000 people and 500 units

- **Housing:** a mix of newer strata low rise apartments; older, more affordable rental townhouses and low rise apartments; and a blend of old and new single family homes; a good affordable housing stock, primarily in older low rise and townhouse units, these are important to maintaining a diverse economic profile and options for housing in the community

- **Parks & Greenspace:** significant amount of greenspace surrounds the area, including: Maplewood Conservation Area, Windridge Park, Hogan’s Pools Park, Maplewood Creek Park, Maplewood Farm and the Seymour River Heritage Park; these parks are largely natural areas, there is limited active recreational park space located directly in the community

- **Transportation:** access is via Dollarton Hwy or north along Riverside Dr. to Mount Seymour Parkway; pedestrian amenities exist in some areas and not others; bike routes have been designated; the area is served by transit and is close to Phibbs Exchange transit hub; both formal and informal walking trails exist in the area, it is not a complete and connected network

- **Water Access:** there is limited and informal pedestrian access to Burrard Inlet and access to the Seymour River at Seymour River Heritage Park

- **Floodplain:** Maplewood is within both the coastal and river floodplain; much of the area is within this zone

- **Community Destinations:** Maplewood Conservation Area, Maplewood Farm, the small commercial centre and nearby recreational facilities in the north east - Ron Andrews Community Recreation Centre, Seymour Youth Centre and Canlan Ice Sports North Shore

- **Business & Industry:** industrial uses located south of Dollarton Hwy and along Burrard Inlet

- **Undeveloped Property:** east of Riverside Dr. (Northlands), District owned and privately held

- **Environment & Landscape:** Windridge escarpment to the north, tree cover within undeveloped areas; much of the area has been historically modified by human interventions (i.e. gravel extraction) over the years; environmentally valuable and sensitive components recently assessed.
DAY 1 - EXERCISE 2: BIG IDEAS & DESIGN DIRECTIONS

During the first part of Day 1 stakeholders, DNV staff and the design team worked in groups to generate big ideas and map out general design directions for the Maplewood Area.

There were five groups with the following focus themes:

1. Community Amenity and Public Realm
2. Environment and Green Networks
3. Transportation
4. Land Use and Density
5. Business and Industry

Land Use and Density was the most popular theme; two drawings were produced at this table. Each is shown and summarized on the following pages.
Key Highlights for Land Use and Density - Group 1:

- Strong commercial - mixed use core and heart of the community
- Fine grain pedestrian-oriented village core (short blocks, high connectivity with lanes, pedestrian corridors and streets)
- Strong east-west corridor trail connection, Northlands to the river
- Community hub and farm expansion
- Industrial - arts district, expansion of industrial - ‘maker’ spaces and small scale artisan manufacturing
- Environmental conservation areas with wetlands and drainage to Maplewood Conservation Area
Key Highlights for Land Use and Density -
Group 2:

- Strong commercial core as the heart of the community
- Community gathering spaces, pedestrian pathways and small scale retail spaces
- Dense residential component at the core, taller buildings ok
- Development intensity and height decreases away from the core
- East - west trail from Northlands to Riverside Dr.
- Environmental conservation areas and drainage connection to Maplewood Conservation Area
- Employment and residential uses within the Northlands area
Key Highlights for Environment & Green Networks - Group 3:

- Maintain two primary wetland areas and natural corridors
- Connected environmental and park spaces - including north-south trail on the dyke, east-west link from Northlands to Seymour River
- Pilot transitional neighbourhood, integrated with landscape and natural areas, potential car-free zone
- Stormwater management
- Walkable central commercial, mixed use core
- Incorporate active park spaces
Key Highlights for Transportation & Mobility - Group 4:

- Priority for modal share - walk, bike, transit, vehicles
- Frequent transit loop to the village core
- Separated commuter cycling routes and an “all ages and abilities” multi-use east-west trail
- Commuter cycling routes along Dollarton Hwy. and Riverside Dr., upgrades required on both streets for safety and completed section south of Northlands
- Strong green spine, east-west trail connection from Northlands to existing and proposed Spirit Trail routes as an all ages and abilities multi-use trail
- Trail responds to conditions and areas with viewpoints, character, materials, etc.
- North-south trail along the dyke at Seymour River Heritage Park, linking south of Dollarton Hwy to water access
- Strong commercial heart and core area with pedestrian routes to connect to frequent transit and nearby employment areas
- Enhanced pedestrian, cycling and transit connections to Phibbs Exchange along Dollarton Hwy
Key Highlights for Business & Industry - Group 5:

- Focus retail area where there is existing commercial
- Maintain the older, smaller industrial stock - important to keeping business in the area
- Strata industrial uses and attracting high paying jobs to the area
- 10-15,000 sq ft. of commercial in the Northlands area to support a small amount of local needs
- Flexible mixed zoning for the Northlands area to allow for a broader range of employment uses and opportunities, campus like centre, innovative businesses
- Potential opportunities for live work east of Riverside provides a transition from industrial to residential uses
Key Highlights for Community Amenity - Group 6:

- Social connection (in all design of spaces) and connection to the environment as overarching themes
- 0-90 design for all ages
- Community services, gathering spaces and housing with the central core area and within a 5 min walking radius
- Opportunities throughout to meet and gather in the community - parks, Maplewood Farm, Seymour River, commercial village core, etc.
- Build on and enhance the natural setting
- Materials and design speaks to the natural setting and green feel
- Innovative parking lot to encourage social interaction
DAY 1: EXERCISE 2 PRELIMINARY IDEAS & DESIGN DIRECTIONS INTEGRATED

During the second part of Day 1 the design team integrated the morning Exercise: Big Ideas and Design Directions by theme into one emerging design concept. Stakeholders and District staff returned in the morning of Day 2 to review, provide comments, and confirm the directions.
Residential
Protected Watercourse/Riparian Area

Business / Light Industrial Uses

Small Commercial Core

New Campus Style, Light Industrial, Live-work

Protected Green Escarpment with East-West Multi-Use Trail

Watercourse / Drainage Connections

Civic Centre / Fire Training

Seymour River Access

Clustered / Cottage Housing

High-rise, Mid-rise, Low-rise and Townhomes surrounding core

Maintain School Site & Community Use

Community Services Hub

Additional Light Industrial/Business

New “Industrial Artisan” Area

Strong Commercial Village Core and Heart at Old Dollarton Rd.

Multiple Pedestrian Connections & Mews

Industrial Intensification to smaller units

Community Services Hub

Protected Wetlands & Natural Areas

High-rise, Mid-rise, Low-rise and Townhomes surrounding core
Emerging Directions - Charrette Team Feedback:

The following are the key comments and changes expressed by individual stakeholders at the check-in on the morning of Day 2. These were used to guide the design team in development of the draft concept design:

- shift of the centre and core or heart of the community works well
- additional employment uses adjacent to the core is a good idea
- urban agriculture and farm presence is not pronounced in the concept and should be shown with changes
- the civic precinct and fire facility needs to be better integrated into the plan and network structure
- Artisan industrial area does not work south of Dollarton Hwy. This area provides good spaces at reasonable cost for light industrial and the introduction of pedestrian traffic is not conducive to use there
- Concern for retail amounts and whether there is enough to provide basic services for the community / perhaps too much live-work / study required
- Water/drainage strategy works well and transitions from industrial to residential
- Concern the amount of residential outlined in the Northlands area reduces lands for industrial, however the campus style mix of residential (employee housing) and light industrial/business is ok
- Strengthen connections between the Northlands and Maplewood Flats
- Transportation network doesn’t seem clear, this needs to be outlined (cyclist, commuter, multi-use trails)
- Windridge Dr. area should be designated at a much higher density, there are good views and opportunities for higher forms of housing
- Maintain the park/tree canopy north of the school, should this be active park
- Should the fire training facility be located south of Dollarton Highway?
- De-emphasize cars in the village area, the concept should outline where cars park
- School access and safety will be important
- Show pedestrian crossing for Maplewood Flats entrance
- Concept must show public gathering spaces
- More emphasis needed to attract activity to Northlands, building on research facility in Maplewood Flats, this area has great potential to inspire and provide opportunities for new and innovative work on the North Shore, this should be an area that attracts business and cutting edge technology, research, etc.
- How can Maplewood Farm be better positioned and supported?
- Move ‘Granville Island’ type area to District lands
- Ensure no surface parking
- How important is an east-west vehicle connection, perhaps not needed, Blueridge to the north will be access point
- Urban wildlife corridors should be continous, important to indicate and protect these routes
DAY 2: DRAFT DESIGN CONCEPT

During the second part of Day 2 the design team worked to refine the integrated preliminary ideas based on the charrette team feedback provided in the morning to develop the draft illustrated design concept shown here (right). This following pages outline each key idea and area.

This concept was presented at the public open house for review and input.
Design Concept Highlights

1. Village Centre - mixed use commercial-residential, mid-rise apartment and live work
2. Eco-cluster Housing
3. Multi-family townhomes and/or low rise apartment
4. Light Industrial - Business - Intensification of uses
5. Industrial Precinct - artisan manufacturing
6. Innovative Light Industrial / Business - campus style with employee dedicated housing
7. Environment & Conservation Areas (within the planning area boundary)
8. Civic Precinct
9. Active Park Spaces
VILLAGE CENTRE

The design concept outlines the village centre and heart of the community at Old Dollarton Road and Seymour River Place. This area includes buildings with commercial at the street level and residential above, live-work to the south and multi-family residential to the north.

Streets are multi-modal and pedestrian oriented with wide sidewalks, street trees and places to sit. A shared street is imagined to connect north-south between Old Dollarton Rd. and Front street. This street would be pedestrian oriented and could be temporarily blocked off to act as a plaza, space for community events and markets.
LAND USE AND HOUSING

The following shows the location and variety of housing outlined in the design concept.
LAND USE AND HOUSING

The design concept proposes a diversity of housing types to suit the needs of different household sizes, life stages and economic conditions and seeks to create opportunities for new rental and affordable housing with redevelopment of the village centre.

A number of housing forms expressed in the design concept include mixed use, live-work, and mid-rise apartments within the village core. This central core area also may include opportunities to locate taller buildings (up to 18 storeys) at strategic locations.

The concept also includes low rise apartment buildings and townhouses. Other innovative ideas for housing include cottage or eco-clustered housing integrated within a natural setting, co-housing, live-work and campus-style dedicated employee housing towards the north eastern portion of the study area. Market housing, secondary suites in townhomes, dedicated seniors housing, affordable rental, non-profit housing and other specific needs housing could be options.

A variety of housing options to meet the needs of different household sizes, life stages and economic conditions.
NETWORK CONNECTIONS & GREENSPACE

The following shows the streets, trails and overall connectivity proposed in the design concept.

LEGEND
- Spirit Trail
- Multi-use path/trail
- Frequent Transit Loop
- Separated Bike Lane
- Village Centre / Pedestrian Priority
- Collector
- Arterial
NETWORK CONNECTIONS & GREENSPACE

The design concept provides a framework for active transportation. It outlines an expanded trail system for all ages and abilities in addition to a commuter network for cyclists and pedestrian focused public realm within urban areas and streets.

A key feature of the network is a strong east-west multi-use trail for all ages and abilities. This trail would follow the escarpment connecting Canlan and Ron Andrews Community Recreation Centre to the Seymour River Heritage Park trail and riverfront. The trail would respond to the different environments it passes through (such as viewpoints, resting areas, and parklets), a boardwalk and viewing opportunities at the river, would allow water access, but protect the river edge from disturbance. The riverfront area, Maplewood Farm and community services suggested here could be expanded to collectively build on this strong node and key destination within the community.

A north-south trail connection along the Seymour River on the dyke is shown to extend south to a potential future water access at Seymour River and Burrard Inlet and intersect with the east-trail trail connections, providing a main trail network through the community.

Primary vehicle routes and access points remain with some identified improvements for enhanced pedestrian and bike connections to Phibbs exchange and potential future Frequent Transit to the village core.
A STRONG CENTRE FOR EMPLOYMENT

Industrial ‘artisan’ area east of Riverside Dr.

The design concept maintains industrial lands south of Old Dollarton and adds new opportunities for employment by intensifying existing areas currently used for light industrial and business. Intensification in the design concept was defined as an allowance for additional, light industrial uses north of the Spicer Rd. alignment. This may mean dividing larger spaces into smaller units, or redevelopment of existing buildings.

In addition to intensification of existing light industrial / business areas, the design concept identifies a small industrial precinct to accommodate and generate new business that caters to artisan and small-scale creative works. Defined as a “Granville Island” style district, such businesses, although focused on the creative manufacturing of goods, may allow for

Live-work, small scale manufacturing
minor retail opportunities

The east area is currently designated as light industrial/business but also contains significant environmentally sensitive areas and more pronounced topography with steep sections. The design concept maintains this area with an employment focus but imagines it as a business “campus style” development focusing on innovative technologies and attracting new and possible relocation of existing business with a creative edge. Alongside employment generating uses, the area would also contain employee housing and amenities to support employees lifestyles and needs while working around environmentally sensitive areas and integrated with the landscape of the site.

Intensifying industrial areas to the south of Dollarton Hwy, potential for re-development and/or renovation for smaller units.

Northlands employment node, business campus style with dedicated employee housing and lifestyle amenities to support it.
ACTIVE LIVING & SOCIAL INTERACTION

The design concept proposes two new active park sites, one located at the existing school site within the Village and another east of Riverside Dr. directly adjacent and integrated with a natural area. The intent of these parks would be to provide active recreational spaces (play, sports, etc.) for existing and new residents.

An enhanced trail network connects park spaces to and through the large nearby natural areas and to the urban village core with plazas and urban gathering spaces.

Natural areas provide habitat, wildlife corridors and allow for watercourses and riparian areas. For recreation, these spaces offer trails, viewpoints and rest areas with a focus on environmental protection and education or interpretative elements.

Two primary active spaces connected to a network of smaller urban gathering places and larger natural areas.

Active parks to offer a variety of spaces to meet a diverse range of active recreational opportunities for existing and new residents.
CONSERVATION OF ENVIRONMENTAL AREAS

Conservation of key environmentally sensitive areas provided the foundation of the design concept for where new development could occur and where rehabilitation and improvement of other existing environmental features and systems could be established. The design concept outlines a framework to protect key areas, link them to each other and connect with existing large natural areas nearby, in particular, the Maplewood Conservation Area. Important features include:

1) maintaining the Windridge escarpment with buffer area;
2) protection and enhancement of identified wetlands;
3) facilitating the rehabilitation and enhancement of primary watercourses;
4) improved water quality and flow of drainage integrated with the system, and;
5) protection, rehabilitation and enhancement of habitat within natural park spaces.

Access to natural areas may be restricted where significant environmental sensitivity has been identified, however, most areas will be accessible via a connected trail network, including the east-west multi-use Spirit Trail. This network will respond to conditions and maximize viewpoints, include rest areas and interpretive or educational opportunities.

The design concept outlines a framework to protect key areas, link them to each other and connect with existing large natural areas nearby, in particular, the Maplewood Conservation Area.
COMMUNITY SERVICE NEEDS

Locations and spaces for current and future community services within the Maplewood area were considered within the design concept. With this, several key sites were identified:

- a node of services at Seymour Heritage River Park and Maplewood Farm directly adjacent to the village centre;
- community services (daycare, community meeting spaces, farmer’s market, etc.) within the village centre with redevelopment;
- supported seniors and/or alternative non-market housing east of Riverside Dr. at Old Dollarton Rd.;
- maintaining the public school site within the village, and;
- a small node of community amenities within the Northlands area.

Further analysis of the types of community spaces needed, and the potential locations for these spaces is the subject of a Maplewood Community Needs Assessment (currently in progress).
A CIVIC PRECINCT / FIRE FACILITY

In addition to a centre for employment, the area is anticipated to host a new civic precinct that would include a fire hall, training centre and administrative services, and possibly other civic functions. This precinct would provide emergency services and possibly offer some meeting space for use by outside organizations.

Civic facility integrated and connected to the community village centre and Northlands area, buffered by larger natural areas.
PUBLIC OPEN HOUSE & NEXT STEPS

All working materials and design charrette drawings were presented at the public open house on the evening of Day 2. This event was an opportunity to invite charrette team participants back to see how their ideas formed the design concept and for residents and community members to review and provide input on the process and design concept outcome.

An online questionnaire was available for public input from November 1 - November 16, 2016. A summary of this input will be provided and used to further refine the draft Maplewood design concept developed at the charrette.
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INTRODUCTION

Purpose and Context

In July, 2016, Council directed staff to start a planning process for the Maplewood area. The area includes Maplewood Village Centre, the light industrial and business area south of Dollarton Highway and the Maplewood North lands located east of the Village Centre (see Map 1, following page).

Planning Process

The planning process includes three phases (shown in diagram below) with opportunities for public and stakeholder engagement input within each phase.

The purpose of Phase 1 was to identify opportunities, principles, and big ideas. These will establish direction for design development in Phase 2 and policy and plan development in Phase 3.
Maplewood Study Area

Maplewood is made up of the Village Centre (1), undeveloped lands to the east (2), and light industrial lands to the south (3).

LEGEND

1. Maplewood Village Centre
2. Undeveloped Lands
3. Dollarton Highway Light Industrial
Overview of Engagement - Phase 1

The following engagement opportunities were provided in Phase 1:

1. **Community workshop:** this workshop was the initial public launch for the project and was held primarily for residents, community groups and interested general public to obtain information about the project process and provide early input.

2. **Online questionnaire:** this questionnaire was based on the community workshop content. It was posted for those interested but who could not attend the workshop, yet wanted to provide input.

3. **Stakeholder group meeting:** representatives from active local community organizations or community based services were invited to attend a group meeting to learn more about the planning process and provide specific input on key issues and topics related to their organizations interests.

4. **Stakeholder phone interviews:** stakeholders with a specific interest or investment in the Maplewood area (e.g. Metro Vancouver, local developers, etc.) were contacted by phone and email to learn about the planning process and provide specific input on their interests or area of jurisdiction.

The following report describes each engagement opportunity and provides a summary of “what we heard” from each event or opportunity.
Community Workshop Event & Online Questionnaire

The community workshop event was held on April 20th, 2016 at Kenneth Gordon School and was attended by 150 community members. All residents and businesses within the study area were invited by postcards by mail and newspaper ad. Event notification was also posted Online through social media (Facebook, Twitter and on the DNV website) and event highway signs located in the community.

The community workshop was the first public event held for the process. At this workshop community members were asked to share their ideas to help shape the future for the Maplewood area.

Top left: Screenshot from one of the announcements that was made on social media.
Above: Postcards mail-out invitations for the first Community Workshop
Bottom Left: The newspaper ad that was printed in the North Shore News for the Community Workshop.
THE EVENING COMMUNITY WORKSHOP TOOK PLACE IN 3 PARTS:

- Participants looked through information boards and shared their ideas on interactive boards that asked them to prioritize planning topics, including: transportation, housing, shops & community services, urban design & public realm, sustainability, landscape & environment, parks & recreation, and business, industry and civic uses. A comment page was available for participants who were not able to stay and participate in the interactive boards (6 were submitted).
- A presentation introduced participants to the planning process, provided an overview of the purpose and goals of the evening, and provided an overview of topics and inspiration to help get participants engaged in idea generation.
- Community mapping stations were available for those who had specific locational input regarding ideas, issues and opportunities in the community.
- For those who could not attend the workshop, an Online questionnaire was made available for people to share their thoughts and ideas. The survey was Online from April 21, 2016 to May 6th 2016 and received 93 responses.
The following provides a summary of the interactive display boards and the Online survey, which included eight topic areas. Within each topic area, participants were asked to answer questions and express their priorities for the future.

Participants placed dots from low to high priority for each subtopic. To summarize the interactive boards, totals for low, neutral and high priority were counted and are displayed for each subtopic throughout this report.

Above: The interactive portion of the Sustainability board following the Community Workshop.
Where Do You Live?

Participants were greeted at the door and asked to sign in and to place a sticky dot to indicate where they lived.

Participants who lived outside of the area also attended. They visited from Browning Pl., East Van (2), Lynn Valley (1), Riverbank, Park Royal, Richmond, and Vancouver.

SUMMARY
The majority of attendees were from the Maplewood area and immediate areas nearby including Riverside West, Riverside East, Seymour Heights, McCartney Woods, Blueridge, Windsor Park and Northlands.
Summary of Community Workshop and Online Input

The Community Workshop and Online survey provided sufficient input to inform Phase 2. Several key themes emerged from the community. A strong interest was expressed for:

- the need to address traffic congestion & circulation in the community (but primarily in/out of the area, including consideration that major arterials to the bridge and beyond are already at capacity)
- supporting more active transportation and ensuring pedestrian safety
- strong support for seeing Maplewood continue to have a ‘green’ character, with natural areas preserved and/or incorporated into public spaces
- sensitive development and affordable housing
- a genuine desire to find great ideas and innovations suited to the character and area of Maplewood.

The following pages outline a detailed summary of input on each of the 8 topic areas. Verbatim comments are included in the Appendix.

The Spirit of Maplewood

During the open house and in the on-line questionnaire we asked participants what word would best describe the spirit of Maplewood. This is what we heard:
Transportation

**TODAY** > *Maplewood includes a road network, transit service including several bus routes, sidewalks and trails.*

How do you most often get around within your neighbourhood?
At the Community Workshop, almost an equal amount of respondents primarily travel via walking (21) as driving a car/truck (24). A few respondents also used bus (5) and bicycles (7) as their primary method of transportation. One respondent reported being a passenger in a car/truck as their primary method of travel.

In the Online Questionnaire, of the 63 respondents the most primarily travel driving a car/truck (31), compared to walking (19), biking (8), busing (2), as a passenger in a car/truck (1) and other (2).

How do you most often get to and from Maplewood?
At the Community Workshop, a very large portion of respondents travel to and from Maplewood as the driver of a car/truck (28). About 1/3 of the respondents arrive via other means including walking (7), bicycling (4) and as a passenger in a car/truck (3).

In the Online Questionnaire, of the 63 respondents about 65% travel to and from Maplewood as a driver of a car/truck (41), compared to biking (9), walking (5), busing (4), as a passenger in a car/truck (3) and other (1).

**RESPONDENTS PRIORITIES FOR THE FUTURE:**

<table>
<thead>
<tr>
<th>Active Transportation</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>31</td>
</tr>
</tbody>
</table>

At the Community Workshop, 100% of respondents stated active transport was a high (31) priority in the Maplewood area.

<table>
<thead>
<tr>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>15</td>
<td>49</td>
</tr>
</tbody>
</table>

In the Online Questionnaire, 70 people responded to active transportation with 70% giving high (49) priority.
### Quality Pedestrian Environment

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop</td>
<td>0</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Online</td>
<td>3</td>
<td>16</td>
<td>50</td>
</tr>
</tbody>
</table>

At the Community Workshop, all respondents (29) people responded that a quality pedestrian environment was a high priority.

In the Online Questionnaire, 69 people responded to this question with nearly 75% giving high (50) priority to quality pedestrian environment.

### Transit

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop</td>
<td>0</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>Online</td>
<td>7</td>
<td>29</td>
<td>35</td>
</tr>
</tbody>
</table>

At the Community Workshop, 27 participants stated transit was a high priority, while 2 were neutral.

In the Online Questionnaire, 71 people responded to this question with nearly 50% high (35) priority for transit.

### Automobiles

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop</td>
<td>7</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Online</td>
<td>16</td>
<td>23</td>
<td>31</td>
</tr>
</tbody>
</table>

At the Community Workshop, less than 50% of the respondents found automobiles to be a high (11) priority.

In the Online Questionnaire, 70 people responded to automobiles with nearly 45% giving high priority (31).

### Continuous Sidewalk Connections

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop</td>
<td>0</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Online</td>
<td>5</td>
<td>20</td>
<td>46</td>
</tr>
</tbody>
</table>

At the Community Workshop, 100% of respondents (29) expressed a higher priority for continuous sidewalks.

In the Online Questionnaire, 71 people responded, of which nearly 65% of respondents gave high (46) priority to continuous sidewalks.
SUMMARY OF THEMES & COMMENTS FOR TRANSPORTATION

Respondents provided a lot of feedback on the topic of transportation. For both the Online Questionnaire and Community Workshop, all respondents gave high priority to active transportation, quality pedestrian environment, transit, continuous sidewalks and pedestrian & bicycle linkages. Less than half of respondents gave automobiles high priority.

Community Workshop
Many respondents identified safety issues with Riverside Drive including the need for bike lanes, pull outs for cars to drop off/pick up from the school, and sidewalks.

Several respondents identified the need for a continuous sidewalk along Dollarton Highway, highlighting the lack of a pedestrian connection to Maplewood Flats.

Improved transit infrastructure was an overall theme, with many respondents identifying issues with bridge traffic and north-south congestion. Some respondents recognized the Berkley extension as a solution to north-south congestion, however some were opposed to the proposed location.

Online Questionnaire
Mixed responses were received regarding transportation. The majority of suggestions supported reducing vehicular traffic in the Maplewood area. Respondents identified a need for better, frequent, and more efficient transportation connections to key destinations. Suggestions included improving public transit routes, better sidewalk/pedestrian infrastructure, safer and efficient bike trails and reducing the number of parking spots.

Many responses identified safety concerns with Dollarton Road, including the need for a separated bike path, improved pedestrian path and more signage.

Although the majority of respondents supported better alternative transportation, some respondents emphasized that not all people are able to cycle or walk. Respondents would like to see better road maintenance overall and ensure more viable alternatives to driving.
TODAY > Maplewood is home to approximately 1,000 people and 315 dwelling units.

RESPONDENTS PRIORITIES FOR THE FUTURE:

### Single Family

<table>
<thead>
<tr>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>3</td>
<td>14</td>
</tr>
</tbody>
</table>

At the Community Workshop, 31 respondents were evenly divided regarding the low (14) and high (14) priority of single family homes.

<table>
<thead>
<tr>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>26</td>
<td>11</td>
</tr>
</tbody>
</table>

In the Online Questionnaire, 74 people responded, with over 50% giving low (37) priority of single family homes.

### Duplex

<table>
<thead>
<tr>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>2</td>
<td>14</td>
</tr>
</tbody>
</table>

At the Community Workshop, double the amount of respondents considered duplexes high (14) priority to low (7).

<table>
<thead>
<tr>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>31</td>
<td>14</td>
</tr>
</tbody>
</table>

In the Online Questionnaire, 74 people responded to this question, with just under 40% giving neutral (31) or low (29) priority for duplexes.

### Townhouse/Rowhouse

<table>
<thead>
<tr>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>21</td>
</tr>
</tbody>
</table>

At the Community Workshop, approximately 75% of respondents found townhouses/rowhouses to be of high priority (21) compared to low (6) and neutral (1).

<table>
<thead>
<tr>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>23</td>
<td>37</td>
</tr>
</tbody>
</table>

In the Online Questionnaire, 76 people responded to this question, with nearly 50% giving high (37) priority to townhouses/rowhouses.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Use</td>
<td>13</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>At the Community Workshop, a greater number of respondents thought mixed use options are of high (20) priority to low (13).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>23</td>
<td>39</td>
</tr>
<tr>
<td>In the Online Questionnaire, 74 people responded, with nearly 55% giving high (39) priority to mixed use housing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affordable &amp; Rental Housing</td>
<td>4</td>
<td>2</td>
<td>43</td>
</tr>
<tr>
<td>At the Community Workshop, most people had a high (43) priority for affordable and rental housing compared to low (4).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>17</td>
<td>36</td>
</tr>
<tr>
<td>In the Online Questionnaire, 74 people responded, of which nearly 50% gave high (36) priority for affordable &amp; rental housing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apartments</td>
<td>19</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>At the Community Workshop, there was a moderately greater response for high (24) priority of apartments compared to low priority (19).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>In the Online Questionnaire, 75 people responded to apartments in Maplewood with an overall neutral response.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-Housing</td>
<td>7</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>More than 75% of respondents gave high (30) priority to co-housing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>In the Online Questionnaire, 74 people responded to this question, of which over 40% gave neutral (32) priority, and slightly more respondents gave low (17) priority compared to high (25).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Live-Work

<table>
<thead>
<tr>
<th>Priority</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>4</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Of the limited feedback regarding live-work townhouses, 2/3 thought it high priority (16), with the rest of respondents split between low (4) and neutral (4).

<table>
<thead>
<tr>
<th>Priority</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the Online Questionnaire, 84 people responded, with nearly 45% giving high (33) priority to live-work housing.

Modular-Micro Units

<table>
<thead>
<tr>
<th>Priority</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>10</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The fewest respondents commented on modular-micro units, with the greatest amount stating it was of low (10) priority compared to high (4) and neutral (1).

<table>
<thead>
<tr>
<th>Priority</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the Online Questionnaire, 75 people responded, with nearly 50% giving low (36) priority to modular-micro units.

How important is maintaining the stock of affordable housing in Maplewood?

(only asked Online Questionnaire)

<table>
<thead>
<tr>
<th>Priority</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the Online Questionnaire, 84 people responded to this question, over 50% of respondents stated maintaining affordable housing in Maplewood is a high (38) priority.
SUMMARY OF THEMES & COMMENTS FOR HOUSING
Results from the Online Questionnaire mirrored that of the Community Workshop in terms of low or high priority for housing, however for a lot of the subtopics neutral had the highest number of respondents for the Online Questionnaire.

Variances occurred in terms of apartments having a moderately higher priority at the Community Workshop, compared to slightly lower priority in the Online Questionnaire (but it was almost neutral). Duplexes were a higher priority during the Community Workshop compared to a lower priority in the Online Questionnaire. Single family homes were mostly neutral during the Community Workshop, with over 50% low priority in the Online Questionnaire.

Higher priority was given to housing including duplexes, townhouses/rowhouses, mixed use, co-housing, live-work townhouse.

Community Workshop
The greatest amount of feedback was received for Affordable and Rental housing, which was mostly supporting high priority. Some respondents commented on the need to consider seniors in terms of affordable and appropriate housing.

Online Questionnaire
The most comments were in support of providing affordable housing in the Maplewood area. Many people referenced examples of car free or nature inclusive European developments as good examples to follow. There was support of mixed use with artist studios and restaurants as opposed to offices.

Most were not in support of high rise apartments, but were open to low rise apartments. Some comments were in support of infilling but a few respondents were against any type of development.
Shops & Community Services

**TODAY** > Maplewood currently includes small, local serving retail stores, gas stations, sports stores, and cafes. The I Hope Family Centre and the NV Community Arts Council provide limited community services. A grocery store is due to open on Front Street later this year.

**RESPONDENTS PRIORITIES FOR THE FUTURE:**

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shops and services to support daily needs like food and grocery</td>
<td>4</td>
<td>4</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At the Community Workshop, over 80% of respondents stated a high (41) priority for shops and services to support daily needs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>16</td>
<td>54</td>
</tr>
<tr>
<td>In the Online Questionnaire, 71 people responded, with over 75% giving high (54) priority to shops and services for daily needs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Specialists such as accountants, lawyers, dentists, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At the Community Workshop, Just under 50% of the respondents gave a low (14) priority to specialists in Maplewood, with the rest divided between neutral (8) and high (9).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>29</td>
<td>24</td>
</tr>
<tr>
<td>In the Online Questionnaire, 71 people responded to this question, with just over 40% giving neutral (29) priority to specialists, with the rest divided between high (24) and low (18).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Community services such as daycares and meeting spaces</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At the Community Workshop, just over half of respondents gave a high (18) priority to community services, with the rest split between low (9) and neutral (7).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>19</td>
<td>41</td>
</tr>
<tr>
<td>In the Online Questionnaire, 70 people responded to this question, with just under 60% giving high (41) priority to community services.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SUMMARY OF THEMES & COMMENTS FOR SHOPS & COMMUNITY SERVICES
For both the Community Workshop and the Online Questionnaire, there was a very large response for shops and services to support daily needs like food and groceries in Maplewood. Not as many people replied at the Community Workshop regarding community services, however more than 50% gave high priority both Online and at the event.

Respondents at the Community Workshop found specialists, such as dentists and accountants, to be of lower priority. However, more respondents via the Online Questionnaire gave a neutral or higher priority to local specialists.

Community Workshop
Community services, such as daycares and meeting spaces, also had a lot of feedback as high priority. There were also several comments in support of restaurants to help build a more local community presence.

Online Questionnaire
The most comments were directed to local shops and restaurants to meet residents daily needs, which could be accommodated via mixed use. There were also some comments directed to increasing the capacity for indoor recreation with a health or recreation centre which can accommodate community gathering. Underground parking was also mentioned to maintain community spaces at street level.
Urban Design & Public Realm

**TODAY >** The design of public spaces (streets, sidewalks, plazas etc.) and the relationship to adjacent uses influences community use and experience of this space. Well designed public spaces that welcome pedestrian activity and interaction create more attractive and vibrant community places.

### RESPONDENTS PRIORITIES FOR THE FUTURE:

<table>
<thead>
<tr>
<th>Category</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unique and Identifiable places</strong></td>
<td>7</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>At the Community Workshop, nearly 70% of respondents gave high (19) priority to having unique and identifiable places in Maplewood.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Streets, Parks and Plazas that integrate Stormwater and Ecology</strong></td>
<td>3</td>
<td>1</td>
<td>41</td>
</tr>
<tr>
<td>At the Community Workshop, 45 people responded regarding streets parks and plazas integrating stormwater and ecology, of which over 90% gave high (41) priority.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Improved Landscaping</strong></td>
<td>4</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>At the Community Workshop, over 85% of respondents gave high (33) priority to improved landscaping.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the Online Questionnaire, 66 people responded, with nearly 50% of respondents giving to high (31) to creating unique and identifiable places.

In the Online Questionnaire, 69 people responded, with nearly 75% of respondents giving high (52) priority to integrating stormwater and ecology into streets, parks and plazas.

In the Online Questionnaire, 68 people responded with over 55% giving high (38) priority to improved landscaping.
### SUMMARY OF THEMES & COMMENTS FOR URBAN DESIGN & PUBLIC REALM

For all subtopics, results from the Online Questionnaire mirrored that of the Community Workshop in terms of low or high priority for urban and public realm subtopics. There was a very high response in support of high priority for streets, parks and plazas which integrate stormwater and ecological functioning. Respondents also gave high priority to improved landscaping and well-designed buildings.

#### Community Workshop
During the Community Workshop, over half of respondents think public art is a low priority and that money should be spent in other areas. There were several comments directed to creating open spaces for public to host concerts and art shows. People also commented on the need for sidewalks on Riverside and on Dollarton toward Ellis.

#### Online Questionnaire
Overall, respondents supported urban design and public spaces that define Maplewood as a place to be. Many respondents support creating central, community spaces. Suggestions include featuring public artwork, ensuring spaces are functional, and showing off the natural setting of Maplewood.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well-Designed Buildings</td>
<td>4</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>At the Community Workshop, nearly 85% of respondents gave high (33) priority to well-designed buildings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>16</td>
<td>47</td>
</tr>
<tr>
<td>In the Online Questionnaire, 68 people responded, of which nearly 70% of respondents gave high (47) priority to well-designed buildings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Art</td>
<td>19</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>At the Community Workshop, nearly 55% of respondents gave low (19) priority to public art.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>In the Online Questionnaire, 68 people responded to this question, with a slightly lower (24) priority for public art.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In B.C., we use about an average of 490 litres of water per person per day and about 98 gigajoules of energy per household per year.

RESPONDENTS PRIORITIES FOR THE FUTURE:

**Prepare for Climate Change Resilience – such as stormwater and flood risk management**

5 Low
1 Neutral
36 High

At the Community Workshop, nearly 85% of participants stated preparing for climate change resilience is of high (36) priority.

2 Low
20 Neutral
46 High

In the Online Questionnaire, 68 people responded, with nearly 70% of respondents giving high priority climate change preparation.

**Invest in Renewable Energy and Energy Efficiency**

2 Low
3 Neutral
32 High

At the Community Workshop, over 85% of respondents gave high (32) priority of interest for investing in renewable energy.

2 Low
22 Neutral
44 High

In the Online Questionnaire, 68 people responded to this question, with over 65% of respondents giving high (44) priority to investing in renewable energy and energy efficiency.

**Promote Water Conservation**

3 Low
3 Neutral
46 High

At the Community Workshop, over 85% of attendees stated a high priority (46) for promoting water conservation, compared to low (3) and neutral (3).

2 Low
20 Neutral
46 High

In the Online Questionnaire, 68 people responded with nearly 70% giving high (46) priority to promoting water conservation.
SUMMARY OF THEMES & COMMENTS FOR SUSTAINABILITY

Sustainability was the topic that generated the most response, with around 80% of Community Workshop participants and around 70% of Online Questionnaire respondents giving high priority to all of the suggested environmental initiatives including increasing climate change resiliency, investing in renewable energy, promoting water conservation, promoting active living and food security.

**Community Workshop**
Comments were directed to promoting green building technologies and establishing and enhancing natural habitat.

**Online Questionnaire**
Respondents would like to see sustainability as a priority for the community. Many would like to see more sustainability constructed buildings and homes, environmental education for children and youth, shared gardens and community initiatives that connect sustainability, health and well-being.
Landscape & Environment

TODAY > The Maplewood area is characterized by lower lying areas closer to the Seymour River and towards Burrard Inlet, and a ridge of steep slopes that form part of the Windridge escarpment. There are also a number of significant wetland areas that provide important habitat for birds and wildlife.

RESPONDENTS PRIORITIES FOR THE FUTURE:

Landscape & Environment

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steep Slopes</td>
<td>3</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>Wetlands and Watercourses (including hydrology)</td>
<td>0</td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>Treed Areas</td>
<td>0</td>
<td>4</td>
<td>38</td>
</tr>
</tbody>
</table>

At the Community Workshop, nearly 90% of participants stated steep slopes are of high (24) priority compared to low (3) priority.

At the Community Workshop, all respondents found wetlands and watercourses to be of high priority (37) or were neutral (1). No respondents found wetlands were of low priority.

At the Community Workshop, all respondents found treed areas to be of high priority (38) or were neutral (4). No respondents found treed areas to be of low priority.

In the Online Questionnaire, 76 people responded, with 60% of respondents giving high (42) priority to mitigating steep slopes.

In the Online Questionnaire, 72 people responded with just under 80% giving high (57) priority to protecting wetlands and watercourses.

In the Online Questionnaire, 69 people responded with just under 75% giving high (52) priority to protecting existing trees and treed areas.
SUMMARY OF THEMES & COMMENTS FOR LANDSCAPE & ENVIRONMENT
Respondents at the Community Workshop and in the Online Survey gave all of the categories for landscape & environment high priority, including steep slopes, wetlands and watercourses and treed areas.

Community Workshop
Respondents expressed many environmental needs including protecting existing parks and old trees, managing invasive species, converting port lands to green spaces and increasing trail networks while maintaining habitat. In terms of transportation and the environment, there were comments regarding environmental concerns of the proposed Berkley connector going through the forest and a need to put living infrastructure instead of concrete walls along Mount Seymour Parkway.

Online Questionnaire
For the Online Questionnaire, many comments identified the topic of landscape and environment as the most important aspect of Maplewood. Comments focused on protecting and enhancing existing habitat including forested areas and streams through designation of permanent green spaces and buffers. Respondents expressed a lot of interest in increasing access to nature via walking and cycling trails. A few comments were directed to increasing opportunities for education through signage throughout Heritage Park and lower Seymour River.
TODAY > The Maplewood area is rich in parks and trails. Parks include natural parkland areas (e.g. Hogan’s Pools Park, Windrige Park), District and community parks (E.g. Maplewood Farm and Maplewood Park) and regional parks and conservation areas (e.g. Maplewood Conservation Area). Trails provide important linkages between parks and other community destinations including the Ron Andrew Community Recreation Centre and Canlan Ice Sports North Shore.

RESPONDENTS PRIORITIES FOR THE FUTURE:

Trail Linkages to Connect Maplewood Village with Surrounding Neighbourhoods

1. Low  0. Neutral  42. High
At the Community Workshop, all but one participant stated trail connections are of high importance.

In the Online Questionnaire, 71 people responded, with over 70% stating high (51) priority for pedestrian and bicycle linkages connecting Maplewood.

Expand Natural Parkland to Protect Environmentally Sensitive Areas

2. Low  1. Neutral  36. High
At the Community Workshop, most respondents thought expanding natural parkland was of high (35) importance.

2. Low  18. Neutral  49. High
In the Online Questionnaire, 69 people responded, of which over 70% gave high (49) priority to expanding natural parkland to protect environmentally sensitive areas.

Neighbourhood Park (e.g. playground, open grass areas, seating)

At the Community Workshop, all participants stated neighbourhood parks are of high (23) priority or were neutral (6).

1. Low  15. Neutral  55. High
In the Online Questionnaire, 71 people responded with over 75% giving high (55) priority to neighbourhood parks.
Central Plazas / Open Spaces

At the Community Workshop, over 2/3’s of participants think central plazas/open spaces are of high priority (25) compared to low (6) and neutral (3).

In the Online Questionnaire, nearly 50% of the 69 respondents thought central plazas/open spaces was of high (37) importance.

Community Gardens

At the Community Workshop, nearly 65% of participants found community gardens to be of high priority (22) compared to low (8) and neutral (4).

In the Online Questionnaire, 70 people responded with over 45% neutral (33) and over 40% high (29) priority for community gardens.

Indoor Community / Service Spaces

At the Community Workshop, more than 50%of respondents gave high priority (13) to indoor community/service spaces compared to low (4) and neutral (6), however fewer people responded to this category.

In the Online Questionnaire, 71 people responded with nearly 40% giving neutral (31) and high (29) priority to indoor community / service spaces.
SUMMARY OF THEMES & COMMENTS FOR PARKS & RECREATION

Overall, input on Parks and Recreation at both the Community Workshop and through the Online Questionnaire received high priority rating in all categories with a couple of exceptions.

Community Workshop
At the Community Workshop, all of the categories for parks and recreation received a high priority except community gardens (low), and while high priority was given to indoor community spaces fewer people weighed in. Regarding other themes, respondents expressed a lot of interest in trail linkages to connect Maplewood Village with surrounding neighbourhoods including better access to Maplewood Flats Conservation Area and Spirit Trail. There was also a large response in support of expanding natural parkland, maintaining the existing forest, and enhancing Seymour River Park to be more of a destination.

Online Questionnaire

All categories for parks and recreation received a high priority rating in the Online Questionnaire, with the exception of creating more indoor and outdoor community building spaces (neutral to high) and community gardens (neutral to high). While respondents supported these spaces, is was not rated as highly as a priority.

Respondents would like to see vastly improved trail options for walking, running and cycling that connect the urban with natural areas in the community. Many suggested improved infrastructure that supports active transportation, including wider sidewalks, separated bike lanes and increased road options for these modes of travel.

Several respondents also emphasized the need to make walking and biking easier. Places that were identified included:
• Between Dollarton and MSP on Riverside
• Dollarton to Ellis West to Maplewood
• Windridge extension to East Seymour
• Bike on East Riverside Drive
The Maplewood area has a number of existing businesses that provide important employment opportunities and economic benefits for the community and the region. A significant portion of the undeveloped area is currently designated for light industrial and commercial uses.

RESPONDENTS PRIORITIES FOR THE FUTURE:

Introducing Civic Uses (fleet, fire hall, etc.)

At the Community Workshop, over 50% of respondents thought introducing civic uses to the Maplewood area is of high (17) priority.

In the Online Questionnaire, 72 people responded, with nearly 50% giving neutral (35) and nearly 35% giving high (25) priority to introducing civic uses.

Creating More Industrial/Commercial Mixed Use areas

At the Community Workshop, more than 50% of respondents stated creating more industrial/commercial mixed use areas were of low (15) priority, compared to high (10) and neutral (2).

In the Online Questionnaire, 82 people responded with over 45% giving high (33) priority to creating more industrial/commercial mixed use areas.

Introducing Office Uses

At the Community Workshop, over 60% of respondents gave low (18) priority to introducing office uses.

In the Online Questionnaire, 82 people responded with nearly 40% giving neutral (27) priority to introducing office uses, followed by low (24) and high (21).
Infill and Intensification of the Current Industrial Area

<table>
<thead>
<tr>
<th>Priority</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Workshop</td>
<td>16</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Online Questionnaire</td>
<td>27</td>
<td>28</td>
<td>17</td>
</tr>
</tbody>
</table>

At the Community Workshop, nearly 60% of respondents stated infill of the industrial area is of low (16) priority compared to high (10) and neutral (2).

In the Online Questionnaire, 72 people responded, with nearly 40% of respondents giving neutral (28) and low (27) priority to infill and intensification of the current industrial area.

Additional Light Industrial Uses

<table>
<thead>
<tr>
<th>Priority</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Workshop</td>
<td>18</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Online Questionnaire</td>
<td>35</td>
<td>18</td>
<td>16</td>
</tr>
</tbody>
</table>

At the Community Workshop, over 70% of respondents gave low (18) priority for additional light industrial uses in Maplewood.

In the Online Questionnaire, 69 people responded with over 50% giving low (35) priority to additional light industrial uses.

Additional Business Park Uses

<table>
<thead>
<tr>
<th>Priority</th>
<th>Low</th>
<th>Neutral</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Workshop</td>
<td>25</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Online Questionnaire</td>
<td>37</td>
<td>26</td>
<td>8</td>
</tr>
</tbody>
</table>

At the Community Workshop, nearly 80% of respondents gave low (25) priority to additional business park uses compared to high (6) and neutral (1).

In the Online Questionnaire, 81 people responded of which over 50% gave low (37) priority to additional business park uses.
SUMMARY OF THEMES & COMMENTS FOR BUSINESS, INDUSTRY & CIVIC USES
Results from the Online Questionnaire mirrored that of the Community Workshop in terms of low or high priority, however neutral had the highest number of respondents for a lot of the subtopics for the Online Questionnaire.

Community Workshop
Respondents generally gave business and industry uses low priority for the Maplewood area, particularly the addition of more light industrial and business park uses. Although not in favour of expanding the industrial/business park areas, respondents were more neutral regarding introducing office uses, creating industrial/commercial mixed use and infilling the current industrial area. Respondents were in favour of introducing civic uses such as fire halls.

Online Questionnaire
Respondents provided the most comments opposed to building anymore business, industrial or office areas. There were several comments supporting intensification of existing industrial areas to increase local jobs while maintaining the existing forest. Additional comments suggested building local job capacity could alleviate traffic issues by increasing workability.
Making Maplewood Great

In addition to the topic boards, we also asked participants to give us their ideas about what would make Maplewood great. These interactive boards had a series of ideas displayed with pictures and text, which participants could support by placing a sticky dot next to idea or they could add ideas with sticky notes.

SUMMARY OF THEMES & COMMENTS

Community Workshop
To make Maplewood great, respondents (30) were most supportive of promoting safe pedestrian environments and road spaces that can be closed for vehicles for community events.

Habitat restoration projects also received a large amount of support (24), including tree planting, bird nesting boxes, wildlife rescue initiatives, and climate change campaigns. More than 20 respondents supported ideas encouraging sustainable local businesses, environmentally sensitive development and harvesting rainwater.

Participants expressed great interest in local food and gardening practices including community gardens, waste recovery, urban agriculture, land sharing, etc. There was also a relatively high interest (around 15 respondents) in environmental initiatives such as biomass-based energy systems using waste from Maplewood Farm, naturalized play and enhancing green spaces such as Maplewood Creek. There was some support in expanding outdoor educational opportunities by introducing raingardens, green roofs and community gardens.

In terms of transport, there was a lot of interest in providing parking under condo housing (19) and some interest (around 10 respondents) in car-share programs, bike share programs and woonerfs (shared streets).

Throughout the responses, there has been a lot of support to increase safety along Mount Seymour Parkway, however respondents have both supported and been against walls (planted or with murals) and suggested other options such as planting.

Online Questionnaire

What ideas presented above do you like?
Overall respondents reacted positively to ideas presented. In particular, any local project ideas or policies that featured enhanced green space, restoration or conservation of natural habitat and/or education and interpretation of this valuable asset was favoured strongly. Closely following, ideas that focused on enhancing the public realm and pedestrian friendly and social environment, including pedestrian safety along
Riverside Dr. and amenities such as, food trucks, functional art, rain gardens, etc. were strongly supported. Lastly, many respondents stressed the importance for ensuring new development in the area is required to include and support amenities and the long term sustainability of the community. This would include policies that required car share spaces, energy efficiency, underground parking, affordable housing, smaller retail or business units to support interesting and local business ideas (as opposed to chain stores and franchises) and public realm upgrades that improved the community.

Finally, what are your big ideas for what would make Maplewood a truly great community? In summary, respondents strongly outlined ideas that spoke to creating a ‘complete’ community focused prominently on active transportation (transit access, walking, biking, cycling), affordable housing and a good connected network of green/natural spaces that maintained the look and feel of a small, quiet, community village with quality amenities.

Specific ideas commonly noted included:
- Safety (especially on Windridge Rd., Riverside Rd., Old Dollarton and Dollarton Rd.) and pedestrian and bike focused with good access to transit service, including a pedestrian-only street or square or woonerf type road
- Affordable for families, including smaller ground oriented units, co-op housing, etc.
- Access to the waterfront
- Interpretive signage and educational information for and within the community (trail systems, along streams and in parks that demonstrate and highlight the community’s natural assets and encourage strong community stewardship)
- Good local services (grocery, bank, liquor store, yoga/gym, daycare, etc.) and to co-locate services with synergies or community benefit (such as daycare with senior’s homes and school site)
- Increase social spaces (community gardens, park gathering picnic areas, children’s play areas, exercise parks, etc.)

Any other comments, ideas, or opportunities?
Respondents had a variety of ideas and opportunities to share, these included:
- Cherry trees between Riverside and Seymour River on Mount Seymour Parkway
- Community amenity contributions from developers for specific projects in the community
- No high rises anywhere
- High rises for properties too small to build larger units
- SkyTrain or a sea bus to Maplewood Flats connecting with downtown and west Vancouver (Dundrave)
- Public access and safe pedestrian routes to Maplewood Flats, Seymour River and Burrard Inlet

In addition, several respondents noted concerns or special requests with the project process and project work, these included:
- One respondent was unaware of ongoing outreach methods for the project except
signage in the community. They felt signage for events in the community was most important and needed to come first and well in advance of other outreach to ensure good participation.

• One respondent indicated a freedom of information request will be needed to review the survey (a copy of verbatim survey comments is provided in Appendix x).
• One respondent indicated a microphone at the next meeting would be helpful to ensure better communication.
• One respondent felt it was very important to design the community for cars first. It was felt that designing for cars and flow of traffic would solve the current traffic congestion problems after which, the District could look at how the community can work for people living there and adding residents to the community.
• It was noted that some residents along Riverside Dr. would like to work with the District more directly with the intent to discuss the potential benefits of higher density for their lots and how this might benefit themselves and the future community.
COMMENT FORMS

SUMMARY OF THEMES & COMMENTS

Seven comment feedback forms were provided by workshop attendees.

Comments ranged from maintaining and enhancing the existing forest in Maplewood, the need for affordable housing, increasing active transit with improved trails, sidewalks and bike routes. Some respondents were concerned with public safety in regards to the speed of traffic on roads such as Mt. Seymour Parkway, and others expressed a desire for multifamily zoning where the OCP indicates single family.

Verbatim comments have been provided in the Appendix.
COMMUNITY MAPPING

Participants gathered around two Community Mapping Stations. Here they worked with a facilitator or independently to map out and identify opportunities, ideas and other concerns.

This exercise generated a lot of interest and ideas. Participants commented on a wide variety of topics, including what they love, problems they have experienced, and opportunities that they have identified.

The illustrated diagram on the following page summarizes what we heard during this exercise. A verbatim record of notes has also been included in the appendix.
Maplewood Village Centre Community Mapping

- Safety improvements under bridge i.e. lighting
- Expand Maplewood Farm & potential site
- Clarity on density allowed
- Community gardens
- Heal the forest, remove invasives
- Respond to Park Royal Development
- Urban wildlife - coyotes
- Trout spawning & fishing area
- Redevelop

- Would love a pedestrian bridge
- Safe pedestrian crossings
- 24 hour left turn light
- Need bicycle connections
- Bridge cycle lane
- Connect cyclists & pedestrians to the waterfront

- Boulevard Trees & Speed Control
- Create a living wall
- Create a Woonerf/greenway/or 1 way street
- Sidewalks, crossings & bike lane
- Zone multi-family/transitional

- Maplewood Flats special habitat
- Maplewood Flat
- Great coffee shop

- Community evacuation and safety training for what to do in an emergency, and safety reports posted in easy to find on-line location

Other Ideas (no specific location):
- Grow with a Vision
- Children’s programming - outdoor theatre, community centre
- Better transit and traffic flow
- Village like shopping Centre
- Peace and quiet
- Affordable housing
- Maintained tree canopy & greenspace
- Inclusive Community

2 views: make the school public / keep it private and add a public school
Better lighting & signage about community care
School pick-up w/ staff parking in the rear
Safety improvements under bridge i.e. lighting
Expand Maplewood Farm & potential site
Community gardens
Clarity on density allowed
Maplewood Farm is a community heart
Heal the forest, remove invasives
Respond to Park Royal Development
Urban wildlife - coyotes
Trout spawning & fishing area
Redevelop

Clarity on boundaries and adjacent homes
Consider locating Berkley Rd extension west, closer to development
2 Views: do not develop at all / locate density here to preserve the rest
Clarify ownership of this site
Clarity on OCP designation for Area 2 - Industrial or Park?
Do not put Berkley Road extension through here
Keep the trails & mark them to make them more inviting
Would love a natural public swimming pool tucked into the forest
Bike lanes needed
Sidewalks needed
Create habitat connections & wildlife corridors

2 Views: do not develop at all / locate density here to preserve the rest
Clarify OCP designation for Area 2 - Industrial or Park?
maplewood place

Sold Out

maplewoodnorthvan.com

THANK YOU!

Anthem Properties
Part of Anthem's Neighbourhood Series

604.971.5030
MAPEWOOD STAKEHOLDER ENGAGEMENT

A series of stakeholder consultations were held in May, June and early July including in-person, group and telephone interviews. An invitation to participate was sent and feedback was gathered from various government agencies, First Nations, businesses, developers, social and community service providers, community associations, Vancouver Coastal Health, BC Housing, adjacent industries, environmental groups, representatives from Parks and Natural Environment Committee (PNEAC), Transportation Consultation Committee (TCC), Advisory Committee on Disability Issues (ACDI), North Shore Mountain Biking Association (NSMBA) and HUB.

STAKEHOLDER WORKSHOP
The Stakeholder Workshop was held on June 29, 2016, at District Hall, Committee Room. The objective of the workshop was to provide an opportunity for stakeholders and/or stakeholder group representatives to identify issues, opportunities and directions related to the Maplewood Planning process. Information received provided focus areas for further exploration in Phase 2 of design charrette.

ATTENDANCE
Stakeholders were sent an invitation by email and then received a follow up phone call to confirm their participation and intent to attend.

In total the following 11 stakeholders attended the workshop, 4 sent their regrets and were provided with an opportunity to follow up via phone call, where interested.

- North Vancouver Arts Council
- Maplewood Farm
- Advisory Committee on Disability Issues (ACDI)
- Parks and Natural Environment Committee (PNEAC)
- Wild Bird Trust
- Save our Shores
- North Shore Biking Association (NSMBA)
- Transportation Consultation Committee (TCC) and HUB
- North Shore Stream Keepers
- Parkgate Community Services Society
- North Shore Black Bear Society & Nature Vancouver
- Advisory Committee on Disability Issues (ACDI)
- North Shore Mountain Biking Association (NSMBA)
- HUB Cycling

The following is a summary of feedback from this workshop. Feedback was received through general discussion, a comment form, and through letters that were submitted and received. Input is organized by topic area (as in the community workshop). A more
TRANSPORTATION

Stakeholders emphasized an interest and support for active transportation within their community and to have a “walkable centre”. This includes easy access and connections within and to, outside destinations, other network centres, and local destinations. It was suggested that routes within Maplewood require improvement to ensure they are safe and accessible, with good transit and legitimate options for cyclists. With this, it was acknowledged that people continue to use their cars commuting in/out of the community and others will come from outside the community and region to visit key destinations and therefore, cars and parking should also remain a strong consideration for planning in the community. Specific comments suggested connecting a good on/off street walkable trail system within the community and connectivity between town and village centres or primary outside destinations should be a key focus for planning.

HOUSING

Stakeholders conveyed a strong focus on maintaining affordable housing and rental units, but also affordable market units for new and existing residents, in particular, younger residents, seniors and people with disabilities. Specific comments expressed a concern that people, in particular, younger people are leaving the community and that existing affordable housing will be lost with new development if this is not a primary consideration in the process.

SHOPS & COMMUNITY SERVICES, BUSINESS, INDUSTRY & CIVIC USES

Stakeholders expressed a strong interest in expanding community-based services and programming. In particular, a consistent theme was to explore where new development could incorporate flexible community spaces to address an identified lack of meeting space and options for programming spaces within the community. In addition, existing community service providers are looking for a permanent long term location to deliver and expand on their current services offered in the community and ideally located in the village centre.

Stakeholders also indicated additional retail and other services are required in the community. In particular, there is an interest in catering to smaller, more locally owned
shops and services within the community.

**SUSTAINABILITY**
Stakeholders indicated support for design that facilitates sustainable actions, for example, requirements for development to have a place for composting, recycling, etc.

**LANDSCAPE & ENVIRONMENT**
Many stakeholders indicated environment and natural habitat is highly important to the community, existing wildlife, health and its character. Conservation and enhancement of wetlands and watercourses was a key interest.

Specific comments included a suggestion that all mapping for the planning process show confirmed environmental features. It was also noted the District should revisit the concept of directing stormwater to feed the Park St. marsh in Maplewood Flats. In addition, several stakeholders mentioned ensuring protection from natural hazards, in particular, flooding and earthquakes and how this might be considered with future development.

**PARKS AND RECREATION**
There exists a strong interest in providing good and accessible trail connections and a connected trail network. Specific comments outlined the need to provide “opportunities for local residents to walk to local businesses and engage with each other”. In addition, stakeholders expressed an interest to expand on the idea of parks and what is offered in park spaces, an example provided was to include a seasonal campground.

**URBAN DESIGN AND PUBLIC REALM**
Comments regarding public realm and urban design were varied. One stakeholder indicated that weather protection for the village area shops and services is a priority for design. Another stakeholder suggested that the community should be provided with spaces and opportunities for their ideas to be implemented, thereby, allowing the community to define its own personality and character. It was also expressed that the type of development in Maplewood should explore new design options and forms with the intent to preserve and build with the environment and greenspace (smaller road widths, larger set-backs from watercourses, integrating wetlands, maintaining and developing around significant tree areas).
Comment sheets provided from the stakeholder meeting are included in Appendix A.

**STAKEHOLDER PHONE INTERVIEWS**

Invitations to provide input and follow up phone interviews (where an invitation was accepted) were conducted with key stakeholders and representatives from the following groups:

- Various government agencies
- First Nations
- Businesses, developers, and landowners
- Social and community service providers
- Senior Government.

Stakeholders were sent an email with background information on the Maplewood Planning Process and a meeting request. The objective of the meetings was to introduce the project work, and answer questions as well as gain input on:

- key interests in the plan and planning process
- to identify a continued contact for the project work
- to identify whether the stakeholder has an interest in participating in the design charrette

**ATTENDANCE**

In total, 15 stakeholder phone interviews were completed. Several provided comments via email, or referred to an alternative representative as the primary contact for the work and 9 stakeholders either declined or did not respond to the email or follow up call.

A summary of input is provided below.

**TRANSPORTATION**

Stakeholders expressed a specific interest in maintaining continued connections with the Marine - Main Frequent Transit Corridor Study, providing good access and future route improvements to business and light industrial south of Dollarton Hwy given land use changes and additional development will increase the population of the community in the future. In addition, one stakeholder indicated they would hold on key decisions pending the outcome of the concept.

**HOUSING AND LAND USE**

There exists a strong interest by most stakeholders for what changes in land use will occur in the community, primarily east of Riverside Dr. Several stakeholders expressed an interest in District owned properties, and expressed the desire to review current
and in progress technical studies. Whether District-owned lands would be available for purchase and/or development in the future was raised as a question.

Several stakeholders outlined specific issues and suggested changes with respect to current land use designations as outlined in the OCP for specific properties. In summary, a higher density was desired for most of these properties or modifications to public right of way to ensure property owners had the incentive, conditions and opportunity to redevelop their properties.

BC Housing outlined their interest in affordable housing and indicated a willingness to provide additional resources, support and information, including precedent projects, financing programs, outline of partnership opportunities, etc. for the project work throughout the planning process.

SHOPS & COMMUNITY SERVICES
Stakeholders recognized a need for additional amenities and services in the Maplewood area. However, a number of stakeholders indicated this would and has already been addressed, with exception of community programming and spaces for community groups. Several stakeholders were aware of ongoing discussions with developers regarding the need and provision of additional flexible and permanent community spaces will and should be required as part of new developments within the community.

BUSINESS, INDUSTRY & CIVIC USES
Stakeholders expressed support for current business and industry in the area. One expressed significant support for reviewing intensification south of Dollarton Hwy and the need to look at how the area can support and continue to encourage this component in the community.

SUSTAINABILITY
Most stakeholders felt sustainability should and would be a part of future development in the area as per District goals and policy.

LANDSCAPE & ENVIRONMENT
There was a strong interest for current technical studies to be publicly available for review and to provide additional certainty and clarity on the potential for development in this area.

PARKS AND RECREATION
A number of stakeholders acknowledged a need for further consideration regarding amenities including parks and recreation for the future population.
Invasive plant species are one of the greatest threats to our local ecosystems. The District of North Vancouver is obligated under Provincial legislation to manage invasive species on its public land.

**Japanese Knotweed**
Recognized worldwide as one of the worst invasive species, this plant grows and spreads very rapidly, will push out all native plants, damage creekside ecosystems and parks infrastructure.

**Giant Hogweed**
This plant is a public health concern. If touched, the sap causes skin blisters, long-lasting scars and can cause blindness if it gets in your eyes.

These plants cannot be completely eradicated by only cutting or digging. Stem injection or herbicide is necessary.

Work by provincially certified crews will take place from June to September. The herbicides must be applied during the growing season to be effective. Herbicides used are certified by both the Province of BC and the Government of Canada. Look for signs posted at the application sites for specific details on each application.

For more information please visit dnv.org/invasives
or call DNV Parks at 604-980-3800.
URBAN DESIGN AND PUBLIC REALM
There was an expressed interest and theme that Maplewood presented a great opportunity to explore new forms of housing and design elements. Many stakeholders commented on a need for high quality design and with this, additional intensification for business and residential in the area.

All direct notes from stakeholder calls are included in Appendix A.
PHASE 1 - FOCUS AREAS FOR PHASE 2

OVERVIEW

The input received from community and stakeholders in Phase 1 of the planning process provides key focus areas for Phase 2 concept development. The following list includes key themes heard within the community, from organizations active in the community and stakeholders with investment or jurisdiction in the community.

Of the eight themes, the four topics that were most important were: 1) transportation, 2) housing and land use, 3) landscape and environment, and 4) urban design and public realm.

LIST OF FOCUS AREAS WITHIN EACH THEME

TRANSPORTATION

- Active transportation
- Trail connections
- Pedestrian safety and accessibility
- Vehicle circulation and access

HOUSING & LAND USE

- Affordable & rental housing
- Diversity of housing types to ensure housing for people with a range of socio-economic needs
- Accessibility for housing
- Availability of additional lands for residential in the area and changes to residential land use designations or shifts to residential land use

SHOPS & COMMUNITY SERVICES

- Options for new permanent space/locations for existing community based services to continue and expand services and additional multi-purpose, flexible community space for new services and programs to be added to the community
- Encourage smaller, local owned business service or retail opportunities in the area

BUSINESS, INDUSTRY & CIVIC USES

- Maintain and intensify existing areas/uses
- Allow for additional, appropriate new uses
SUSTAINABILITY

- Explore community resilience - in particular, climate change/flooding and energy efficiency
- Policy and guidelines that support sustainability

LANDSCAPE & ENVIRONMENT

- Conservation of key environmentally sensitive areas (wetlands, watercourses and habitat)
- Rehabilitation and improvement of other existing environmental features and systems
- Design and development that integrates and considers green space, environment and landscape

PARKS & RECREATION

- Additional park space and community amenities needed

URBAN DESIGN & PUBLIC REALM

- Quality design for the village centre and new development
- Green elements, look and feel
- Unique character and design elements
- Cohesive and connected public realm

While design development will not be limited to this list, focus areas are considered what's most important to the community and stakeholders and will be used to structure design targets and guide directions within the Phase 2 design charrette and concept development.
Community Mapping
CURRENT CONTEXT

- Rethink the placement of the Berkley Road Extension
- Wrong place for the Berkley Road extension
- Bird sanctuary, animal pathway, “Hope for Wildlife” location
- Maplewood flats are to the East of the “Maplewood” Boundary, shouldn’t it be included?

WHERE DO YOU LIVE?

‘Use a sticky dot to show where you live!’

If you live outside the area shown, please put a sticker in this box and write down your neighbourhood.
- Browning Pl.
- East Van x 2
- Lynn Valley +1
- Riverbank
- Park Royal
- Richmond
- Vancouver
- *These boundaries are not the same as previously
- How are Lynnmour Maplewood Blueridge ‘connected’?
- Need E-W Connector alternate & connection to Belcarra
- Need upper E-W connector to alternate connect to Lynn Valley
Lorsodin, Future connector to Belcarra was scheduled for 2015 in 1999
The character and identity of a place is important to its community look and feel. Consider the character and identity of Maplewood today and what makes it special.

What is one word that captures or describes the ‘spirit’ of Maplewood?
- Nature
- Natural
- Natural
- Traffic
- Potential traffic nightmare
- Laid-back
- Preserve Heritage area and Bird Sanctuaries. Limit dog access to areas not used by ‘wildlife’ + hikers
- “eco-reservoir” – a green area that contributes natural benefits (so preserve it)
- Nature
- Awakening
- Unaffordable
- Affordability
- Forestry
- Nature
- Create better connections or foot to “nearby destinations and amenities”
- Perfect for retreat celebrations, child-animal connection
- Sufficient human: naturally fragile environment already. Yes!!
- Traffic
- Original natural
- This area has been a “slum”. Time to Revitalize + Renew! European Plan!
- Disconnected – beautiful natural environment
- Adequately densed neighbourhood already:
- Awakening
- Underutilized natural spaces (river, trails, park space) Much room for improvement!
- Save nature, the birds, active transport.
- Character
- Without a “heart”
- Natural green
- Integrated Community
- Mixed-use
- The River must be central to the community
- Loved European concept (1)
- Becoming too dense without sufficient infrastructure planning!! (1!)
- Safe walking areas – need sidewalk on riverside!
- The River
TRANSPORTATION

Other comments, ideas or opportunities:

- Sidewalk along Dollarton, east of bird sanctuary – dangerous curve! (2)
- Redo riverside (Parkway > Dollarton). Sidewalks/bike lanes/safe! (2)
- Need better transport infrastructure transit across North Shore
- Dollarton sidewalk (2)
- Major safety concerns at Old Dollarton Road and Seymour River Place > Pedestrian controlled crosswalks and slower local traffic
- Strong focus on active transportation both cycling and walking, the area is flat and lends itself to walking and cycling
- Not the right place for the Berkley Road extension!!
- Consider bridge traffic. We need to prevent serious congestion.
- SkyTrain
- Need an alternative north-south route (Parkway > Dollarton). Berkley?
- Linked road from kaks park to north Burnaby
- No sidewalk from Mt. Seymour Parkway to Old Dollarton Highway – Extremely dangerous. Bike-traffic-pedestrians both sides (2)
- Forester + Dollarton roundabout to relieve traffic trains
- Consider congestion with bridge on/off before adding more density!
- Improved infrastructure across North Van, particularly bridge and highway access. Do not want to support housing development until traffic issues are resolved.
- Sidewalk need significant attention > especially on Riverside + along Dollarton Highway by the mudflats + connecting to the Cove
- Get up to date traffic data, the info in the current study is way out of date!
- Riverside Drive is unsafe for people waiting for transit no proper pullouts | Riverside Drive | School. Proper curbed road along Riverside Drive | Riverside Drive | School.
- We would not need to get in our cars if we had services at proximity
- As you can see. Almost everyone is driving…. That is not good at all because the public transit is not well planned. Need better transport.
- We need sidewalk on Riverside Drive
- Why not a ‘fly over’ on little bridge north to Keith or a 3rd lane to go up Mtn Hy
- No sidewalks! + needs safe bike lane on riverside Drive Parkway and Dollarton
- Riverside Drive is unsafe for kids using school grounds for after school events (eg. soccer) no space for passengers to get out/in of vehicles – just a matter of time before some is hurt
HOUSING

Other comments, ideas or opportunities:

- No more housing on Seymour River Place – No entry/exit if emergency on Old Dollarton. (3)
- Keep affordable housing, which equates to more rental units, which embrace family living including pets
- More thoughtful connection between “types” of housing > currently seems haphazard in relation to new developments + existing homes (2)
- Affordable housing (1)
- If we are to retain natural spaces and must still hit 1,500 housing units then we must go for higher density!
- Not supportive of any high density housing until traffic/bridge issues addressed.
- We need more housing for seniors – people who don’t want to leave the area but don’t need the big house. Seniors need housing on one level, with outdoor space, or walking distance to grocery store + bus stop
- Need to think about needs of seniors (1)
- (Townhouse/Rowhouse): Yes please for Windridge
- (Affordable & rental housing): And available. New units are “rented” before the displaced locals can rent.
- (Apartment): No high structures

SHOPS & COMMUNITY SERVICES

Other comments, ideas or opportunities:

- A good ladies only gym workout centre please!!!
- Need to think about needs of seniors
- Pub/restaurant (3)
- We need space to meet & build community together
- Local serving businesses! Community spaces!
- Re-opening neighbourhood school – creating a “neighbourhood school” with library + gym to be shared use with community (2)
- Sushi restaurant (1)
- Encourage restaurant with outdoor patios
- Create some vibrancy. Get people out of their houses
URBAN DESIGN & PUBLIC REALM

Other comments, ideas or opportunities:

- Sidewalks on Riverside (2)
- Green belts with pathways between areas of development (2)
- Somewhere for open air summer concerts/art shows. A speaker’s podium (think speakers corner as in Hyde Park London!)
- Sidewalks towards Ellis
- Open spaces public areas!!!
- Houses in Maplewood should be sustainable. Bring a positive impact to the environment, not damage it.
- Discourage townhouse developments designed like the Seymour River Place development by Anthem. Looks like army barracks
- Last “public art” display at heritage park was vandalized by people drinking at river bonfires. Sign burned as firewood at our park!! (1)
- Waste of funds

SUSTAINABILITY

Other comments, ideas or opportunities:

- Green buildings
- Public assembly. Association meeting place. Churches
- Lets collect/re-use our greywater!
- Need to integrate “living” for seniors
- Need an influx of young people
- WildFowl, wetlands, mudflats conserve [sic]. Establish + /or maintain a Buffer zone around them – use port lands for this – Enhance port lands as designated trails, gardens
- All new developments should all require sustainable sources!
- Every structure should require solar panels on the roof
- It should be illegal to use clothes dryers on sunny days – clothes lines!
- Create a strong community so our parks don’t get trashed? Fish “fished” illegally!
LANDSCAPE & ENVIRONMENT

Other comments, ideas or opportunities:

- Port Lands to be retained as green space = buffer zone for wetlands/mudflats of waterfowl area
- Escarpment
- Separation from roads with trees and greenery please (1)
- The ‘big’ trees are important! Although new trees are being planted to replace the ones already taken, it will be too long before they are again!
- Protect and restore heritage park first, then consider more density!
- Don’t put a wall on Mount Seymour parkway – Put trees!! (2)
- Continue the Seymour greenway to the waterfront
- No Berkley connector through forest
- For heavens sakes – Leave “Windridge Park” alone! And Maplewood Flats – one of the only areas left on the waterfront for wildlife conservation and enjoyed by many!!
- Protection of environment from invasive species – knotweed, English ivy
- * Protection of existing tree stock from invasive species – esp. English ivy
- Reptarian Zones Very Important!!!
- Keep wetlands + watercourses – as is. But increase trails + pedestrian/bikeways to existing parks. Increase trails in treed areas
- Lets turn forested lots into protected areas!

PARKS AND RECREATION

Other comments, ideas or opportunities:

- Improve trail access from Seymour Bridge (3)
- (pointing to trail north side of Mt. Seymour Parkway, east of bridge) Why no dogs on this part of the trail only (4)
- The Maplewood mudflats aren’t included in the designated area and should have safe walking access
- Encourage community gardening
- More green space old growth – leave alone!!! (6)
- Safe, accessible trails to get to Maplewood conservation area (2)
- Dollarton Highway Sidewalk (4)
- Maintain heritage park; more people means more illegal alcohol & bonfires; high fire risk to us!
- A continuation of Dollarton Sidewalk from the 2700 block to connect to existing sidewalk (1)
- Beautiful trees between directions on Mount Seymour Parkway (1)
- Need to think about needs of seniors
- Trails that connect to he existing spirit trail (1)
- A hierarchy
- Pub/restaurant (3)
- Public assembly, organizations, churches (2)
- The “park” behind Maplewood Farm could be a destination for the neighbourhood > with thoughtful + improved trails, benches, garbage, etc. > It could be great! (1)
- Set up green corridors between parks!
- Establish parking options, support facilities, *controls and cost recovery*
for ‘day trippers, local tourists, hikers + bikers who are inundating the area to ‘use’ the north shore

BUSINESS, INDUSTRY & CIVIC USES

Other comments, ideas or opportunities:

- Industrial areas need plants to make up for pollution + cement
- Create jobs! (2)
- Need to address needs of seniors
- Create incentives for locals to occupy big park use? Otherwise there seems to already be enough empty lots (1)
- New Rec Center

MAKING MAPLEWOOD GREAT

Other comments, ideas or opportunities:

> Provide safe pedestrian environments and road spaces that can be closed to vehicles for community events (30)
> Habitat restoration projects, tree planting programs, bird nesting boxes, wildlife rescue initiatives, climate change campaigns (24)
> Encourage sustainable local businesses (23)
> Encourage low impact, environmentally sensitive development (22)
> Celebrate and harvest rainwater to connect people to the natural environment (21)
> Provide parking underneath condo housing (19)
> Community gardens, group buying clubs, food waste recovery, urban agriculture projects, edible landscapes, land sharing (17)
> Playground equipment, green space improvements (16)
> Explore biomass-based energy system using waste from Maplewood Farm (15)
> Maplewood Brewery (14)
> Maplewood car-share program (13)
> Restore and enhance Maplewood Creek (13)
> Encourage public art projects, sculpture gardens, gallery spaces (12)
> Provide innovative opportunities for local business (e.g. live-work town houses) (10)
> Art inspired bike racks outside of all the stores and in key public places in Maplewood (10)
Bike share program (9)
- (directed to bike share program) Make it safe for bikes first
> Woonerfs (share streets) (8)
- (directed to woonerfs) would love to see this in actuality!
> Ocean-loop based geoexchange system, Biomass-based energy system using waste from Maplewood Farm (petting zoo) (8)
> Encourage ‘cool the school’ retrofits to create a multi-functional learning and play space on the roof (7)
> Raingardens for ecology and education at the school (7)
> Living walls (6)
> Community events, educational displays, environmental campaigns, social justice campaigns, community courses (5)
> Educational opportunities at the farm - community gardens at the school, or adjacent to the school (4)
> Seasonal food-truck parklets within the business area (4)
> Community interaction initiatives, “happy city” projects (4)
> Some of the blank walls are needed to protect from traffic, noise, these could be painted community murals (2)
> Please! No murals (2)
> We need a community square. Nice fountain (1)
> Harvest rainwater! (1)
> Something to encourage collection of grey water > used shower/laundry water
> I’d love to see our greywater collected and recycled
> A living wall or some sort of attractive barrier between Mount Seymour Parkway and Heritage Park Lane. It’s not safe right now as it is > anyone could easily swerve onto the sidewalk...
> Please no walls – trees instead! + traffic calming
> Save Nature. Add infrastructure
> Community garden! In a more favourable location
> Kenneth Gordon is a valuable resource to have on the North Shore, however, with the growing community in Maplewood, could we somehow also have a public school, or find another nearby location for Kenneth Gordon?
> Keep green spaces – add trees –add more trails
> Keep the majority of unused green spaces as park (that can actually be used). Change existing housing to meet higher density needs
> Consider that all “development” including loss of existing green space must be carbon neutral. Also, > Talking about “no net negative environmental impact” for the overall community development. A management framework should be established/required for this
> Lead by Example. Create natural sustainable environment. Spawning grounds, Maplewood Farms, etc.
> Exterior Movie Theatre. Safe place for kids to play and walk. Outdoor Concert area for summer time. Similar to Ambleside & Central Lonsdale.
> Give the neighbourhood a European feel. Make it a shopping centre equivalent to Park Royal or Lonsdale Queue.
> Address Air Quality. Make the
chemical plants responsible for containing their pollution.
> Slow down traffic on Old Dollarton Please! There have been several near fatal accidents in a short period of time. Suggest making Old Dollarton pedestrian friendly. Give it a boulevard feel - Attractive.
> Maplewood should be a people oriented community. People should be able to walk to different areas (easy walkways not narrow pavements) and reduce need of car use & traffic.
- Please have a microphone at the next meeting. We weren’t able to hear anything despite all the good intensions.
> Please address the issue of commercial waste. Apparently we are not allowed to throw our garbage anywhere. Right now we are throwing it at the neighbours at nighttime. Help!
> Consider all building with at least LEED Silver design standards. Make this a Green neighbourhood
- Would you consider hiring engineers that already live and work in the area for any of your projects here?
> Natural playgrounds areas that are built into natural environment. ie. Hastings track + Queenston Park in Poco!
### TABLE A

**GREENSPACES, HABITAT AND ACCESS TO NATURE**

- Keep all current green spaces for the abundance of wildlife (3)
- Trees! (Refers to the boulevard trees along Mount Seymour Parkway).
- Living wall (3) – (refers to Mount Seymour Parkway, just north of Heritage Park Lane)
- Like: connections trail system to external destinations
- There is trout breeding here, urban wildlife, coyote
- Like: natural setting
- Wildlife corridors between green spaces
- Very special conservation area (Maplewood flats)
- Connect to waterfront greenways (draws connection between Seymour River Park down Amherst Ave beyond)
- Connection to waterfront (refers to the east shore of Seymour River adjacent to the business lands)
- Consider foot bridge connect trails (draws a bridge between the south area of Seymour River Park behind the townhouses across the river)
- Please keep trails! They are why I moved here!! Please mark them! (not inviting)

**NEIGHBOURHOOD BOUNDARIES**

- Why is this property not included? Please review the boundaries (referring to triangle shaped single family home adjacent to the north boundary, just south of Mount Seymour Parkway).

**PROGRAMMING**

- Consider kid friendly spaces in the Village, programming, outdoor theatre, community centre.
- Maintain school, Maplewood farm, or schools nearby (2)
- Ensure if population increase do we need a site for public school (keeping Maplewood as private)

**LAND USE**

- Settle on density possibility of these lots – multifamily? Laneway? Duplex? (refers to the lots west of Seymour River Place, and adjacent to Maplewood Farm).
- Could this be designated ‘transition MF’ as the neighbouring properties? (referring to the identified single family homes in the OCP land use map, just north of Maplewood Park.)
- This is the area for development intensity – but maintaining greenspace and quality (referring to Maplewood Park).
- How many units? High density? Walk?
TRANSPORTATION

• Key cycling commuter route (points to Dollarton Highway between the Seymour River and Old Dollarton Road)
• Sidewalk Seymour River Pl only one side and ends halfway (points to west side, section between Front Street and just North of Munster Ave)
• Greenways not cars (4) – (pointing to Windridge Drive north of the school)
• Pedestrian safety, no sidewalk, no crosswalk (kids, school) (referring to Riverside Drive adjacent to the school site).
• Transportation (bus)?, school ?, park ? for Riverside Dr. [sic]
• Difficult to walk to Maplewood from here safely with stroller (ref. to traveling west on Dollarton Hwy)
• We need sidewalks to connect Maplewood “Town Centre” with the existing community o the east along Dollarton Highway. It’s dangerous!
• Focus for infrastructure on active transportation cycling, walking within community not just out
• Bus – slow, car – slow, cycle – seasonal: need a plan for entire district. Transportation not keeping pace with development.

TRAFFIC

• Left hand turns are currently part-time, make it permanent (refers to the intersections of Dollarton Highway at Old Dollarton Road and Riverside Drive).
• No emergency route, this entrance gets clogged up – it’s the only entrance (refers to the intersection of Dollarton Highway at Old Dollarton Road, and Old Dollarton Rd at Seymour River Place).
• No new development until traffic is fixed.
• Speed control on Mount Seymour Parkway (Expressway). Traffic moves 70-80 km/hr currently making existing bike lane unsafe. Cycling.
• No more development, traffic a mess.
• If there's a major road through it will have huge impacts to the park – consider other options. Alignment to the west closer to development? (Referring to Berkley Road extension)
• Used as parking/loading, pick up (referring to Riverside Drive between Maplewood Park and the School).
• Pull through at school, (pick up) staff parking around back.
• Heavy Industry
• Consider air quality, contaminants (industry held responsible)
OTHER

A friendly inclusive community
- To the District – Please remember that the “loud” voices do not speak for the global community – they only speak for themselves. Thx.
- Under the bridge – dark, safety, lighting (referring to Mount Seymour Parkway)
- There is some peace and quiet
- Maplewood area key issues: traffic, housing density and location, affordable housing, infrastructure

TABLE B
GREENSPACES, HABITAT AND ACCESS TO NATURE
- Keep the forest, it is new! (refers to area where Berkley extension is planned for)
- Do not develop this (refers to area where Berkley extension is planned for)
- Our idea of a park is what we have now? Your idea of a park is 1 tree with a clump of grass surrounded by a concrete jungle. 2 cultures crashing!
- Keep all greenspaces for abundance of wildlife (refers to Area 2)
- Keep all greenspaces for abundance of wildlife (refers to Hogan’s Pools Park)
- Very sick forest (refers to forest around Maplewood farm)
- Forest protection / restoration (refers to forest around Maplewood Farm)
- Cool forest, cool forest like how green it is and pretty!! <3<3<3*
- Cool! When I grow <3 up I * want to live * near a forest even if it costs a lot of ___ money! Rihanna
- Everyone’s secret fishing spot – that’s illegal right now (refers to east shore of Seymour River adjacent to Seymour River Park)
- Keep all greenspaces for abundance of wildlife
- Trail (refers to Maplewood Park)

PROGRAMMING
- Create a “natural pool” open to the public for swimming (points to green area where Berkley Road extension is planned for)
- Reopen Maplewood Public School
- Can we have more community gardens/boxes at Maplewood/the corner of where the farm is, please.

LAND USE
- Do not develop Area #2: North Van is unique because of wildlife.
- Rezone for multi-residential (refers to single family homes north of Windridge Drive).
- Clarity on uses and future zoning (refers to housing lots adjacent to Maplewood Farm)
- Expand Maplewood Farm (points to the lots that are ‘cut out’ in the North East corner)
- Redevelop residential (refers to single family lots on East side of Seymour River Pl with apartments on
either side)
• Density needed to support local businesses and housing affordability
• In developing south side of Old Dollarton Road, consider maintaining current building height
• Rezone Maplewood Public School

TRANSPORTATION

• Sidewalk along Dollarton, with room for strollers (8) – (refers to North side for the extent east adjacent to Maplewood Flats to Old Dollarton Road).
• Sidewalk to Ellis!
• Windridge drive common bike route, please add a bike lane and make it safe
• * Sidewalks * on Riverside Drive, Mount Seymour Parkway, to Old Dollarton Highway (5)
• No sidewalks along Riverside Drive – more pedestrian friendly, safe crossing for school.
• Also add safe bike lane.
• Very poor walkway to Phibbs x-change (refers to West side of Dollarton Highway Bridge where the road splits for an off ramp)
• Bike bridge across Seymour River to Barrow (refers to rail bridge)
• Connect bike routes in this community and make them safe
• Blind corner, very dangerous for pedestrians!!! (points to Riverside Drive at Old Dollarton Road)
• Bike lane here (connector) to Old Dollarton from Deep Cove

TRAFFIC

• Speed control, safe crossings (Dollarton Highway, adjacent to Maplewood Flats)
• Ecology – no road (4) (refers to area where Berkley extension is planned for)
• 1 way Woonerf (refers to Windridge Drive adjacent to school)
• Move safe car park to back of school, make front car park a pull through for parents to pick up. Then parents can turn left to exit Seymour Park Place and there is no need for another road!
• Traffic – redevelopment conditional on improved intersections and traffic flow (refers to intersections: Dollarton Highway and Old Dollarton Rd, Old Dollarton Road at Seymour River Place, and at Riverside Drive)
• Extend left hand turn light (refers to Dollarton Highway at Old Dollarton Road)
• Area of concern: newly built west Maplewood Village – when traveling East on Dollarton Hwy and turning left (East) onto Old Dollarton Road. New road suddenly narrows, this exposes cyclists to potential injury/____.
• Very concerned about traffic
• Roundabout (points to Dollarton Highway at Forester street)
HEAVY INDUSTRY

- Better safety transparency, public reporting on accessible media – ie, facebook, clarity on what horns mean.
- Please educate new and old resident what to do if the chemical factory “nexes” malfunctions. Evacuation plan? Give out masks.

OTHER

- OCP contradicts Land Use / open ended – park or industry in Area 2?
- Clarity on property ownership – Port, Federal, District (3) – (refers to area between Village Centre Boundary and the old school site)
- Why the property 2207 Windridge not included? Would like to be included!
- How were the boundaries determined? (refers to single family homes North of Seymour Parkway)
- More sidewalks, more lighting, (Seymour River Place) more signs up about caring for the community like no litter, pick up after your dog etc.
- No development without fixing ecology
- Community amenities funding remains in the neighbourhood ie. Fund farm expansion
- Coordinate with Park Royal Development
- Park Royal Village like shopping area where superstore / driving range is
- Public school (points to existing school)
- Nice coffee shop (points to Forest Street, at neighbourhood southern boundary edge)
- Flood management
- When one creates growth, vision must apply (“what will make this area great”) using its resources to make it a destination that attracts people and grows the economy.
Feedback Forms - Verbatim Comments

COMMENT FORM 1

1. Upgrade the Ron Andrews Community Centre, tennis courts, new pool + gym, soccer/baseball fields.
2. SkyTrain on North Shore?
3. Improve transit
4. Connect walking trails + biking routes
5. Reduce speed on Mt. Seymour Parkway or enforce the speed limit. Speed Kills! Build sidewalks

COMMENT FORM 2

(See following page with map: arrow pointing to Windridge Detached Residential zoning) - “Rezone as multi family”

COMMENT FORM 3

We need to keep what little forest we have and rehabilitate from all the invasive plants. Also we need to be able to collect our greywater to be able to re-use it. Also what development there is should be built at “higher quality than what I’ve seen (the new buildings look as if they’ll collapse in 25 years). Another problem is that the younger generation cannot afford to stay in north van rentals are through the roof and no one can have a dog/cat.

COMMENT FORM 4

I’d like to see the Port Lands identified on the maps, and hear what the District’s strategy is for working with them. The Port Lands are an eyesore along Dollarton Rd who allowed them to build a parking/storage/industrial facility where the old crab shop was located?

COMMENT FORM 5

Good land DON’T go the way of the “City of North Van”! Please throw out the idea of extending Berkley through Windridge Park - you’ll already be developing East Riverside why in heavens would you desecrate a lovely park - the extension of the spirit trail. Yes, but no other major thorough fair and hopefully Maplewood Flats will also be Left Alone - probably the only conservation area left on the edge of the foreshores and enjoyed by many. Thank you S. Carey. P.S. Maplewood still feels like a wonderful community - don’t go and spoil it!!

COMMENT FORM 6

Pedestrian only road for “Old Dollarton Rd” - used as a highway/bridge access - highly dangerous with high speeds

COMMENT FORM 7

We enjoy the natural beauty of the area and would hate to lose more

We are very concerned about traffic levels already and what more residences & businesses will bring

- We are concerned about changes to rental rates, available housing and cost of living
Scanned Comment Form 2. High quality colour version is available in the DNV OCP, downloadable from the DNV website.
On-line Survey - Verbatim Comments

The survey was online from April 21, 2016 to May 6th 2016 and received 93 responses.
Maplewood Community Workshop

Introduction  The District is leading a community and stakeholder engagement process to develop an implementation plan and design guidelines for the Maplewood area. What is the process and why are we doing it? The Maplewood Plan... will set the direction for growth and development over the next 20 years, with the potential to build on the area's historic character and existing features. Complete this survey to share your Ideas on the Maplewood Community Plan! It will take approximately 10-20 minutes.

Character and Identity

The character and identity of a place is important to its community look and feel. Consider the character and identity of Maplewood today and what makes it special.

a. What is one word that captures or describes the ‘spirit’ of Maplewood?

<table>
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Housing
Maplewood is home to approximately 1,000 people and 315 dwelling units. a. Prioritize the types of housing that are most needed in Maplewood. (1 – 5 rating: 1 Low priority, 3 Neutral, 5 High priority)

i. Single Family

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Total Responses 74

ii. Duplex

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Total Responses 74

iii. Townhouse/Rowhouse

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Total Responses 76

iv. Mixed Use

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**v. Affordable Housing and Rental**

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**vi. Apartment**

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**vii. Co-Housing**

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**viii. Live-Work Townhouse**

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b. Maplewood currently provides key affordable housing options for the District. How important is maintaining the stock of affordable housing in Maplewood?

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Total Responses: 75

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<tr>
<td>1.</td>
<td>Very important to protect the stick of affordable housing in the area</td>
</tr>
<tr>
<td>2.</td>
<td>A diversity of businesses in those spaces is also important. Open artists studios and restaurants do more for community and walkability than do an office space. Please don't prioritize apartment-only builds. Mixed use should be the standard these days. Where mixed use isn't allowed, save space for homes big enough to raise families in. All developers should have to incorporate greenery and natural materials in their development plans, as well as cohesiveness with the community aesthetic. Low income housing is great as long as it doesn't take away from the appeal of the neighbourhood aesthetically. Please, please, please no walls in front of Loden Green development! Trees are a better options!</td>
</tr>
<tr>
<td>3.</td>
<td>I live in a stage one of OCP plan for Maplewood. I attended the information meeting too. District is not listening to people who live in Maplewood area. There only mandate is to add more condos and town houses to area. We don't want any more condos or town houses. We want single family only.</td>
</tr>
<tr>
<td>4.</td>
<td>There are two distinct types of apartments - Low rise and high rise. our survey lumps these together. I'm OK with Low rise apartments BUT NOT ok with High rise apartments since they spoil the look and feel of the area and make it busier than it should be.</td>
</tr>
</tbody>
</table>
| 5. | I was born, educated and now raising a family in North Vancouver. My children went to the same elementary school and high school as I did. I enjoyed meeting old school mates while participating in my children's school activities. Unfortunately I am not sure how much longer my family is going to be able to remain residents of North Vancouver. Both my children remain at home while attending BCIT. It keeps myself and my husband up at night worrying that we will not be able to continue raise our family on the North Shore. We, and many others in North Vancouver who are not economically strong, feel that our residences are being demolished. After many years in North Vancouver we are no longer feeling...
Welcome in our own community.

6. Rental units are needed and will create a better living experience.

7. We don't need anymore new development of any types.

8. Improving public transit and REDUCING the amount of automobile traffic on Old Dollarton and Dollarton is a key issue.

9. Provide a car-free development where streets are generally car free and available for walking, biking, playing (examples in Sweden, Germany, Denmark - cars only access homes for delivery of large items etc.)

10. Don't let it become "the projects".

11. Dire need for affordable family sized dwellings, rental, coop and low income housing.

12. COOP type housing based on the 3 principles of participation, solidarity & friendlyness. This concept has taken roots in Geneva, Switzerland where the real estate market is very comparable to the one of the greater Vancouver.

   Visit codha.ch for an example of this innovative idea.

13. Affordable office space.

14. Ensure that no building is more than 2 stories. Similar to the new units on the Seymour Parkway near the Maplewood Farm. NO HIGHRISES!!!

15. Replace older run down apartment blocks.

16. Affordability through density not single family homes.

17. The cost of Maplewood has pushed out EVERYONE that grew up in the area with me.

18. Maximize the value of the community - market housing in the core, affordable a layer out

19. No more residential, commercial or industrial development of any kind.

20. I would like to be on the mailing list for any updates on this project.

21. People already know the problems, council needs to talk solutions.

22. I think that there are enough condos and we can use some taller buildings so that they don't keep spreading wide and long, but high. HONESTLY, there are too many people here already, but go high and leave some land!!

23. Small lot, incremental infill.

24. Co-habit with nature alongside with co-operative or co-living housing will encourage greater community diversity, inculsivity, safety, happiness for all, mental wellness especially for teens who will have activities. Keep the nature and affordable housing your priority. Use the nordic model for inculsivity, bike friendly, social gardening, care homes with day care for staff and plants entwined. Bring nature to the front in every opportunity. Maplewood is nature.


26. I'm puzzled by the decision to build new retail without housing on top, e.g. Stong's.
**Business and Industry**

The Maplewood area has a number of existing businesses that provide important employment opportunities and economic benefits for the community and the region. A significant portion of the undeveloped area is currently designated for light industrial and commercial uses. How would you rate the following options as priorities for the future? (1 – 5 rating: 1 Low priority, 3 Neutral, 5 High priority)

### i. Introducing civic uses (fleet, firehall, etc.)

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### ii. Additional light industrial uses

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### iii. Creating more mixed use areas.

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### iv. Additional business park uses

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v. Introducing office uses

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vi. Infill and intensification of current industrial areas.

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b. Other comments, ideas, or opportunities:

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<td>1.</td>
<td>Certainly don’t cut down existing trees to make space for offices or industrial areas. That being said, creating jobs is Maplewood is key to the vitality of businesses in the area and creating a walkable neighbourhood; so, instead intensify existing industrial areas. Don’t prioritize this over improving the community resources and feel for the residents. We want residents to remain proud of Maplewood.</td>
</tr>
<tr>
<td>2.</td>
<td>Parks, Green belts, Natural habitat.</td>
</tr>
<tr>
<td>3.</td>
<td>Because this area has a landfill, large chemical plant and large business park area already I think the Maplewood area should not proceed any further in this vein. Affordable family housing in this area should be a priority with open environmentally friendly areas.</td>
</tr>
<tr>
<td>4.</td>
<td>There are already enough offices, industrial warehouse, etc. on the other side of Main Street</td>
</tr>
<tr>
<td>5.</td>
<td>Encourage less driving and more walking.</td>
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<tr>
<td>6.</td>
<td>Need industry to keep folks employed - keep the waterfront away from PMV, they’ll just bring in more out of town workers as always</td>
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<tr>
<td>7.</td>
<td>The north shore in general needs more local work places to alleviate bridge traffic</td>
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<tr>
<td>8.</td>
<td>A walk only artery with small businesses below and housing above</td>
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<tr>
<td>9.</td>
<td>Would love to see more small retail, dining options.</td>
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<tr>
<td>10.</td>
<td>There are already enough storage buildings, offices, business parks in this part of North Vancouver.</td>
</tr>
<tr>
<td>11.</td>
<td>We don’t want to see anymore business of any kind in Maplewood area. It takes away the...</td>
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70 | Appendix

Maplewood Village Area Plan
Summary of Engagement - Phase 1 Report
There shouldn't be any industrial development in a Village.

It's hard to imagine adding more industrial stuff in this area, as it is already stuck with the dump and recycling-Which poses a risk to those wishing to live in the area, as well as to the bird sanctuary and Maplewood Farm.

Business and industrial development should be balanced with population growth. Local employment should be encouraged.

"GVRD" has said there is a shortage of industrial space in the region yet still approves multi-family development on its industrial lands. We need a North Shore analysis of the issue so that we don't do any more of that same. We have enough "business park" and office space. What is desperately needed is AFFORDABLE housing.

The outside buildings should all reflect the identity of Maplewood.

Co-work, innovation/start-up lab, simple flexible office/warehouse and production space, small lot incremental infill.

The industry and industrial area there now is very off putting and so different from the surrounding treed area. Bring nature back to the cement wasteland, and incorporate this into the green energy and planning of all office and planning use. This should be manditory. Low emissions or none.

Discourage truck fleet and equipment parking on public streets. (ie: Old Dallarton)

Please don't cut down all the trees in the north lands. Convert that area to park. As far as I'm concerned, all of nature is environmentally sensitive. If you must develop that area, please do it carefully and leave a thick edge of trees along the road. It's so beautiful.

### Shops and Services

Maplewood currently includes some retail stores, gas stations, sports stores, and cafes as well as some community services and organizations such as the Ihope Family Centre and the Maplewood Arts Council. A grocery store is due to open on Front Street this year. a. What additional types of shops, services or community locations do you think are needed in Maplewood? (1 – 5 rating: 1 Low priority, 3 Neutral, 5 High priority)

#### i. Shops and services to support daily needs like food and grocery.

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ii. Specialists such as accountants, lawyers, dentists, etc.

<table>
<thead>
<tr>
<th>Response</th>
<th>Chart</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
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</tr>
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<tr>
<td>5 (High)</td>
<td></td>
<td>8.5%</td>
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</tbody>
</table>

Total Responses 71

iii. Community facilities like daycares, or meeting spaces.

<table>
<thead>
<tr>
<th>Response</th>
<th>Chart</th>
<th>Percentage</th>
<th>Count</th>
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</thead>
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<tr>
<td>5 (High)</td>
<td></td>
<td>31.4%</td>
<td>22</td>
</tr>
</tbody>
</table>

Total Responses 70

b. Other comments, ideas, or opportunities:

   Prioritize local-serving businesses and businesses owned by locals and families. Consider businesses that will interest and serve a variety of ages.
   Also consider parking - don't take up our community footprint with large parking lots. Underground parking makes better use of our space. Instead we need open spaces for markets, community events and socializing.

2. Absolutely no more development. If District keep forcing people to accept their ideas about development of more mix use housings, we will retaliate in the next election.

3. I would really like to see the sidewalks and streets upgraded. Many areas on Maplewoods don't even have safe walking areas along the streets. I would also like to see designated off the street bus pull outs (young people going to school have to stand on the side of the road (no curb/sidewalk) to catch the bus on Riverside Drive. I pass this area daily and the roads are in unforgivable shape and there are usually about 10 young people waiting for the bus to school in an open unsafe area.
   I would also love to see either more designated running/walking trails or a proper running track like Sutherland School has (maybe behind Kenneth Gordon School?).

4. Little Pink Door shop is perfect - need more!

5. Specialth stores, health centers, arts and crafts, improved recreation services

6. Don't know that we need more stores. Definitely places to eat (current expansion where Stong's is looks like enough for that whole area)
7. Do not load up this area with facilities that are already available in the near vicinity.

8. There needs to be capacity of 'daily needs' stores to accommodate the increase in professional business that should be encouraged. This will lead to amenities being available for the locals. There should be thought given to the fact that this is also a thoroughfare where people who live in deep cove can stop at as they arrive back into NV or through the bottlenecks over the Seymour bridges. "Lets stop at Maplewood instead of going all the way to Dollar Shopping Centre..."

9. Maybe another recreation centre or dance studio


11. Need local shops and services like Parkgate. Superstore is convenient with a car but also by bike.

12. Stack offices on top of retail. Huge lost opportunity not layering on Stong's and then putting in a giant parking lot.

### Landscape and Environment

The Maplewood area is characterized by lower lying areas closer to the Seymour River and towards Burrard Inlet, and a ridge of steep slopes that form part of the Windridge escarpment. There are also a number of significant wetland areas that provide important habitat for birds and wildlife. a. In considering the future of Maplewood, how important are the following: (1 – 5 rating: 1 Low priority, 3 Neutral, 5 High priority)

#### i. Protecting existing trees and treed areas

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**Total Responses 69**

#### ii. Mitigate steep slopes

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</tbody>
</table>

**Total Responses 70**

#### ii. Protect wetlands and watercourses (including hydrology)

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<tr>
<th>Response</th>
<th>Chart</th>
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<th>Count</th>
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</table>
b. Other comments, ideas, or opportunities:

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<tr>
<th>#</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Especially in a community like Maplewood, the beauty of the natural environment, and the retention of wildlife and waterways are so important. We risk being a community defined by highways if we aren't careful. No doubt the trees areas reduce the sound of traffic as well. It would be great to have cherry trees continued between east-west lanes of Mount Seymour Parkway between Riverside and the Seymour River!!</td>
</tr>
<tr>
<td>2.</td>
<td>If District refuse to listen to us we can media involved.</td>
</tr>
<tr>
<td>3.</td>
<td>Try not to develop some of the untouched areas so that the deer, bears and other wildlife will continue to thrive. Too much development will drive these animals away.</td>
</tr>
<tr>
<td>4.</td>
<td>I have a request and ideas regarding habitat and wildlife education. It would be wonderful to see information stations in Heritage Park and the lower Seymour river area. Boards with images and information about the ways and lifecycles of the plants, small creatures, insects, birds, and fish that make the river and surrounding area their home. It would be enlightening to discuss terms like stewardship and how ecosystems depend on all factors thriving in order to be healthy and sustain life, people included. I think it could help foster an appreciation and respect for all life and encourage people to be caretakers of the land and clean up cans and garbage. Also including more places for garbage disposal and recycling in the area would be helpful. I’ve seen garbage and destruction in the area. A week ago a class of approx. 30 kids from Kenneth Gordon school walked to the river where they all threw huge rocks and boulders into the shallows for several minutes, potentially crushing small fry, eggs, and life that seek refuge in the protected areas of the river. This was disheartening. It would be nice if the teacher could have references to help them teach students to appreciate the life there, so the kids could look for it, and learn to tread more gently.</td>
</tr>
<tr>
<td>5.</td>
<td>North Vancouver already has plans for huge building growth now and into the unforeseen future. I think it is imperative that North Vancouver designate the Maplewood area as a permanent green space, thus ensuring current and future wildlife a safe liveable community unto themselves. I do believe with proper foresight people and wildlife can live together. How wonderful to have future families see wildlife in their nature environment!</td>
</tr>
</tbody>
</table>
6. This is the most important part of Maplewood.

7. Keep nature accessible...

8. Leave wide buffers around streams, fence sensitive habitat, provide educational signage and viewing areas

9. Some unused forested or green space appears to be wasted space. Protecting those spaces while providing access to the public through them would increase the appeal of the maplewood neighbourhood. Forest and wetlands remain a major connector for wildlife small and big between the mountains and the ocean. Why not utilise those corridors to connect maplewood and its people with the mountains and the ocean by creating a trail system and parks worthy of beautiful british columbia

10. Absolute priority for anything in the Seymour area!

11. seems bounded by pretty good green spaces (river to west, forest to east, ocean at bird sanctuary)

12. These are redundant questions as the answers are self evident. This wee criticism is also applicable to many parts of your questionnaire. Keep you questions to the important topics and do not pad the questions just to fill in space. As in this section.

13. Steep slopes are a concern but are really only applicable above the GVRD main ROW, and there is a riparian strip there so would buffer housing...

14. Anything added to this community really needs to take into consideration the environment. Cleaning up all industry to be environmentally responsible would be a start, but also making sure that new developments only land on space that is already occupied by building. (no taking down of current green spaces)

15. Protecting existing trees should read protecting HEALTHY existing trees. Trees that pose danger to existing trails should be taken down and left to rot in a natural way

16. The natural area is what makes Maplewood special. Our bird sanctuary is world known, with dedicated volunteers. Hundreds of people visit every week, sometime more. We should be expanding our natural protection of the Maplewood area. As stewards of North Vancouver and Tsleil-Waututh in unceded land, we have a responsibility to protect the land for your grandchildren, mine, all the great grand children of the world to experience these wild and beautiful places. For example, to sit at the sanctuary and be viewed up close, nose to nose by a Rufus Hummingbird is a moment I will cherish always.

17. I support the idea of a cycle/walking park under the Seymour River bridge crossing.

18. I was very sad to see almost all the trees cut down for the new mixed use development. They were huge. Gradually all the trees get taken away in this area.

### Parks and Recreation

The Maplewood area is rich in parks and trails. Parks include natural parkland areas (e.g. Hogan’s Pools Park, Windridge Park), District and community parks (e.g. Maplewood Farm and Maplewood Park) and regional parks and conservation areas (e.g. Maplewood Conservation Area). Trails provide an important linkage between parks and other community destinations including the Ron Andrews Community Recreation Centre and Canlan Ice Sports North Shore. a. In considering the
future of Maplewood, how important are the following: (1 – 5 rating: 1 Low priority, 3 Neutral, 5 High priority)

i. Pedestrian and bicycle linkages to connect Maplewood Village w/ surrounding neighbourhoods

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ii. Neighbourhood parks / playgrounds

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iii. Expand natural parkland to protect environmentally sensitive areas

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iv. Creating more continuous sidewalk connections

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v. Community gardens

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vi. Central plazas / open spaces

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<td>5 (High)</td>
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Total Responses 70

vii. Indoor community / service spaces

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<th>Percentage</th>
<th>Count</th>
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Total Responses 69

b. Other comments, ideas, or opportunities:

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<th>#</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Any new playgrounds should consider the research coming out around the benefits of risky play, and should also take into account some counter-intuitive research results around the danger of some types of “soft landing” materials that are actually more likely to cause serious bone breaks for children. We need indoor community /service spaces because it rains for so much of the year, but Gordon Maplewood school and its grounds could be used for this as well. And any central plaza should have seating and some coverage. Consider 8-80 design principles for open spaces and sidewalk continuity. Well lit running and walking trails are a great idea too!</td>
</tr>
<tr>
<td>2.</td>
<td>I loved the ideas about functional art, such as uniquely shaped benches and bike locks, and also potential slow moving roads allowing for outdoor living. Having more shared gardens and edible landscapes in the area would also be a great thing.</td>
</tr>
<tr>
<td>3.</td>
<td>As mentioned in my prior comments I would like to see running/walking trails OR a running track like Sutherland School recently installed (good use of the field behind Kenneth Gordon School?).</td>
</tr>
<tr>
<td>4.</td>
<td>Make room for green space, wider sidewalks, bike lanes by reducing surface parking</td>
</tr>
<tr>
<td>5.</td>
<td>Need more pedestrian paths - not more bicycle paths - not sure why you grouped those - leading question?</td>
</tr>
</tbody>
</table>
6. Trail system and parks worthy of beautiful british columbia.

7. Keep Cyclists and Pedestrians complete separate. Especially along Dollarton. This is a major cycling route for commuters and recreational weekend warriors. The current shared use paths along Dollarton are a hazard for cyclists who travel at 30-40kph they need to be kept on the road and keep the Shared use paths for families on bikes, walking or scooters for the elderly. DON'T MIX THEM.


9. non vehicle access should be a big focus. I live on Windridge and I see bicycles all day every day, more than most bike lanes downtown. The easier it is for someone to walk from Herritage Blvd or Ellis dr the better the community will be.

Also, walking is very difficult btw MSP and Dollarton on riverside and also from Dollarton and ellis west to Maplewood

10. Any initiative that protects the environment or that promotes aggregation and community building is important

11. Connect urban and natural areas with trails.

12. Yes yes yes! Go for it! Bike route! Easy to follow sidewalks connecting all over Maplewood and further! Lovely community gardens, wheelchair and disabled friendly, be inclusive so ESL is not a factor: seek out immigrants. Gardens are a great way to bridge cultural divides. Community centre’s, not gas stations or pubs. If you build it: they will come. I will!

13. I favour the Windridge extension with good sidewalk & bike access to East Seymour. Make car traffic on Windridge one way going east. Provide bike paths on (east) Riverside Drive.

14. Prioritise people walking and cycling, and transit connections, over people driving and over parking. Build narrow streets with low speed limits and wide sidewalks with plenty of trees for shade and benches to rest. Walking through parking lots is unpleasant and can be dangerous, so consider how and where those are designed. Particularly, the entrances and exits where they cross the bicycle/walking path on the main road are very dangerous. Sight lines are poor and the new development adds more chances for conflicts and accidents.

15. Increased population density will require more transportation options. Now is the right time to implement separated on street bike infrastructure. Multiuse trails are nice, but cycle for transportation connections to the Second Narrows are required.

**Transportation**

Maplewood includes a road network, transit service including 4 bus routes, sidewalks and trails.

**a. How do you most often get around within your neighbourhood? (select only one)**

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<th>Percentage</th>
<th>Count</th>
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<td>Bicycle</td>
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<tr>
<td>Car/Truck as passenger</td>
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</tr>
</tbody>
</table>
a. How do you most often get around within your neighbourhood? (select only one) (Other)

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<tr>
<th>#</th>
<th>Response</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>I used to bike but I got run over by a car.</td>
</tr>
<tr>
<td>2.</td>
<td>Goods &amp; Service driver</td>
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b. How do you most often get to and from Maplewood (select only one)

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<th>Response</th>
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<th>Percentage</th>
<th>Count</th>
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<td>Car/Truck as driver</td>
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<tr>
<td>Car/Truck as passenger</td>
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<tr>
<td>Other</td>
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b. How do you most often get to and from Maplewood (select only one) (Other)

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<th>Response</th>
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<tbody>
<tr>
<td>1</td>
<td>GS Driver</td>
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c. How would you rate the following priorities for the future? (1 – 5 rating: 1 Low priority, 3 Neutral, 5 High priority)

i. Active Transportation - a rich network of pathways, trails, and bike facilities

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<th>Response</th>
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<tr>
<td>5 (High)</td>
<td></td>
<td>54.3%</td>
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ii. Quality Pedestrian Environment - comfortable and inviting streets, sidewalks and plazas

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<th>Response</th>
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</table>
### iii. Transit - frequent transit service that provides regular connections to and from Maplewood

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<th>Chart</th>
<th>Percentage</th>
<th>Count</th>
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<td>Total Responses</td>
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### iv. Automobiles - reducing congestions and making driving more convenient

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<th>Response</th>
<th>Chart</th>
<th>Percentage</th>
<th>Count</th>
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</tr>
<tr>
<td>Total Responses</td>
<td></td>
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</tbody>
</table>

### d. Other comments, ideas, or opportunities:

1. I currently work in Vancouver, relatively close to the Canada-line station at 25th and King Edward, but getting to the Canada line (or other skytrain lines) is quite inefficient in Maplewood. I used to commute by bus to work before moving to Maplewood, and am now reliant on a car.

   My husband works on Fell avenue in North Vancouver by the automall. If he takes the bus to work it takes him over an hour and involves 3 buses! Biking on the other hand takes him 25 minutes. The inefficiency of getting across northvan by public transit is crazy. We need more direct bus routes within North Vancouver and into key transit destinations within Vancouver. This efficiency is also key to the property values of homes in Maplewood.

2. Stop cars from cutting through Maplewood to get to Blue Ridge or Deepcove

3. Reducing congestions is a higher priority BUT I don’t mean in regards to increasing the number and size of roads. I mean in regards to minimizing development to keep the vehicle numbers down

4. Minimally upgrade streets and install curbs (road conditions in some areas are unsafe). Sidewalks would be wonderful.

5. Not everybody can bike or walk from a place to place. There are people that have kids, are disable bodies or old. Stop feeding us the European way of living.

6. Provide high quality bike path from Maplewood to Phibbs Exchange and ample secure bike parking at Phibbs. Phibbs is only 5min by bike from Maplewood along Dollarton but it is a dangerous & inconvenient ride.

7. Again the attempt to slide bikes in with other topics - you're losing cred here.
<table>
<thead>
<tr>
<th>No.</th>
<th>Text</th>
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<tbody>
<tr>
<td>8.</td>
<td>transit, bike, walking paths only make sense if we create local High density living.</td>
</tr>
<tr>
<td>9.</td>
<td>When considering cycling: we definitely need to improve the network through Maplewood, and points beyond. The stretch of Riverside Drive between Mt Seymour Parkway and Dollarton Road DESPERATELY needs a bike lane. It is dangerous. We also need various jurisdictions to ensure that the roadways are cleaned regularly of dirt and debris. The sand used over the winter on these roads has still not been cleaned up and makes for unstable surfaces for cyclists.</td>
</tr>
<tr>
<td>10.</td>
<td>unfortunately the transportation study didn't seem to account for the massive growth at Raven Woods, nor did it seem to include other developments along Mt. Seymour Parkway and Cates Landing. Don't know if the changes to the Highway 1/99 interchanges at Mt. Seymour and Main Street will be enough to get traffic away from east of the Seymour.</td>
</tr>
<tr>
<td>11.</td>
<td>Again, all self evident answers to your questions. For some reason you are masking the important questions like traffic congestion with many questions / answers that are completely predictable.</td>
</tr>
<tr>
<td>12.</td>
<td>with improved businesses and network of sidewalks walking would be ideal...currently not much to walk to</td>
</tr>
<tr>
<td>13.</td>
<td>There should be ample parking for those transitioning through the area and want to stop in but not in the core. This is where it should be easy to walk bike within the industrial area and then transfer out to upper riverside or along the parkway</td>
</tr>
<tr>
<td>14.</td>
<td>Make more roads and streets. Not everybody can bike or walk.</td>
</tr>
<tr>
<td>15.</td>
<td>as a most basic need for bus stops, each stop should have a shelter. Nothing Fancy, but just something to stand under, as when it rains some of the bus stops are not covered and bus stops are so far apart, so by the time you try to walk to a covered one, you’d miss the bus. I’m always surprised that the bus stop close to Superstore, doesn’t have a cover!</td>
</tr>
<tr>
<td>16.</td>
<td>The area is mainly flat and set in a great location for active transportation, both walking and cycling. Planners should take advantage of this by building a community that fosters alternative modes of transportation, minimizes car use and generally encourages people to get out and about on foot or by bike. Connections for biking should be made towards Mt. Seymour Parkway, Phibbs Exchange and The Iron Workers Memorial Bridge. Physically separated bike paths (i.e. not just painted on the road) should be made to encourage all people to use this means of transportation. Riverside Drive and Old Dollarton Rd. are in dire need of bike paths as they are currently very dangerous for cyclists. Mixed use paths should be minimized (e.g. such as the one along Dollarton Highway) as they can cause conflicts between pedestrians and people biking. Cycling infrastructure on Dollarton Rd. should be completely revisited to create separate paths for cycling and walking.</td>
</tr>
<tr>
<td>17.</td>
<td>C(I) is a loaded question. Better transit and pedestrian ways are needed. Cyclists need to be licensed and obey the rules before they are given any more lanes.</td>
</tr>
</tbody>
</table>
| 18.  | Build high with parking below....save some green space. Nothing can grow in the air...but life
can grow on the ground!

19. Connected and protected bike network within maple wood and to other town centres.

20. Although I do drive through here, I often spend several hours a week, or per day walking around with my dog and I find the paths could be better if they were away from the Nasty street. Especially crossing around trying bus terminal! Fix that! Bad! Someone is going to die! I am tired as and driver seeing bikes do hard lefts or rights and push and cross 4 lanes of traffic. But I digress. Paths Paths for walking/biking each it’s own side would be wonderful and nice benches sat nicely throughout, some sun and crossed most shade. Some under cover too (many of us walk in thr rain or shine) fountains would be nice. MEC has a nice fountain: it’s even got a lower level for dogs. That would be great on hot days. The occasional washroom would be great too. Simple and safe, one stall at a time so no one can come in while you are there. You can do the open floor kind with open 6 inches do its easy easy to see if someone is in there, and easy to wash with a hose. You can make the floor uncomfortable which will discourage sleeping. A solar panel will not light up when you don’t want it to. Lovely big maps with cool historical facts. Trivia, treasure hunts all around maple wood. You can pick up the clue sheets at the district offices all so birthday parties, etc wil have fun discovering Maplewood and and the trivia if the area. Just an idea. I love treasure hunts. I’m always making them :)

21. Discourage vehicle traffic through Maplewood and eliminate curb parking on Old Dollarton. Dollarton Hwy mixed use cycle/walking path is dangerous for cyclists because critical Attention must be given to: 1). Cars driving in/out of commercial zones, 2). post at each drive entrance that can knock you off the bike, 3). Pedestrian traffic - simultaneously! It's time we made the curb lane a dedicated cycling lane!

22. Encourage less car ownership and reduce congestion by providing less public and private parking.

23. West Coast Express train station to Brentwood

24. It is already comfortable to drive and this has generated more traffic. WE need to give people viable alternatives. Like closing 1 lane on dollarton to dedicate to bikes and bus only traffic. Public transport must be made more competitive with the private automobile for travel times in order to shift people out of their cars.

Urban Design and Public Realm

The design of public spaces (streets, sidewalks, plazas etc.) and the relationship to adjacent uses influences community use and experience of this space. Well designed public spaces that welcome pedestrian activity and interaction create more attractive and vibrant community places. a. Rate how you would prioritize the following for making Maplewood a more vibrant and attractive community: : (1 – 5 rating: 1 Low priority, 3 Neutral, 5 High priority)

i. Unique and identifiable places

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<thead>
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<th>Response</th>
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### ii. Streets, parks and plazas that integrate stormwater and ecology

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Total Responses 66

### iii. Improved landscaping

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Total Responses 69

### iv. Well designed buildings

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Total Responses 68

### v. Public art

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Total Responses 68

### b. Other comments, ideas, or opportunities:

<table>
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<tr>
<th>#</th>
<th>Response</th>
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<tbody>
<tr>
<td>1</td>
<td>Celebrate our proximity to nature. Use natural materials, native to this place. Public art should be relevant to where we are, and should lend itself well to various uses and</td>
</tr>
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</table>
interaction, especially for kids. Interesting landscaping is important, but make sure the space is usable and affords physical activity.

2. Art is a wonderful thing when the economic situation is strong. Because families are currently feeling financially stretched now is not the time to spend valuable dollars on art and culture.

3. Storm water and ecology ponds are great for rats and mosquitoes.

4. Maplewood deserves to be beautiful!

5. Function > fluff

6. Of course you have to make it an interesting place for people who don’t live there to go as well as the residents of that small area.

7. Maplewood really needs a renewed character through its community places - a destination over a drive thru.

8. As noted before. More fluff.

9. Create proper village town centre or heart of the community.

10. No more building of any kind.

11. Incorporate flexible spaces to allow for citizen led placemaking activities.

12. Another yes yes yes. Local public art. BC at the most. Local teens too. Encourage waste water to be introduced into the cycle. Well designed homes sound like fancy and unaffordable to me. Good craftsmanship is one thing. Creating a public space that is memorable and says "that’s Maplewood" would be magnificent. I think something like benches all have a lamp post coming out one side which turn into a solar powered led lamp. The colour is medium brown and the lamp post is in the shape of a tree - this would say to me: nature and conservation, culture and cool.

13. Reduce through traffic. Consider 30 km/h speed through the Maplewood core, including Riverside north. More roundabouts, especially at intersection of Old Dollarton/Riverside.

14. Engage with the good people at Happy City, or at least read Charles Montgomery's book of the same name if you haven't already.

15. Build places people want to be...no cookie cutter developments.

**Sustainability**

Sustainability refers to a communities' ability to maintain ecological, social, and economic balance, as well as its ability to respond to change and be flexible when faced with change. What should our priorities be in Maplewood to create a more sustainable, resilient community? (1 – 5 rating: 1 Low priority, 3 Neutral, 5 High priority)

**i. Prepare for climate change resilience – such as stormwater and flood risk management**

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Maplewood Village Area Plan
Summary of Engagement - Phase 1 Report

84 | Appendix
### ii. Invest in renewable energy and energy efficiency

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**Total Responses:** 68

### iii. Promote water conservation

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**Total Responses:** 68

### iv. Promote active living and alternative forms of transportation

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**Total Responses:** 69

### v. Promote food security and local food systems

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<tr>
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<td>36.8%</td>
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**Total Responses:** 68
b. Other comments, ideas, or opportunities:

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<th>#</th>
<th>Response</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Lets do all that we can to reduce our carbon footprint and to teach the next generation to consider the natural environment when making choices. Understanding and prioritizing taking care of the environment and of your own health and well-being is extremely important, and should be a priority in any community.</td>
</tr>
<tr>
<td>2.</td>
<td>All new buildings should be built with solar hot water, bike rooms with ebike charging outlets</td>
</tr>
<tr>
<td>3.</td>
<td>could be beachfront property in 100 years</td>
</tr>
<tr>
<td>4.</td>
<td>As before. I get the impression that you think of us as simpletons.</td>
</tr>
<tr>
<td>5.</td>
<td>The maplewood farm and ideals of farming should be incorporated into the community. This used to be a very popular place for horses and rustic living</td>
</tr>
<tr>
<td>6.</td>
<td>Food security and water conservation tie into everything else. Being responsible for your environment and protecting your community - using efficient means of transportation and getting big bonuses at work for doing so will encourage health, less sick days, mental health positive outcomes and more. We need to be aware that we could run into trouble trouble from natural disasters and plan ahead: earthquake, fires, landslide and flood. Each business and building should have a plan and ewxh building owner and co-operative should provide a emergency management plan.</td>
</tr>
<tr>
<td>7.</td>
<td>Going east or west from Maplewood is a challeng on bike. The connectedness of Maplewood to East Seymour and commercial centres west of 2nd narrows traffic is a problem. Perhaps the current Bridgehead reconstruction will take that into account.</td>
</tr>
<tr>
<td>8.</td>
<td>Community gardens and outdoor space for private gardens, absolutely. All cycling facilities should be AAA. Kids should feel safe biking to school or walking home without their parents. Conserve existing trees and plant new ones. Bioswales, solar panels, grey water systems, net zero energy use, small carbon footprint, etc. and make sure people are engaged with this. Make it a selling feature.</td>
</tr>
<tr>
<td>9.</td>
<td>Provide people the choice to connect to other north shore city / town centres with separated and fast bike infrastructure. Consider a bike highway on Highway 1.</td>
</tr>
</tbody>
</table>

**Your Big Idea**

As we embark on the planning process we would like to know from residents, businesses and others what makes Maplewood a truly great community. There’s so many possibilities. Suggestions will be used to inform big ideas and principles to help guide the planning process. Here are a few of the things we thought of:

**What ideas presented above do you like?**

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<th>Response</th>
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<tbody>
<tr>
<td>1.</td>
<td>I like all the ideas above. It would be easy to require new developments to include car2go, modo and evo spaces in their (preferably underground) parking. Encouraging sustainable</td>
</tr>
</tbody>
</table>
local (and local-serving) businesses is hugely important. Walls ONLY where absolutely required, and then there should be significant community discussion around the design. Creative bike racks could also be a requirement for developers. Street spaces that are closed to cars and allow businesses to have outdoor seating, or at times rotating food trucks would be excellent. This of course goes hand in hand with safe pedestrian spaces with trees for shade and non-business related seating so that people can spend time in the space without spending money.

Facilitate local office spaces to host food truck and community events. Make industrial groups give back to the community!

2. Provide safe pedestrian environments and road spaces that can be closed to vehicles for community events.

3. Community Events, environmental sustainment, Underground parking, local business

4. Habitat restoration, Green space improvement, Connect people to the natural environments

5. I loved the ideas about functional art, such as uniquely shaped benches and bike locks, and also potential slow moving roads allowing for outdoor living. Having more shared gardens and edible landscapes in the area would also be a great thing.

6. Community gardens, safe pedestrian layouts, food trucks

7. Wow these are great ideas! I would caution that valuable dollars not be wasted. Ensure that community’s necessities like affordable housing, green spaces remain, and traffic flow are address for now and into the future. Until these basic needs for all of the North Shore are met, future embellishments should be kept to a minimum.

8. Bike share.

9. Maplewood brewery, car share (car to go), good safe sidewalks, sustainable use of maplewood farm


12. Habitat restoration projects, restore and enhance maplewood creek, seasonal food truck, sustainable local businesses

13. Car-Share Program; Parking under condos; Habitat Restoration

14. Restore Maplewood Creek
    Woonerf, streets closed to vehicles
    Community gardens
    Innovative opportunities for local businesses

15. I like all the ideas, i embrace the development but we cannot add thousands of residents to this area until there is a defined plan to address the current traffic problem.

16. I love them all - it would be a dream to live within walking distance of a town centre like this
17. **sustainable businesses.** Most are good ideas - esp foodtrucks

18. **All ideas that connect the community together in a healthy and considerate environment that is inclusive of all ages and all means. Ideas that restore a village lifestyle where reliance on the community is greater than one on local or other governments.**

19. **bike racks outside businesses**

   retail space for businesses that help foster a community not just fill our lives with junk (eg butchers, pharmacy, health services, Saturday market, restaurants that are open outside of monday-friday 9-5 hours )

20. **Anything that promotes a more community, friendly, social environment for residents and local businesses.**

21. I favour ideas that enhance the livability of the neighbourhood for working families. Community gardens, safe playgrounds, AAA cycle routes, community centres and local schools are ways to achieve this.

22. **already have one brewery within the community and they seem to have done it right. wouldn't want to see any additional brewery(s) cannibalize the existing one, but maybe could be a cluster like the few in Vancouver. Underground parking is great (more surface space for residences). Ocean source heat pump for heating/cooling buildings not a bad idea. No shortage of water down there**

23. **Cool the school, shared streets, local businesses, community murals**

24. **safe pedestrian and bike pathways**

25. **Sustainable local businesses**

   Public spaces which are pedestrian and cyclist friendly

26. **restore and enhance maplewood creek**

   seasonal foodtrucks

   green space improvements

   safe pedestrian environments and road spaces that can be closed down for community events

27. **They each have merit but do not incorporate too many of them. Keep it simple.**

28. **Habitat restoration. Food trucks.**

29. **..provide safe pedestrian environments and road spaces....**

30. **All above**

31. **anything that would add to greenbelt, protect the habitat and keep the Maplewood a small community village.**

32. **Wildlife rescue, and habitat restoration, being in the area for 20 years, its something that would be appreciated**
### 33. Habitat Restoration

### 34. Affordable housing for mixed demographics, linked to public transportation

### 35. All

### 36. Preserving natural habitat.

### 37. Bike and car sharing, community gardens

### 38. Parking under condo units

### 39. It offers a little of everything for all types of people.

### 40. All of the above!! Habitat restoration, encouraging bees by planting the right things, I love the bike share and car share. Rainwater catchers. Anyway to convert waste into better use.

### 41. All are great ideas - implement as many of them as possible!

### 42. I think there should be some walls for noise protection as we hear many cars. I think parks are great. I think parking under BUILDINGS is good. Less condos and more buildings if we have to do this at all. Restore Maplewood Creek... Create a BEACH at the river.

### 43. All of them!

### 44. Rain garden and cool thr roof project.

### 45. Growing Maplewood but allowing it to avoid car dependency by better connecting it to East Seymour and the business districts west of Mountain Hwy. Westridge Dr extension/upgrade offers a pleasant (Spirit Trail) route to the pool and ice rink and hopefully beyond, on foot or by bike of course. Creating a community that is walkable and not stressed out by passing through vehicle traffic.

### 46. All of them! But particularly urban food, reducing waste and energy use, safe public spaces for people (happy city!), fewer surface parking lots and more support for the ecosystem.

### 47. Lots of great ideas...pick a few and really do them.

---

**Finally, what are your big ideas for what would make Maplewood a truly great community?**

<table>
<thead>
<tr>
<th>#</th>
<th>Response</th>
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<tbody>
<tr>
<td>1.</td>
<td>Listen to residents so that they want to stay living in their homes so that Maplewood is an engaged community. We have lots of young families moving into the neighbourhood, so celebrate and support this. Make it make sense to spend the weekend just puttering around the neighbourhood and interacting with others from the neighbourhood. Make it easy for people to live in Maplewood but commute without a car to work in and around North Van and Vancouver.</td>
</tr>
<tr>
<td>2.</td>
<td>Kids safe to get around (walk ways missing), more local shopping possibilities, Underground Transit to avoid all the busses on the street, better Transit Connections to Lonsdale, West Vancouver and Vancouver</td>
</tr>
</tbody>
</table>
3. Preserving the green space and natural habitat. Stop new mix use development. Stop over crowing the village. Improve the traffic and infrastructure. Listen to the needs of the people living in the Maplewood community.

4. Residential/public access to the waterfront - too much industry on the waterfront

5. Thanks for all your hard work and deep consideration. The change is great!

   Just in case it got lost in the other section, here again is this request that is close to my heart.

   I have a request and ideas regarding habitat and wildlife education. It would be wonderful to see information stations in Heritage Park and the lower Seymour river area. Boards with images and information about the ways and lifecycles of the plants, small creatures, insects, birds, and fish that make the river and surrounding area their home. It would be enlightening to discuss terms like stewardship and how ecosystems depend on all factors thriving in order to be healthy and sustain life, people included.

   I think it could help foster an appreciation and respect for all life and encourage people to be caretakers of the land and clean up cans and garbage. Also including more places for garbage disposal and recycling in the area would be helpful.

   I've seen garbage and destruction in the area. A week ago a class of approx. 30 kids from Kenneth Gordon school walked to the river where they all threw huge rocks and boulders into the shallows for several minutes, potentially crushing small fry, eggs, and life that seek refuge in the protected areas of the river. This was disheartening. It would be nice if the teacher could have references to help them teach students to appreciate the life there, so the kids could look for it, and learn to tread more gently.

6. Good community communication,

7. No earth shattering big ideas, just affordability and green!

8. Let's get the schools full of kids again . I have been here for nearly 40 years. I know some people like a quiet sleepy forgotten place to live. I remember when the area was full of working families, active and full schools, and community.

   I realize there are those that worry about traffic but I don't want to stop progress in our area over that. Otherwise maple wood will never change for the better.

9. More Walkable (connecting sidewalks, streets shut off to traffic), better field / usable park area behind school, businesses that serve community needs (eg daycare, dry cleaning, restaurant, grocery, bank, liquor store, yoga/gym), more accessible to transit. Build on the legacy of the farm-community centred around professional young families and farm.

10. No more development of any type. Improve the infrastructural and traffic. Preserve Habitat
11. I would like to see Maplewood grow to be a small town community feel, with nature/bike/hiking trails connecting to other communities.

12. A village centre/square and pedestrian friendly malls.

13. Build a truly car-free or car-light family friendly neighbourhood where streets are safe to walk, bike, play. Car access is limited.

14. Get rid of Canexus!

15. Community car parking. Free park & ride to encourage people to ride or take transit part way to work.

16. Coop housing in a coop environment.

17. bike/pedestrian only areas like what you see in Europe. Where one can run their weekend errands all in one place without ever having to get into a car.

18. A park area encouraging residents to congregate.

19. Work with the School District to ensure that a public elementary school is returned to the community.

20. Maybe it wouldn’t be a bad idea for a slightly taller/larger office-type building towards the eastern end of the lands. A reason for people to come into the neighbourhood during the day (keeps service industries busy for more of the day; traffic would be counter to main through flows)

21. Getting rid of less desirable condos in the area that are eyesores

22. Safe and well connected bike and pedestrian pathways. Especially on windridge road, riverside road, old dollarton and dollarton road. Enforce speed limits on mt Seymour pathway. Paint lines like on 29th street to enforce 50 km/hr.

23. Community gathering spaces that can be used in winter and summer (i.e. with some protection from rain/sun). Local groups can book it/community concerts/farmers markets etc.

24. A community space or plaza that anchors the village - can host events, go to the village for a coffee. A place that can draw people to stay for awhile instead of driving through. Current derelict mall would be a good space to develop for this.

25. Community gardens
   Senior housing attached with daycare

26. encourage self sufficiency in the community with well rounded selection of merchants, schools, services and activities

27. Restrict growth due to lack of infrastructure

28. Not a congested place surrounded by condos and town houses. We don’t want to attract more people to Maplewood village. We want to keep it a quite and green environments

29. Becoming the AFFORDABLE community it use to be.
30. We would like to see of Maplewood village as a small quite community surrounded by nature.  
   We don’t want a vibrant and noisy community.

31. Affordable housing

32. An open and interesting area for people to visit and stay.

33. We want to keep Maplewood a small Community. If having a vibrant community means to have more condos or town houses. WE DO NOT WANT IT.

34. More affordable housing  
   We need more and newer rental apartment buildings that stand taller so developers will build them - they need to make the economics work as well  
   Give them more FSR

35. Bring the community back into the community.

36. Ensuring that the dump is kept clean and that there is no seepage into streams or ocean.  
   Ensuring any industrial business is up to the best standards in terms of environmental stewardship.  
   Ensuring all bus stops have a shelter  
   Encourage independent businesses to come in to the neighborhood. (not chain stores)

37. Make it an active transportation community designed around walking and cycling. Driving should be minimized and limited to the outskirts. Design it around public spaces to encourage people to go out and socialize, to foster a sense of community.

38. Turn the beach area into a beach area along the river...ALL NATURAL, but bring in some sand and create an environment that encourages spending a day along the river. NOTHING COMMERCIALIZED necessary!

39. Flexible, incremental development as opposed to monolithic. Small lots to increase building type and variety. Fine grained transportation network. Centralize parking in one or two locations and create a car free community. Mixed use, not just vertically in developments but horizontally along the street fronts.

40. Replace a portion of the industrial use to mixed use and plant community gardens with community designed play parks for both young and old old to exercise on: slide for kids, exerciser bikes for adults *Nelson BC has a great adult park for exercises. You can move the equipment apart so there is a walk in between.

41. Create a roundabout at the intersection of Old Dollaton and Riverside Dr.(east).  
   This will fiscourage people driving through Maplewood and improve walkability.

42. Wouldn’t it be amazing if car ownership there were only 10-15%? One way to do this is to make it more attractive to 20- to 35-year-olds who aren’t driving or owning cars and may be attending Cap U not too far away. But they also don’t have a ton of income so housing needs to be affordable and diverse.
43. Amtrack: Seattle to Whistler

44. Seperated cycling infrastructure like Dunsmuir / Hornby in Vancouver to make cycling viable.

Any other comments, ideas, or opportunities?

<table>
<thead>
<tr>
<th>#</th>
<th>Response</th>
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<tbody>
<tr>
<td>1.</td>
<td>Cherry trees between Riverside and Seymour River on Mount Seymour Parkway! Make this a beautiful place to live! Thanks!</td>
</tr>
<tr>
<td>2.</td>
<td>We will F.O.I this survey and all the documents relating to this project.</td>
</tr>
<tr>
<td>3.</td>
<td>I was disappointed that only 2 days notice was given for the April 20th meeting. The signs only went up 2 days before. If you want our input and want to hear our concerns, you need to give us more notice via earlier installation of signs or leaflets in our mailbox.</td>
</tr>
<tr>
<td>4.</td>
<td>The neighbours at 591, 561, 531, 525, and 505 Riverside Drive have discussed the Maplewood plans and our potential role in it. While we would like to assist the district with plans to densify our lots, the current projected FSR zoning of 1.2 does not make our properties valuable enough to warrant the change. The maximum a developer can currently pay, even in the most expensive areas in Vancouver, is $285 per square foot at this FSR. Considering our lots are a relatively small 4059 square feet, and our homes are valuable, this FSR does not allow us to replace our homes with comparable ones. Four of the lots have homes with 5 bedrooms, including two bedroom suites, all in great condition, and some very newly renovated. We would be amenable to helping the district progress with the plan of increasing density and believe that our area could benefit from higher proposed density than the current 1.2 FSR. Not only would this make economic sense, but also it seems it would allow for the creation of much needed parking on the site of any new development, and a higher density structure would suit the area since it borders on busy thoroughfares. It could also nicely sustain plans for increased housing for many future years to come.</td>
</tr>
<tr>
<td>5.</td>
<td>I have full confidence, when looking at the North Shore as a whole, that a clear picture of needs, not wants are evident for the good of its residents. Affordable housing and the environment are top priority. I know with a will there is a way. I look forward to continuing to participating in the Maplewood area development.</td>
</tr>
<tr>
<td>6.</td>
<td>Please no highrises!</td>
</tr>
<tr>
<td>7.</td>
<td>Use money from developments to upgrade the paths along Dollarton Highway (widen and make intersection crossings safer and more convenient).</td>
</tr>
<tr>
<td>8.</td>
<td>Please provide a microphone at the next meeting. I couldn't hear a thing and i was in the</td>
</tr>
</tbody>
</table>
9. People move to the north shore for is simplicity and connection to nature. keep the balance.

10. Skytrain to the north shore!!

11. A nice coffee shop please! A restaurant chain like cactus club

12. Sea bus from maplewood to Lonsdale to dundrave and downtown. Why not.

13. safer pedestrian connection to bird sanctuary.

   enhance access and public space around the river- it's a great asset to the community that is hidden away!
   develop riverside drive section from Dollarton to Mt seymour parkway as a north south corridor and less of a drag strip for cars. Pedestrian and bike friendly please!

14. One of the most important issues that you do not include in this survey concerns traffic congestion AROUND Maplewood. The plan is to add 1500 more residences which equates to 3,000 more cars. The traffic in ALL parts of North Vancouver District and City is horrendous and the Maplewood Village Centre will just make it worse.

   If I had a trump card to play I would prohibit ALL new building permits for everything on the North Shore until the ENTIRE traffic situation is relieved. You might say you want to encourage more public transportation etc. but until this is a fact, I would like to see all developments of all kinds on the entire North Shore put on hold until the traffic flows smoothly at every rush hour. The Maplewood village idea is a small part of the problem but it cannot and should not be viewed in isolation.

   I am intrigued why all you development and consulting folks do not dwell on the traffic issue first and once fixed, THEN see how a Maplewood development might fit in to a well organized municipal system.

   For some reason you folks always do things backwards.

15. Before District approves any more development, it should improve the road and streets. I think We have enough affordable housing in North Vancouver.

16. We encourage District to listen to the needs of local residents instead of ignoring them.

17. I would like to be on the mailing list for any updates on this project.

18. I love what is already happening in the Maplewood area. New businesses have been developed on land that really needed a facelift. Plus with the added population, those businesses should do well.

   There is a really ugly shed accross from Superstore that could use a major facelift it's not so attractive.

19. There are a few neighbours that live at the following addresses. WE ARE IN BIG TROUBLE...if things keep going the way they are..we will be surrounded by condos and no one will buy us out. Condos take up too much land space....the air is fee and empty....BUILD UP....not just for our sake but to keep some greenery! If you build condos where we lived in our renovated homes with suites NONE of us will be able to live in North Van as no developer will give us enough money...our lots are not big enough! However, if we stop this
nonsense of all these sprawling condos and build a little higher...you can get more people in per square foot. ISNT THAT WHAT YOU WANT???

The neighbours at 591, 561, 531, 525, and 505 Riverside Drive have discussed the Maplewood plans and our potential role in it.

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We would be amenable to helping the district progress with the plan of increasing density and believe that our area could benefit from higher proposed density than the current 1.2 FSR. Not only would this make economic sense, but also it seems it would allow for the creation of much needed parking on the site of any new development, and a higher density structure would suit the area since it borders on busy thoroughfares. It could also nicely sustain plans for increased housing for many future years to come.

20. Promote nature first above all other ideals. Ask yourself: "how does nature do in this scenario?" Be honest and you will be doing the best thing. Thank you.

21. I'm impressed with the amount of detail in the report. I was sorry to have missed hearing about the open house. Perhaps signage in the area would have helped as I cycle through Maplewood regularly.

22. More trees, fewer surface parking lots. Land is too valuable to waste on parking. Be more thoughtful about that. I'm excited by a lot of your vision and look forward to seeing it unfold.

Thank you for filling out this survey!

Stay up to date on the project:

47 respondents signed up for email updates
Stakeholder Meeting Worksheet Comment Forms

The following are the original comment worksheet forms and meeting minutes from the stakeholder meeting held on June 29th, 2016.
3. Please provide additional comments or key points you’d like to leave us with from today’s session.

- emphasize affordable housing rental
- establish trail network
- improve community spaces such as meeting rooms.
- facilitate the establishment of a covered mall.
- Space for a Campground??
  (Seymour Prov. Park were studying the possibility of one at the bottom of the Seymour Rd.)

Next Steps

Your input provided today will be combined with what we heard from the community and other stakeholders. This will be used to help structure focus areas for exploration at a stakeholder design charrette scheduled in Fall 2016. If you’ve indicated interest in this event, we will contact you again once a date has been confirmed. Otherwise, we will provide you with an event notice and invitation to attend the public open house to immediately follow the charrette and again contact you at the draft concept stage for continued review and input.

For further information and background materials, please visit the District of North Vancouver’s website at: http://www.dnv.org/sites/default/files/edocs/maplewood-workshop-display.pdf
<table>
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<tr>
<td>- maintaining a mix of affordable and market housing.</td>
</tr>
<tr>
<td>- ensuring mix of housing and commercial space with opportunities for small business.</td>
</tr>
<tr>
<td>- community amenity space</td>
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<tr>
<td>- walkability - connecting trail system.</td>
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<tr>
<td>- maintaining natural habitats where possible</td>
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<tr>
<td>- ensuring protection from flooding, earthquakes, etc.</td>
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AFFORDABLE Housing should stay affordable through its life time. Catering to those who serve a community, the young who need to just rent especially when they are just starting out. They do not want to buy. Rentals.

Transportation and easy access to community areas and connection to other routes out of the area. Every effort made to preserve wetlands there is a shortage due to development over the years and that

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Have municipal wide concepts like setbacks from streams are
— Lot coverage allowance is
— Setback from streets — main roads — smaller roads

Tree canopy by lot by region

On-site water storage / capture
Pre-plan transportation including parking & cycling

Local governments are the ones to review the big picture which would include employment / industry

* Houston, near Smithers, has a wonderful community shared wetland

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- Main focus should be residential with community amenities and green space to create a livable neighbourhood.
- Lots of opportunities for local residents to walk to local businesses and engage with each other.

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- Affordable housing that is also accessible to people with disabilities.
- Connectivity between the town centres or the RS, good bus access with accessible stops + pedestrian paths that are safe for people with disabilities.

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- When creating a village, it is important to provide spaces and opportunities for the grassroots of the community to define its personality from the ground up.

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- I value preservation of natural wildlife habitats and remembering the importance of not fragmenting the natural spaces.
- I agree that we need to ensure there are homes for people with different levels of income.

LATER
- Be sure business and residential buildings have secure garbage/organics structures (required).
- Landscaping needs to be aware of what plants attract wildlife.

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**Parking Considerations for Regional Tourism?**

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Stakeholder Phone Calls & Information Received

The following is a record of stakeholder comments received in phone interviews, letters and record of meetings.
Stakeholder Interviews – Record of Conversations

Interview Outline

Interviews were conducted using the following format:
1. Introduction to the Maplewood Process: Review the project work/process & timeline.
2. Review key interests in the plan and planning process.
3. Identify a continued contact for the project work.
4. Ask what the typical process for referral and input to the plan is.
5. Are you interested in participating in the charrette?

Record of Interviews

TransLink & Coast Mountain Bus Company (2 representatives, referred to one)
- Translink does not currently expect service changes or new projects directly within this area.
- Refer to the Marine – Main Frequent Transit Corridor Study (formerly North Shore Corridor Study), it may have some impact in the area, the project is currently scheduled on a rapid timeline; a preliminary concept is due in the fall 2016.
- Refer to the north shore transportation plan – identified transit exchange, long term planning and existing services.
- Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.

Metro Vancouver, Properties Division
- Recommendation to involve water and sewer groups at Metro Vancouver and engage operations.
- There is an existing sewer right of way within the Maplewood area. Metro Vancouver will hold on all work with this ROW until land use and Maplewood Plan is complete; all previous designs showed a park designation; will require proper tenure for this ROW.
- Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.

Metro Vancouver, Policy and Facility Development Solid Waste Services (2 representatives)
- Currently operate an established waste site.
- Customers for recycling is primarily residents, may have some reno recycling.
- Large amount of truck traffic in/out of the area.
- Primary concern is the flow of traffic and limiting impacts on residential in the area.
- Interested in transportation study and charrette outcomes.
• Would like to remain on the stakeholder list, be informed of draft plans and design charrette outcomes.

Metro Vancouver, Growth Management, Parks, Planning, and Environment
• Key interests in the plan: compliance with RGS, industrial lands, conservation/land use changes, maintaining regional population and employment projections for the area.
• Note, key infrastructure projects will be happening in that area, outside the study area, but may have some impact to land use and development there (traffic impacts, with growth and development).
• Note the frequent transit development area, overlay for bus and connecting Maplewood to transit/access in and out of the community.
• Would like to remain on the stakeholder list, be informed of charrette invite, draft plans and design charrette outcomes.

BC, Housing, Development and Asset Strategies
• BC Housing can provide services, resources and information to this project process and District when working with developers in the area. Start with the website.
• BC Housing offers a financing program, assist with a sub-committee on housing.
• Can provide a short slide presentation on affordable housing.
• Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.

Property Owner Representatives (2 representatives)
• The way the FSR is currently set up there’s no incentives for certain owners to sell, in particular for smaller lots. Should additional density be desired (or build out of current designations), the District will need to review this as part of the Maplewood process.
• There is no community gathering place – this will add vibrancy to the community.
• Explore flexibility in creative ideas for housing, duplex and laneway housing for increasing density, or other forms, to promote owners developing, as opposed to large block development, in addition, this may be best suited to the character of Maplewood.
• Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.

North Shore Family Services
• Currently holds an agreement with the District.
• Currently serve 1,100 families, a well-used program. Services are community wide, not income dependent.
• Existing location has space and traffic concerns.
• Services require a central location and subsidized space. Other partners that would need a shared space, they need to match services, because they can’t set up tear down for programming.
• Two programs, iHope and companion in community care program, volunteer program, requires 5,000sq ft., two separate spaces, kitchen, outdoor spaces, play, and partnership with IDP, matching programs.
• Need lots of storage, receive donations in excess of $100,000 of materials. More space, can add more programs, and expand services.
• Maplewood is a key place and critical location, close to Tsleith-Waututh Nation, share lunch, support program, community building, this location is key to that partnership.
• iHope also raises a lot of money for community programs.
• Space through a community amenity would be ideal, they’re prepared to expand their services.
• Proximity to transit is important, parking is important, traffic flows and access is important. Already hearing from participants in the area about density and transportation.
• Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.

Representative Property Owner & Commercial Realtor
• There is a need to consider 2.75FSR up to 6 to 7 storeys in the area to ensure there is incentive for developers to redevelop properties.
• Consideration for rental buildings or combination of market and rental would be important.
• Consideration should be given for properties on Munster St. to have a higher density. The service lane should be reviewed, closed, consolidated, and sold with adjacent properties to facilitate a good development that works.
• Underground parking is likely not feasible (flood level and cost).
• Transportation was identified as a huge issue for the community, especially to accommodate the new density, fulfilling good design and Maplewood planning objectives, water access is important, work-industrial public space, and accommodate new business, new development should integrate in the community, make it aesthetically pleasing, there is a lot of opportunities here.
• Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.

Anthem Properties
• Have had recent successful development in the area.
• Currently within the District development process for additional properties.
• Interested in the Maplewood Planning Process.
• Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.

GWL
• Have had recent successful development in the area.
• Recognize potential for intensification, increased businesses, have stable and growing tenants.
• Interested in the Maplewood Planning Process. This process will help inform their future business planning.
• Notes for the process: street front parking remains available, good access, underground parking is cost prohibited for this area, need to be realistic with design or guidelines for buildings. Consideration for noise and access, transportation issues, especially near residential.
• Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.

Darwin Properties
• Maintain significant property holdings in the area.
• Development interest.
• Will provide and share information and general concepts. Have been working with the community for all developments.
• Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.
• Refer to information memo submitted July 22, 2016.

Seylynn Properties
• Interest in redevelopment of specific sites and in what land uses the Maplewood Planning Process concept plan will result in.
• Would like to remain on the stakeholder list, be informed of draft plans and interested in participating in the design charrette.

Vancouver Coastal Health
• District contacted. Refer to letter of input following.

Port of Vancouver (interview pending)
• Would like to remain on the stakeholder list, be informed of draft plans and design charrette outcomes.
Darwin Properties would like to submit the following summary of goals and constraints regarding each of our two sites in Maplewood:

**Maplewood Gardens:**
- Consider a variation in building height in order to provide affordable rental housing for existing tenants
- Provide a diversity of housing and building forms for people of all stages of life and income (concrete, wood-frame and townhouses)
- Maximize open space and connections to and from Northwoods Village
- Build a new High Street, providing a community focus and a public plaza for community events
- Incorporate active transportation strategies to encourage walking, cycling and transit use
- Limit the amount of retail on site so as not to compete with the neighbouring retailers and businesses
- Incorporate community amenity space for I Hope Family Centre for Family Services North Shore

**Maplewood North:**
- Industrial and office development is not possible on the northern half of the property due to the topography
- Focus employment lands in the southern, flat portion of the site
- Current business park model along Dollarton does not maximize the potential use of land; consider more innovative concepts such as South Lake Union Innovation District in Seattle to attract major employers such as Amazon.
- Consider a zoning that allows flexibility in types of uses and does limit the type of businesses who can work in the new business district.
- Employment lands designed to encourage higher paying jobs and greater employment density (more offices, less warehouse/factory uses)
- Residential housing to support the employment lands and attract/retain employees is critical to attracting businesses. Note: Darwin is currently in talks with 2 major North Shore employers – both agreements are conditional on providing a component of employee housing.
- Residential housing to support the employment lands and attract/retain employees is the most appropriate use for the northern sloping portion.
- Preserve and enhance wildlife corridors and habitats
- Preserve and enhance major watercourses
- Improve public trail network and potential connection to the Spirit Trail and the waterfront
- Enhance public transit to the site to be able to service the employment lands
- Sustainable development that enhances the environment, to LEED Gold standard
Child and Family Friendly Communities
As signatories to the North Shore Congress Child and Family Friendly Charter, Vancouver Coastal Health (VCH) and the District of North Vancouver (DNV) are committed to promoting child-friendly communities and looking at policy decisions through a child and family friendly lens.

From a municipal perspective, attracting and retaining families is vital to the social and economic fabric of a municipality. From a health perspective, the early years of a child’s life are a crucial determinant of child and adult health outcomes. The greatest return on investment, in terms of lifelong health and quality of life, can be realized through investments made during the earliest stages of the life course. Creating environments in which children and families thrive provides the foundation for a healthy, prosperous and sustainable society.

Importance of the Early Years
Children experience a phase of accelerated physical, mental and emotional growth in the early years of their lives. Indeed, during the early years, 700 new neural connections are made every second. While genes are the main driver behind initial child development, the process gets fine tuned through environmental influences. Essentially, the first six years of life is when a human’s growth is especially responsive to external input.

Adversity in the early years has been linked to:¹
- Higher rates of injuries, illness and death
- Increased risk of chronic conditions across the lifespan
- Higher rates of depression and anxiety
- Higher rates of substance abuse
- More child behavioural and developmental problems
- Lower school readiness and lower academic achievement, involvement with the youth justice system, teen pregnancy, and unemployment in adulthood

Local Government Makes a Difference
There is a long standing connection between the manner in which cities are planned and managed and the health outcomes that manifest among residents. Municipal governments can play a strong role in creating child and family friendly communities with family-oriented housing at affordable prices, access to child care and other community facilities and spaces, and elements that promote social connectedness.

Child and Family Health in the District of North Vancouver
While many residents on the North Shore are in very good health, there are some concerning statistics that indicate there is room for improvement for the sake of children’s well-being. In particular, 30% of children are developmentally vulnerable in the neighbourhood grouping that includes Maplewood, with the highest areas of developmental vulnerability found in Physical Health and in Social Competence.² In addition, the My Health My Community survey data shows that adults who live in the east area of the DNV report higher than average rates of stress, as well as lower than average rates of active transportation for work and errands – both of which warrant attention in order to prevent chronic disease in the future. These indicators also matter to child health as parent stress levels and health behaviours are linked to child developmental outcomes.
Helping Children and Families to Thrive in Maplewood

There are many planning actions and municipal policies that can support children and families to thrive. Based on the health data and on what the evidence shows has a high impact on child development, we recommend focusing on three areas in particular: housing, community spaces, and social connectedness.

Affordable, Family-Oriented Housing

Research has demonstrated the strong link between housing and child health. In particular, there are five aspects of housing that have been shown to impact the immediate and long-term physical, mental and social health of children: physical quality, crowding, affordability, location, and stability.

In the DNV, as is the case elsewhere in the VCH region, the lack of affordable housing is having a significant impact on parent stress levels, as well as contributing to child poverty. This latter point is a significant concern given the large body of evidence that illustrates that poverty may be the single most powerful predictor of poor health. Affordable housing can go a long way towards mitigating the negative effects of poverty on health and help to level the playing field for more equitable outcomes for all children.

A foundational component for housing in Maplewood that would both attract and retain families and promote child health is affordable, quality, family-oriented housing, particularly housing cooperatives and non-market, rental housing that includes ground-level, 3+ bedroom units. Ideally, the housing would be located close to outdoor play spaces and other community amenities through which children can interact with each other and to which children can walk to on their own.

Community Spaces

In Maplewood and vicinity, children seem to be most developmentally vulnerable in the Physical Health and Social Competence domains. There is evidence that relevant community spaces and facilities are positively associated with improvement in these domains. In particular, key community spaces for healthy child development include outdoor play areas, affordable, quality child care, and community hubs where families and other community members can access health and social services, socialize, and attend cultural and community events.

Promoting outdoor play is an effective strategy to address pressing child health issues. Many studies show that outdoor play is good for children’s physical and mental health and encourages creativity, social skills and resilience. When children are outside they also move more, sit less, and play longer. Community components that facilitate this to happen include playgrounds that offer natural elements such as trees and plants and the freedom for children to explore and engage in activities of their own choosing. Parks and natural environments are also important elements to add into the mix and have equally shown – sometimes more so – to benefit children’s health. Given Maplewood’s location and existing natural assets, there are exciting prospects in this realm.
Another key community space to consider for Maplewood’s children and families are child care facilities. Ample research shows that quality child care improves child health and promotes child development and learning. In addition, parent surveys that have been conducted over the past 10 years across BC – including two on the North Shore – show that a top concern of parents with young children continues to be the lack of availability, affordability, and quality of child care. Parents have also articulated a need for part-time care options, care offered during non-traditional hours, and care that accommodates children of different ages.

Community hubs – spaces where multiple services are offered in a single location – have shown to be a valuable community asset that enables improved health and social outcomes for individuals and families, as well as stronger collective impact at the community level. A community hub could also help to build connections between members of diverse cultural groups that might use the space such as new immigrants or members of the neighbouring Tseil-Watauth First Nation.

From a child and family-friendly lens, community hubs contain health and social services, early learning and care programs, and recreational and cultural opportunities, and are designed in a way that facilitate physical access (e.g., for strollers, children with disabilities, etc.) and social access (e.g., affordable services, culturally appropriate, socially inclusive, etc.). Recent, local examples of child and family hubs can be found in the District of West Vancouver and in the City of New Westminster.

**Social Connectedness**

Social connectedness and feelings of community belonging are important determinants of child and family health and well-being. These components help to reduce anxiety and depression and build children’s assets (such as connection to adults in their neighbourhood) that have been shown to protect against these health issues. In addition, when there is a strong feeling of belonging to a neighbourhood, residents tend to have higher levels of pride and trust, leading to higher levels of cooperation and contribution to broader community affairs. There is also extensive evidence on the negative impacts of a lack of social cohesion in a neighbourhood, including higher rates of youth delinquency, crime, victimization, alienation, and mental distress.

Given the high rates of child social-emotional vulnerability and adult stress levels in the DNV and the potential for social connectedness to mitigate some of these effects, there is an opportunity to strategically and intentionally plan Maplewood to strengthen child development and community well-being.

Key components in promoting social connectedness for the benefit of child and family health include design that enhances a feeling of safety (e.g., good lighting), is inclusive (e.g., easy for people with disabilities to get around; access to public washrooms, etc.) and encourages community members to interact with each other, particularly through community spaces (see previous section) and connectivity elements such as woonerfs and pedestrian pathways. An important aspect in this is to strive to make being out in the community and interacting with others easy, desirable, delightful and “the norm”. This creates the kind of supportive environment in which children, families and indeed all community members can thrive for better individual and population health outcomes in the District of North Vancouver.
Information Resources

*Child Friendly Communities: How child and youth friendly is your community?* This site offers measurement and planning tools to make your community more livable for children and families: [http://www.childfriendlycommunities.ca](http://www.childfriendlycommunities.ca)


*Local Government Policy Primer on ECD:* [https://www.vch.ca/media/video_urban_ECD_policies_oct%202013(1).pdf](https://www.vch.ca/media/video_urban_ECD_policies_oct%202013(1).pdf)

*Municipal Child and Family Friendly Strategies (some examples)*

- Surrey: [https://www.surrey.ca/files/Child_and_Youth_Friendly_City_Strategy_City_of_Surrey.pdf](https://www.surrey.ca/files/Child_and_Youth_Friendly_City_Strategy_City_of_Surrey.pdf)

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3. This measure of child vulnerability is provided by the Early Development Instrument (EDI). Maplewood is located in the “Lynnmoor/Blueridge” EDI neighbourhood. For more info: [http://earlylearning.ubc.ca/maps/edi/nh/sd44/](http://earlylearning.ubc.ca/maps/edi/nh/sd44/)
MAPLEWOOD LOCAL PLAN

1912 Development Map

District of North Vancouver, October 29, 2002
C.7 MAPLEWOOD LOCAL PLAN

1. The Maplewood Local Plan

The District Official Community Plan is a municipal bylaw adopted by Council expressing social, environmental and economic objectives and policies relating to the general form and character of future land use patterns and related servicing requirements for the District of North Vancouver. The Maplewood local plan covers a smaller local area (Map 1) and deals in more detail with local concerns. It forms a part of the District Official Community Plan.

The local plan is based on a long-term vision developed by Maplewood community representatives. The Plan itself is intended to guide and protect the community for the first ten years after which there will be a plan review and an adjustment of the plan to take into account changes in technology and society. This local plan will provide growth management direction in Maplewood over the coming decade or more.

2. Community Vision

Any plan must be based on visions of the future, not necessarily tied to the past, with the ability to see beauty and opportunity where none before have realised it. So Maplewood, which seems today like a neglected and unorganised community, has abundant opportunities available to it to transform into a new exciting and vibrant community. Such forward-looking visions become the foundation of the plan.

The key vision of the community is that of a complete and balanced community with local jobs equalling the local labour force. In particular, jobs for local people and especially jobs for local young people should be encouraged and this will also have the merit of increasing the municipal tax base. New employment areas will reflect a high environmental standard and will also have high aesthetic standards, reflecting the community's outstanding natural environment. There will be a variety of housing for all ages and incomes and family circumstances centred on a newly invigorated, walkable Maplewood village centre. Front Street will become a key focus of pedestrian activity, a street lined with new retail businesses with apartments and live/work units above. The Maplewood village centre will be convenient for transit and pedestrians and will be the nerve centre of an extensive system of trails, which wend through the community stretching from the Seymour River to Windridge and from Hogan’s Pool to Burrard Inlet.

Sustainability - defined as better energy efficiency in the design of new buildings and business/industrial areas, diminished use of the automobile through provision of live/work units, local jobs and better local transit, increased walkability through a new pedestrian trail system and better home-work relationships and overall green space protection - will be strongly encouraged in the name of conservation of the Earth’s resources. The riverfront will be open and accessible to all and there will be better access and viewing opportunities on the Burrard Inlet waterfront. Conservation and protection will be emphasised and all creeks, wetlands, steep slopes and the remaining saltwater marshes will be rigorously protected and enhanced. Entranceways into the community will reflect its social history and environmental assets and new buildings will be encouraged to adopt an architectural theme which pays tribute to Maplewood’s long and distinguished history as one of the North Shores pioneer communities.

3. Plan Goals

Social - creation of a vibrant and complete community where one can live, work, recreate and shop in a friendly and welcoming environment.

Environment - recognition and enhancement of the community's unique environmental assets of river frontage and salt water frontage, treed slopes and natural creeks, saltwater marsh and mudflats, logged old growth forest and forested spaces; promoting efficient use of energy resources.
Transportation – provision of accessible and widespread pedestrian/cycling routes so that walking and cycling are major activities; realise the benefits of Maplewood’s location as a transportation axis for transit, rail, water and road transportation; minimize the impact of commuter vehicle trips on a sustainable community.

Economic - provision of local employment that will enable local people to work and live in the same neighbourhood or in the same building, including the creation of a vibrant and attractive central business area and business parks that are energy efficient, attractively designed and are an asset to the community.

4. Environment and Conservation

Key Plan Strategy: to protect and enhance Maplewood’s environmental assets with emphasis on watercourse and shorelands.

Maplewood has a varied natural environment, the two dominant features being the valley of the Seymour River and the shore of Burrard Inlet. Other dominant natural features are the Windridge escarpment and the various creeks, which wind through Maplewood - Maplewood Creek, Blueridge Creek and McCartney Creek. 2 illustrates the variety of environmental assets in this community.

The shoreline of Burrard Inlet was once a natural mudflat, the home of numerous flocks of birds. With its freshwater/saltwater mix it was a productive area for wildlife, waterfowl and fish. With industrialization, much of the salt-water marsh was dredged and filled for industry. However, prodigious preservation efforts by the Wildbird Trust in the Maplewood Conservation Area on land infilled and previously used for industrial purposes have demonstrated how a productive bird habitat can be sustained in this area. The remaining tidal mudflats in the area east of the Maplewood Conservation area complement the habitat provided in the Conservation Area and will be protected in their natural state, as the contribution of tidal flats to bird and fish habitat is substantial. Additional community and neighbourhood level open space 6.9ha (17ac) - provided north of Dollarton Highway, will complement the Conservation Area. The major rivers and creeks of Maplewood – the Seymour River, Maplewood Creek, Blueridge Creek and McCartney Creek also all need environmental protection -a key feature of this plan.

The plan also recognises the existence of hazardous conditions in Maplewood and so the Windridge escarpment will be protected as a forested greenbelt featuring an east-west trail and the upper springs and lower seepage areas must be carefully controlled for slope stability while still providing base-flow to the creeks. The trees, streams, shores and wildlife are all part of Maplewood’s character and are assets to the community and must therefore be treasured, preserved and protected. The existence of potentially hazardous conditions relating to the air quality around the Nexen Inc chemical plant is recognised in the application of development restrictions around the plant according to the MIACC guidelines.

**Objective 4.1 To protect the Seymour River as an important community resource**

Policy 4.1.1 Any development bordering the Seymour River shall be set back according to current Provincial legislation.
Policy 4.1.2 Natural riverbank vegetation on the Seymour River shall be retained and the riparian area rehabilitated where possible.
Policy 4.1.3 The fish bearing capacity of the Seymour River shall be documented and a plan put in place to increase such capacity over the next 10 years.
Policy 4.1.4 The advisability of designating low lands near the river as a flood plain will be examined in consultation with the Province.

**Objective 4.2 All streams and creeks shall be protected, preserved and enhanced**

Policy 4.2.1 Any development bordering McCartney or Blueridge Creeks shall be set back according to current Provincial legislation. Development close to other streams or creeks shall have setbacks as determined by Provincial legislation and by required environmental studies.
Policy 4.2.2 Natural streamside or creek side vegetation shall be retained and the riparian areas rehabilitated where possible.
Policy 4.2.3 The fish bearing capacity of all streams and creeks shall be documented and a plan put in place to increase such capacity over the next 10 years.
Policy 4.2.4 All streams and creeks shall have identification signs erected at prominent locations providing the stream/creek name and information about its environmental and habitat qualities.
Policy 4.2.5 Fresh water flow from streams and creeks into the Maplewood Conservation area is beneficial and should be enhanced where possible.
Policy 4.2.6 Natural waterways shall be protected from harm caused by storm water discharge.
Policy 4.2.7 Protect water quality in streams and creeks by the use of environmentally sensitive land development practices and related engineering designs.

**Objective 4.3 To protect other natural water features**

Policy 4.3.1 The Maplewood Farm duck pond shall be restored and enhanced for fish and wildlife habitat as a community effort.

**Objective 4.4 To protect and enhance the natural and vegetative qualities of the Windridge escarpment.**

Policy 4.4.1 An environmental study shall be prepared to document the physical, vegetative and wildlife assets of the Windridge escarpment.
Policy 4.4.2 All streams, groundwater levels and water seepage areas within the escarpment shall be carefully protected and monitored to ensure slope stability and vegetation survival.
Policy 4.4.3 Where it is documented that an existing public trail might jeopardise the stability of the escarpment, such trail may be closed and re-routed, where possible.
Policy 4.4.4 All tree and vegetation removal from the escarpment shall require an environmental permit and such permit shall not be issued where it might adversely affect the stability of the escarpment.
Policy 4.4.5 Any new road or trail traversing the escarpment shall require a detailed environmental assessment to ensure the best route is chosen from a slope stability /environment viewpoint.

**Objective 4.5 To protect air, water or land quality**

Policy 4.5.1 All industrial developments greater in size than 0.5 ha (1.23 ac), either new, expanded or redeveloped, shall be required to prepare environmental impact studies detailing any potential pollution of air, water or land.
Policy 4.5.2 Encourage the development of site remediation plans for all polluted industrial sites with, approximate timelines, to assist in succession planning of such sites.
Policy 4.5.3 Protect the quality of groundwater by ensuring that surface activity does not adversely affect surface water percolation so leading to pollution of groundwater resources.

**Objective 4.6 To ensure new development is environmentally sound.**

Policy 4.6.1 All new development to reflect current environmental design principles and practices.
Policy 4.6.2 The landscaping of development parcels shall reflect and complement the natural areas.
Policy 4.6.3 All environmentally critical areas shall be identified prior to development approval and measures taken to protect them.
Policy 4.6.4 An independent wildlife survey shall be required prior to the development of natural or forested areas.
Policy 4.6.5 Encourage energy conservation in the design of new buildings in Maplewood.

**Objective 4.7 To support and protect the efforts being made to increase wild life in the Maplewood Conservation Area.**

Policy 4.7.1 Ensure no developments incompatible to wild life habitat occur on the perimeters of the Maplewood Conservation Area.
Policy 4.7.2 Work with the Wild Bird Trust to enhance the Conservation Area.

**Objective 4.8 To protect and enhance the remaining natural intertidal shores in Maplewood.**

Policy 4.8.1 Ensure public access to the remaining natural intertidal shores is strictly controlled to protect such areas.
Policy 4.8.2 The Burrard Inlet Environmental Review Committee (BERC) should be requested to ban the infilling and the dredging of the remaining natural intertidal shores in Maplewood excepting where dredging is required for vessel safety and maintaining established shipping channels.

Policy 4.8.3 Studies shall be undertaken to establish the feasibility of reclaiming former intertidal shores for wildlife habitat.

Objective 4.9 To expand and improve greenway corridors for wildlife

Policy 4.9.1 Provide a protected corridor for Blueridge Creek in the Windridge area to where it joins McCartney Creek.
Policy 4.9.2 Provide a protected wildlife corridor along McCartney Creek.
Policy 4.9.3 Expand the corridor where McCartney creek crosses the Dollarton Highway.
Policy 4.9.4 Develop an inventory of wildlife in the area to determine wildlife corridor needs.
Policy 4.9.5 Protect streamside areas and strive to maximise these where possible.

5. Parks, Open Space and Trails

Key Plan Strategy: to create many new park opportunities and a new community trail system.

Maplewood, under this local plan, will possess a large amount of parks and open space (Map 3) totalling 76.92 ha (190 ac). In terms of District parks standards, there is a surplus in community level space and neighbourhood level parks space. In addition, the community has easy access to a considerable amount of district level space (Maplewood Conservation Area and Maplewood Farm) and also has 10.7ha (26ac) of greenbelt open space (McCartney Creek, the Windridge escarpment and Cutter Island), as indicated below:

<table>
<thead>
<tr>
<th>MAPLEWOOD OPEN SPACE</th>
<th>TYPE &amp; AMOUNT</th>
<th>PARKS STANDARD ha/1000 pop.</th>
<th>LOCATION and STATUS</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>District level</td>
<td>N/A</td>
<td>Maplewood Conservation Area- existing</td>
<td>34 ha (84ac)</td>
<td></td>
</tr>
<tr>
<td>38.1ha (94ac)</td>
<td></td>
<td>Maplewood Farm- existing</td>
<td>4.1 ha (10ac)</td>
<td></td>
</tr>
<tr>
<td>Community level</td>
<td>N/A</td>
<td>Seymour River Heritage park- existing</td>
<td>5.8 ha (14.3ac)</td>
<td></td>
</tr>
<tr>
<td>10.62ha (26.24ac)</td>
<td></td>
<td>Area north of Dollarton-proposed</td>
<td>4.8ha (11.86ac)</td>
<td></td>
</tr>
<tr>
<td>Neighbourhood level</td>
<td>N/A</td>
<td>Windridge park- existing and proposed**</td>
<td>14.3ha (35.5ac)</td>
<td></td>
</tr>
<tr>
<td>17.5ha (43.24ac)</td>
<td></td>
<td>Playground north of school- proposed</td>
<td>0.3ha (0.9ac)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Playground off Riverside Dr- existing</td>
<td>0.4 ha (1ac)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>West of International College-proposed</td>
<td>2.5ha (6.2ac)</td>
<td></td>
</tr>
<tr>
<td>Greenbelt Open Space</td>
<td>N/A</td>
<td>McCartney Creek-existing</td>
<td>4.9ha (12ac)</td>
<td></td>
</tr>
<tr>
<td>10.7ha(26.4ac)</td>
<td></td>
<td>Windridge escarpment-existing</td>
<td>4ha (10ac)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cutter Island-existing</td>
<td>1.8ha (4.5ac)</td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td>* based on local plan estimate pop of 3520</td>
<td>76.92ha (190ac)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Windridge Park partially exists but is not dedicated and is only partially zoned for park use. An area of approximately 8.7ha (21.5ac) is currently used as a de facto park and the local plan proposes an additional 5.6ha(14ac) expansion into a new dedicated and zoned Windridge Park of 14.3ha (35.5 ac).

Maplewood has a number of parks and also areas with greater park potential. The Maplewood Conservation Area is a district level open space and although it is primarily a bird sanctuary, it does provide for public access to the shoreline and this has been a valuable attraction for the community. The 4.1ha (10ac)
Maplewood Children’s Farm is both a district level open space and a regional attraction and should be encouraged to constantly upgrade and diversify its attractions.

Good public access to the Seymour River is offered by Seymour River Heritage Park, a 5.8ha (14.3ac) community level park and in the long term it is the intent of this plan to create the opportunity for a sea-to-sky walkway along the river starting at the mouth and proceeding as far as the Seymour Demonstration Forest. More community level open space is provided by an additional 4.8ha (11.86ac) area north of Dollarton, currently a wooded area, and this may further complement the Conservation Area.

The 14ha (35ac) neighbourhood level park in Windridge will protect the Blueridge Creek valley and will preserve the magnificent second growth forest with its remnants of the old growth logging industry as another link to Maplewood’s past. Additional neighbourhood level open space will be provided north of Dollarton and east of Riverside Drive with a 2.5ha (6.2ac) area open space located on a former fill site immediately west of the Canadian International College.

Greenbelt open space within the community is represented by the McCartney Creek Valley, currently protected by PRO zoning, the east-west Windridge escarpment and Cutter Island, a 1.8ha (4.5 ac) dedicated park space lying west of the Seymour River. This open space will be left in its natural condition and so not developed for any form of park. A possible community trail running along the Windridge escarpment linking the new Windridge Park with the Seymour River should be investigated.

**Objective 5.1 To expand the range of waterfront access opportunities to Maplewood residents.**

- Policy 5.1.1 Prepare an independent environmental impact and feasibility study of the development of a public viewpoint at the foot of Park Street, and the required connecting public trail alternatives, in consultation with the Wild Bird Trust, Maplewood residents and adjacent landowners.
- Policy 5.1.2 Ensure ongoing consultation with the Wild Bird Trust in any trail proposal, which might affect the Maplewood Conservation Area.
- Policy 5.1.3 Develop a trail along the length of the Seymour River starting at the river mouth, respecting riparian protected areas along the river.
- Policy 5.1.4 Develop public access on the spit at the mouth of the Seymour River with new viewing opportunities.
- Policy 5.1.5 Review the feasibility and safety of a public canoe/kayak launching area on the spit, in conjunction with the Vancouver Port Authority and BERC.
- Policy 5.1.6 Future industrial or commercial developments on the waterfront should be people-friendly and provide for public access opportunities.
- Policy 5.1.7 Maintain the Horton, Daly and Ellis waterfront-access street ends for public viewing of Burrard Inlet, but not for boat launching.
- Policy 5.1.8 Consult with the GVRD regarding the future use of the log sort area at the foot of Riverside, including the possibility of using part of the site as public waterfront park, when such site is surplus to GVRD requirements.

**Objective 5.2 To expand park opportunities in the community.**

- Policy 5.2.1 Create a park in the Windridge Centre area over all District land along and east of Blueridge Creek. Such park to utilize existing trails, preserve existing vegetation and preserve the Blueridge Creek valley, linking with the McCartney Creek valley. Any park plan for this new park shall also examine the needs of new residents in Windridge, including new seniors housing and the needs of the Kiwanis Lodge residents.
- Policy 5.2.2 Create a Windridge escarpment park with provision of an east-west trail, the boundaries of such park to be decided in consultation with adjacent property owners and after environmental studies. Policy 5.2.3 Develop as a children’s park, the current undeveloped park lying north of Maplewood School but emphasize tree and vegetation retention to provide privacy for neighbours.
- Policy 5.2.4 Create new community level and neighbourhood level open space north of Dollarton Highway, between Riverside and the Canadian International College to provide opportunities for a playground, community trails, a sculpture walk and conservation of wetland areas.
- Policy 5.2.5 The Seymour River Heritage Park should be expanded to serve the community with provision for a dog walk, a public washroom and a canoe/kayak launching area should the Seymour River spit launch be inoperable due to safety or environmental concerns.
Policy 5.2.6 Cutter Island, on the west bank of the Seymour River, shall remain as a natural area but pedestrian links with Maplewood Centre and along the Seymour River should be examined.
Policy 5.2.7 Ensure that current and proposed park space is developed to provide for community needs.
Policy 5.2.8 Examine opportunities for a public allotment garden in the community, in partnership with a non-profit agency.

Objective 5.3. To enhance the recreational experiences offered by Maplewood Farm.

Policy 5.3.1 Encourage the continuous improvement of the Maplewood Children’s’ Farm.
Policy 5.3.2 Provide additional interpretative material to commemorate the first District council meeting held at this location in 1891.
Policy 5.3.3 Provide better directional signage to the farm.
Policy 5.3.4 Examine the vehicular access and parking needs of the farm.
Policy 5.3.5 Encourage the retention of a tree-covered, natural-looking entrance to the farm from Seymour River Place.

Objective 5.4 To create a network of trails connecting all parts of the community.

Policy 5.4.1 Create a trail master plan linking the Seymour River, Windridge escarpment, Maplewood Farm, the new Windridge park, the Park Street viewpoint, other new open spaces, streams, creeks and the new Dollarton Highway linear trail.
Policy 5.4.2 Ensure that new development in Maplewood Centre, Windridge and new Business Parks are all connected to the community trail system.
Policy 5.4.3 The trail system to be developed with a distinctive Maplewood motif reflecting the history of Maplewood and with interpretative plaques provided along the trails.
Policy 5.4.4 All trails in Maplewood to be linked with important features in Maplewood such as the Environment Canada Science Centre, the International College and the Maplewood Centre.
Policy 5.4.5 Ensure that Maplewood trails are functionally connected to trails in adjacent communities.
Policy 5.4.6 Plan so that trails are wheelchair accessible where possible.
Policy 5.4.7 Establish trails where bicycles are compatible with pedestrian use of the trail.
Policy 5.4.8 Riverside /streamside trails to be designed to respect riparian areas, wildlife corridors and other identified sensitive areas.

6. Residential

Key Plan Strategy: to improve opportunities for a larger variety of housing types.

Maplewood is a small community from a residential viewpoint. There are 2492 people in Maplewood according to the 1996 census, amended to include the Kiwanis Lodge in Windridge and the Seymour Estates apartment complex at Lytton Street and Mt Seymour Parkway. The breakdown of existing housing types and population age groups is shown in the table below:

1996 Census as updated to 2000:

<table>
<thead>
<tr>
<th>UNITS</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total Units</th>
<th>Population</th>
</tr>
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<tbody>
<tr>
<td>Single family</td>
<td>264</td>
<td>135</td>
<td>210</td>
<td>70</td>
<td>192</td>
<td>871</td>
</tr>
<tr>
<td>Town Houses</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Sec Suites</td>
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<tr>
<td>Windridge</td>
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<td></td>
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<tr>
<td>Kiwanis</td>
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</tbody>
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<table>
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<tr>
<th>POPULATION</th>
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<th></th>
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<tbody>
<tr>
<td>0-19 yrs</td>
<td>20-44 yrs</td>
<td>45-64 yrs</td>
<td>65+yrs</td>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>700 (28%)</td>
<td>1005 (40.3%)</td>
<td>475 (19%)</td>
<td>312 (12.5%)</td>
<td></td>
<td>2492</td>
<td></td>
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</tbody>
</table>
It is proposed that there be an increase (to 1362 units) in the number and type of residential accommodation in the community. Many of the town house and apartments are rental units and this should be encouraged to continue. The diversion of heavy traffic from the Dollarton Highway to the new Dollarton Highway will act to reduce noise, smell and congestion for residences along the current Dollarton Highway and so increase the opportunity to improve the residential ambience of Maplewood. There is some opportunity in the village centre for some live/work residences, for artists’ loft and live/work units on Front Street. This would contribute to the “completeness” of Maplewood and would bring more residential character to the community. Along the old Dollarton Highway, opportunities exist for an eclectic mixture of low density housing types, ranging from existing single-family units, to small lot housing, duplexes, triplexes and innovative low-density live/work units. Existing single-family areas will remain primarily the same, except in specifically noted areas. The following table summarizes the breakdown of housing types in the local plan.

### 2002 Local Plan Estimates:

<table>
<thead>
<tr>
<th>UNITS</th>
<th>Single Family</th>
<th>Town Houses</th>
<th>Apartments</th>
<th>Sec Suites</th>
<th>Windridge</th>
<th>Kiwanis</th>
<th>Total Units</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>328</td>
<td>178</td>
<td>250</td>
<td>70</td>
<td>344</td>
<td>192</td>
<td>1362</td>
<td>3526</td>
</tr>
</tbody>
</table>

It should be noted that all new residential development must comply with the land use guidelines set out by the former Major Industrial Accidents Council of Canada (MIACC) relating to distance from the Nexen Inc (formerly CXY Chemicals) chemical plant lying south of the CNR tracks on Amherst Road. In all cases in lower Maplewood (not including Windridge) in areas designated RS and RM, this means an average density of 19.76 units/ha (8 units/ac) for all new developments. Such developments are noted in the following table:

### Table 1 Density Averaging in lower Maplewood

<table>
<thead>
<tr>
<th>Site and Location (See Map 7 for site locations)</th>
<th>Size Ha/ac</th>
<th>Current Use</th>
<th>Total Units</th>
<th>Proposed Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Dollarton Highway</td>
<td>1.2(2.99)</td>
<td>Single Family</td>
<td>24</td>
<td>Single Family, Townhouses/Apts</td>
</tr>
<tr>
<td>b) Seymour River Pl</td>
<td>0.5(1.28)</td>
<td>Single Family</td>
<td>20</td>
<td>Single Family, Townhouses/Apts</td>
</tr>
<tr>
<td>C) Front Street N</td>
<td>0.4 (1.1)</td>
<td>Industry</td>
<td>10</td>
<td>Apartments over retail, Live/work</td>
</tr>
<tr>
<td>d) Front Street S</td>
<td>2.3(5.6)</td>
<td>Vacant</td>
<td>30</td>
<td>Apartments over retail, Live/work</td>
</tr>
<tr>
<td>e) Dollarton Highway S</td>
<td>1.0(2.5)</td>
<td>Single Family/Vacant</td>
<td>20</td>
<td>Single Family, Live/work units, Duplex etc</td>
</tr>
<tr>
<td>f) Dollarton Highway N</td>
<td>3.6(8.9)</td>
<td>Single Family/Vacant</td>
<td>75</td>
<td>Single Family, Live-work units, Duplex etc</td>
</tr>
<tr>
<td>Total Average Density</td>
<td>9.05(22.37)</td>
<td></td>
<td>179 units 19.76 units/ha (8 units/ac)</td>
<td></td>
</tr>
</tbody>
</table>

Note: The 8 units/acre average density restriction will be either removed at such time as chlorine production ceases permanently at the Nexen Inc chemical plant, or reviewed should Nexen Inc make plant changes that reduce risk.

In the Windridge Centre area, opportunities are noted in the plan for an expansion of apartments or congregate care residential units south of the Kiwanis Lodge and for family- oriented or seniors housing east of Kiwanis Lodge. Additional apartment units above ground floor retail are proposed for a 0.4ha site at the southwest corner of Berkley Road and Mt Seymour Parkway and the Seymour Estates apartment complex on Lyton has some intensification potential.
**Objective 6.1 To provide a variety of housing types and tenures**

Policy 6.1.1 Expand multi-family housing opportunities within and around the Maplewood Centre, including housing affordable to all income groups.
Policy 6.1.2 Provide for additional multi-family housing in Windridge to cater to families or seniors.
Policy 6.1.3 Strive to protect existing rental housing stock.
Policy 6.1.4 Conserve existing single-family housing areas where designated RS on the Plan Map.
Policy 6.1.5 Allow for low-density housing options –single family/town housing/ apartments, duplex/triplex/artist lofts/live-work units- in areas designated RM.
Policy 6.1.6 Encourage the development of adaptable housing in Maplewood so that people may live their lifecycle in Maplewood if so desired.
Policy 6.1.7 Make provision for small single-family lots and duplexes or triplexes on Dollarton Highway near Forester.
Policy 6.1.8 Residential densities in excess of MIACC guidelines will not be supported in lower Maplewood in all areas designated RM on the Plan Map. This means that the allowable residential development shall not exceed the projected number of units listed on Table 1. These density restrictions to be removed when production of chlorine ceases permanently at the Nexen Inc chemical plant, or reviewed should Nexen Inc make plant changes that reduce risk.
Policy 6.1.9 Make provision for artists’ loft units and low density live /work units on Dollarton Highway near Forester, allowing for a variety of commercial and service commercial uses.

**Objective 6.2 To revitalise existing residential areas**

Policy 6.2.1 Conduct a municipal audit of infrastructure in current residential areas to determine a replacement plan for sidewalks, streets, lighting standards, sewers and waterlines, with new streetscape guidelines for the old Dollarton Highway.
Policy 6.2.2 Develop residential design guidelines to be applied to new housing. Such guidelines to be drawn up with community input with the intention that new housing reflect the spirit of Maplewood.
Policy 6.2.3 Examine traffic patterns near the Maplewood Farm to determine if the traffic impact on the neighbourhood can be reduced.
Policy 6.2.4 Ensure that new single family housing is in scale with existing neighbourhood housing unless the community sets different standards.
Policy 6.2.5 Improve current streetscapes and lanes where possible.
Policy 6.2.6 Embark on a residential street tree-planting programme.
Policy 6.2.7 Support a density increase on the Seymour Estates property to a maximum Floor Space Ratio (FSR) of 1.2 to allow for creative redevelopment and improvement of the complex (residential density of 98-123 units /ha or 40-50 units/acre).

**Objective 6.3 To ensure that all new residential development provides positive benefits to the community**

Policy 6.3.1 Develop a Public Benefits Strategy with community input.
Policy 6.3.2 Include protection of existing rental housing, provision of new seniors housing, provision of park space and improvement of community services in such strategy.
Policy 6.3.3 On RM Medium Density sites where densities up to 138.32 units/ha (56 units/acre) are allowed, seniors housing or congregate care developments to a maximum floor space ratio (FSR) of 2.0 are allowed.
7. Commercial

Key Plan Strategy: to create an exciting, dynamic village centre in Maplewood and revitalise the commercial core.

Maplewood has a small commercial base of approximately 51,900 sq ft (Retail/Service and Office space) according to the 1997 Urban Systems Economic Development Strategy Study. The five main commercial areas in Maplewood are the Maplewood Plaza, Dollarton Plaza, Maplewood Market, a former Petrocan service station converted to automotive repair and the Maplewood Pub on Spicer Street. Other small retail type uses, a small café on Riverside Drive and a doughnut drive-through on Dollarton, exist within industrially zoned areas. The strategy of this plan will be to focus commercial activity into the Maplewood and Dollarton Plaza areas (Map 4). The Maplewood Centre will be the dynamic, diverse and pedestrian/transit friendly commercial/retail focus of Maplewood. Front Street will be developed as a new “High Street” with mixed uses retail and apartments on both sides of the street. More multi-family housing in Maplewood Centre will also provide a better customer base. Emphasis will be on improved pedestrian activity and aesthetics: street furniture, attractive paved pedestrian areas, better signage and the history of Maplewood will be highlighted in street signs and historic markers. A space capable of hosting a weekly “farmers market” will be sought to allow Maplewood Centre to act as a true village core. A small vigorous commercial centre will better serve the needs of residents and workers and that includes the retention and improvement of existing retail areas. The north side of Front Street will be redeveloped to provide about 10,000 sq ft of ground level retail while the Nexen Inc. property on the south side of Front Street has potential for 97,000 sq ft of commercial use (site 12 on Map 4). A minor commercial presence of about 10,000 sq ft is also planned for Windridge, for a total increase in commercial space of 117,000sq ft (or 11,700 sq ft/year over 10 years). Home-based businesses will also be encouraged as a means of creating a work/live environment.

The whole commercial/light industrial complex centred on Charles Street also offers opportunities for redevelopment and expansion to complement the Maplewood Centre and take advantage of the increased business opportunities and the improved access to Maplewood provided by the new Dollarton Highway. The entranceways to Maplewood are very visible and this is where first impressions of the community are made so care must be taken with redevelopment of such sites.

**Objective 7.1. To create a village centre for Maplewood.**

Policy 7.1.1 Prepare a master plan for the Maplewood Centre vicinity to include provision for a new “high street” centred on Front Street.
Policy 7.1.2 Ensure a strong pedestrian flavour to redevelopment within the Maplewood Centre with options for alternative modes of transport: transit and bicycles.
Policy 7.1.3 Develop design guidelines for all new commercial and residential development in the village centre. New buildings to carry a “Maplewood” theme reflective of the community’s history and geographic setting.

**Objective 7.2 To Increase pedestrian-friendliness within the village centre**

Policy 7.2.1 Encourage better weather protection for pedestrians.
Policy 7.2.2 Provide more pedestrian resting places with benches.
Policy 7.2.3 Encourage the provision of bicycle storage.
Policy 7.2.4 Increase live-work opportunities within the village centre to reduce auto dependence.

**Objective 7.3. To Increase employment opportunities in Maplewood**

Policy 7.3.1 Encourage more small and diverse retail businesses.
Policy 7.3.2 Explore possibilities of more live/work residences either in the Maplewood village centre on Front Street or within parts of the Dollarton Business Park.
Policy 7.3.3 Encourage home-based businesses by the provision of proper zoning regulations.
Policy 7.3.4 Support small business and create a business climate which helps all businesses.
Policy 7.3.5 Encourage the creation of a local business association to promote Maplewood businesses.
Objective 7.4. To provide more mixed-use (residential/commercial)

Policy 7.4.1 Provide for a mixed use development on a site at the south-west corner of the Berkley Road/ Mt Seymour Parkway intersection with retail businesses to support the diverse population of the Windridge area.

Objective 7.5. To ensure that business uses at Maplewood’s gateways are of a high aesthetic standard

Policy 7.5.1 Require a high standard of building design and landscaping on all business sites at the approaches to Maplewood.
Policy 7.5.2 Require that any redevelopment of the “Swedish Park” site, currently used for a storage unit business, reflects the history of the site and is of a high aesthetic standard as befits this most important entranceway site.
Policy 7.5.3 Develop site, sign and landscape standards, based on Maplewood’s environment and history on sites 3 and 4, identified on Map 7.
8. Business Parks

Key Plan Strategy: to create new employment within a stimulating physical environment

Maplewood will be changed dramatically with the development of four substantial areas for business park purposes (Map 4):

a) The Dollarton Business Park of 1.4ha (3.5ac) (Site 8 on Map 4) located at Dollarton and Forester. This will be a high quality environment for business/office and light industrial use. Landscaping and tree planting will be emphasised and design guidelines introduced to make attractive buildings and high quality landscaping the norm.

b) Nexen/DNV 3.5 ha (8.8 ac) north of the new Dollarton Highway, bounded by Riverside Drive, Forester Street and the lane south of Dollarton, (Site 8a on Map 4) will be a business park-type development that will feature tree retention and high tech office type use. The 4.97ha (12.2 ac) of land south of Dollarton Highway (Site 9 on Map 4), currently owned by Nexen Inc will tend more to light industrial use but of high quality and allow for R&D uses.

c) The 10ha (25 ac) site lying between Windridge Drive and Dollarton Highway, between Blueridge Creek and the Canadian International College (Site 7 on Map 4), currently owned by the Vancouver Port Authority (VPA), will feature mixed-use office/business park with minor commercial. Part of this land may be developed for a film studio. Any retail uses except for purely local use are discouraged as this will act negatively on Maplewood Centre. Live/work uses are encouraged and in-house transient residential uses within a film studio complex are acceptable. Provision has to be made for the development of the extension of Berkley Road to connect with Dollarton Highway.

d) Approximately 5.2ha (13 ac) of land bounded by Dollarton Highway, Forester Street and the Maplewood Conservation Area (Site 8b on Map 4). This will be an attractively located business park which will take advantage of the views offered by the adjacent Maplewood Conservation Area and will contain office space, research and development and, possibly, film-related activities.

Developments of such business parks will, over the next 20 years, provide a substantial tax base to the District and a ready market for Maplewood’s local businesses, leading to a revitalisation of businesses in the Maplewood village centre.

**Objective 8.1 To encourage the development of business park uses**

Policy 8.1.1 Work with private owners within the Dollarton Business park to ensure comprehensive development of this business park.

Policy 8.1.2 Start negotiations with VPA leading to the development of a master site plan for its holdings in east Maplewood, such plan to be preceded by environmental studies to assess the impact of development on natural vegetation, wildlife, wildlife corridors, surface and subsurface hydrology and slope stability.

Policy 8.1.3 Do not allow major retail uses in business parks or retail businesses along Dollarton Highway, uses of such a nature that would adversely affect existing or planned retail areas in Maplewood Centre.

Policy 8.1.4 Encourage the provision of a fibre optics network into all business parks.

**Objective 8.2 To create attractive business parks**

Policy 8.2.1 Develop building and landscape design guidelines for all business park areas with the emphasis on high quality buildings that reflect a Maplewood theme of environmental conservation and history.

Policy 8.2.2 Ensure that all business park designs encourage the use of bicycles.

Policy 8.2.3 Allow only micro-scale retail uses in business parks to serve purely business park needs in order not to compete with businesses in the Maplewood village centre.
Policy 8.2.4 Preserve as much of the natural existing vegetation as possible and concentrate on heavy replanting to create an oasis of green.
Policy 8.2.5 Develop a consistent business park signage that emphasises the natural environment of Maplewood.
Policy 8.2.6 Encourage the provision of public art within all business park areas.

**Objective 8.3. To integrate residential uses within business parks**

Policy 8.3.1 Develop new zoning that allows a mixture of residential uses such as live/work buildings within business parks.

**Objective 8.4 To ensure that new business parks contribute to the community’s well-being**

Policy 8.4.1 Require community improvement levies to provide for improved recreational, cultural and community facilities.
Policy 8.4.2 Include community recreational activities in business park design.
Policy 8.4.3 Explore a business park tie in to Windsor High school business programmes to create work experiences for students.

9. Industrial

**Key Plan Strategy:** to plan for the replacement of the chemical industry in the long term with a range of industrial uses, including light industry, opening opportunities for public access to the waterfront.

Maplewood has a strong industrial employment base (Map 4) dating from the 1920’s with the development of coastal sawmills. The non-wood industrial base is of more recent origin- dating from the late 1950’s with the Nexen Inc chlorine plant. The plan now encourages the removal of hazardous industry from Maplewood. When the chemical industry south of the CNR tracks – represented by Nexen Inc, Sterling Pulp Chemicals and Mohawk Oil - decides to relocate, it will open the door to a redevelopment of this area for a larger number of lighter industrial uses, which may eventually generate a higher municipal tax base, as well as allowing opportunities for improved public shoreline access. The filled shore lands belong to Vancouver Port Authority and any changes in the industrial nature of this area will require VPA agreement. VPA also has the right to retain such lands for port-related industry. Since industrial site remediation may take decades to complete, conversion of the heavy industrial areas will take well beyond the time scale of this plan. Nexen Inc owns 4.97 ha (12.3 ac) of zoned and serviced light industrial land south of the new Dollarton Highway, which should develop following the highway opening in summer 2002.

Other major industrial uses in the area include Global Pacific (lumber re-export), Ocean Construction Supplies, Allied Shipbuilders, B.A. Blacktop, International Bio-Recovery (waste food-to-fertiliser) and Rempel Brothers Concrete, currently relocating to a new enclosed plant on the waterfront south of Global Pacific (Site 5 Map 4). The light industrial area centred on Charles Street and Riverside Drive West is in the process of transition and more attractive buildings, landscaping and streetscapes should be encouraged when redevelopment occurs.

The plan divides industry into three categories:

- light industrial: light manufacturing and storage, some office space.
- medium industrial: medium manufacturing and storage with minimal office space.
- port industrial: port-oriented heavy industry with some water transport needs - ship repair, gravel and construction supplies, heavy truck and rail traffic.

**Objective 9.1 To create attractive light industrial areas**

Policy 9.1.1 Ensure that all new light industrial areas are of a high visual standard, with attractive landscaping and underground services.
Policy 9.1.2 Encourage the upgrading and improvement of the light industrial area west of Amherst with emphasis on upgrading of roads, sewers, provision of sidewalks and other infrastructure.
Policy 9.1.3 Review the zoning in the above area to determine if more uses of a commercial nature are warranted.
Policy 9.1.4 Consider expansion of additional entertainment-type attractions that would complement the existing Maplewood neighbourhood pub on Spicer Street.

**Objective 9.2 To plan for the eventual removal of all the chemical industry from Maplewood**

Policy 9.2.1 Upon redevelopment, chemical industry lands lying south of the CNR tracks should be considered for port-related uses in the short to intermediate term and for high tech marine R&D or other suitable port-related uses such as small specialised niche terminals, marine construction and light industrial uses in the long term.
Policy 9.2.2 All heavy industrial land occupied by chemical industry uses shall be remediated once vacant to allow for replacement by lighter industrial uses.
Policy 9.2.3 Ensure that no hazardous industries replace the vacating chemical industry.
Policy 9.2.4 In the meantime support existing heavy industry by creating a positive business climate that encourages upgrading of equipment and investment in such businesses and that further recognises the positive contributions in job creation and municipal taxes of these businesses.
Policy 9.2.5 Actively involve the Vancouver Port Authority in any long range planning affecting the industrial waterfront.

**Objective 9.3 To provide for more public access to the waterfront**

Policy 9.3.1 Work with the GVRD to examine the feasibility of providing some waterfront public access at the log sort site on Riverside Drive, or some long term park space when the land becomes surplus to GVRD.
Policy 9.3.2 Feasibility studies should be undertaken to establish if there is any potential for a commuter ferry terminal on the site of the GVRD log sort.
Policy 9.3.3 Fashion better public access to the waterfront by working with Industry to effect more public access to industrial sites and to the industrial waterfront where safety allows opportunities for viewing platforms. Opening up closed street ends and re-creating historic street ends should all be considered.
Policy 9.3.4 Encourage industrial site tours to acquaint residents with the variety of industry in Maplewood.

**Objective 9.4 To clean up and improve current industrial areas**

Policy 9.4.1 The recycling receiving depot on Spicer Street should be phased out and removed to a site with better truck access, possibly close to the current transfer station on Riverside Drive.
Policy 9.4.2 The operation of the GVRD transfer station on Riverside should be reviewed with regards to minimising disturbance to the residential and business areas of Maplewood in terms of smell, litter and truck noise.
Policy 9.4.3 Streetscapes and public infrastructure in the industrial areas should be upgraded with better provision for landscaping, sidewalks, street trees and streetlights.
Policy 9.4.4 Industrial signage shall be improved.
Policy 9.4.5 Should the industrial waterfront site on Harbour Road become available for redevelopment it should be considered for more intensive urban uses such as waterfront restaurant, marina, public market, entertainment uses, marine technology research, college outreach facility and other public-oriented commercial uses commensurate with a lively waterfront location. Public waterfront access should be a condition of this type of redevelopment.

**Objective 9.5 To improve safety in industrial areas**

Policy 9.5.1 All uses within, and surrounding, the Nexen Inc chemical plant shall be governed by the standards set by MIACC, until the plant ceases operation.
Policy 9.5.2 Minimize the manufacture, storage and transportation of hazardous materials within the community.
10. Transportation, Circulation and Utilities

Key Plan Strategy: to provide a transportation system that better meets both the needs of the residents and the expanded commercial/industrial base.

Maplewood is a community shaped by its transportation links, a product of its key location. It sits at the entrance to the Second Narrows bridgehead and also guards the approaches to Seymour. The Seymour River constricts road circulation to a few bridge crossings. The rail system is also focussed on the rail crossing of Second Narrows and the CNR tracks have to cross the Seymour River in the same location, making Maplewood a very congested spot. The Iron Workers’ Memorial Second Narrows Bridge is at capacity and constrains movement into and out of Maplewood. Traffic accessing this bridge is sometimes backed up in the morning peak period. The proposed doubling of the Dollarton Bridge will improve east-west traffic flow over the river and will improve access to Main Street and to the Phibbs transit exchange.

The new Dollarton Highway will divert commercial and heavy truck traffic from the residential areas adjacent to the old Dollarton Highway improving quality of life and pedestrian safety. There will be minor improvements to Riverside Drive East and the proposed extension of Berkley Road to join Dollarton Highway will provide a much-needed north-south road link. The Berkley Road extension connecting Dollarton and Mt Seymour Parkway will provide a better alternative to using Riverside Drive and thus will reduce traffic on Riverside Drive. When the Trans-Canada Highway was built in the late 1950’s, Keith Road was severed from the Seymour/Maplewood area. It is necessary to re-initiate this historic Keith Road–Mount Seymour Parkway direct link to tie Seymour and Maplewood with the rest of North Vancouver to allow inter-community links without the traffic entanglement of the Second Narrows bridgehead.

Some utilities will need to be upgraded to support future land uses. The water supply and sanitary mains are adequate for the proposed developments, however, there will be some water main replacement needed along main arterials in the area. The sewage pump station at Forester will need to be expanded. The GVRD is proposing to install a new water main (Main Number 5) from the Seymour Dam to the Burrard Inlet and some sections have already been pre-built. A street improvement programme in the industrial area should be undertaken in conjunction with local businesses. A fibre optics network serving the new business parks should also be considered.

Maplewood also has a concentration of District-serving waste treatment and disposal facilities, including the GVRD waste transfer station on Riverside, the District of North Vancouver recycling yard on Riverside and the International Paper Industries (IPI) recycling centre on Spicer Street. Other related waste treatment uses include the International Bio Recovery plant (waste food into fertiliser) on Riverside and the Mohawk recycled oil treatment plant on Forester. This concentration of waste treatment uses provides Maplewood with the potential of a base for other sustainable environmental industries. At the same time, consideration should be given to effecting a move of the IPI site closer to the GVRD Transfer station thus releasing the Spicer Street site for more intense urban use (Policy 9.4.1).

**Objective 10.1 To provide better external road connections**

- Policy 10.1.1 Mt Seymour Parkway should be extended over the Trans Canada Highway to link directly with Keith Road.
- Policy 10.1.2 The Grantham Street Bridge crossing of the Seymour River should be maintained.
- Policy 10.1.3 The Dollarton Bridge over the Seymour River should be twinned to improve east-west traffic flow.

**Objective 10.2 To improve internal road circulation**

- Policy 10.2.1 Examine improvements to school child safety by the provision of an onsite drop-off/pick-up zone and a lighted crosswalk on Riverside Drive.
- Policy 10.2.2 Provision should be made for a pedestrian crossing of Mt Seymour Parkway to facilitate schoolchildren crossing and to connect neighbourhoods separated by this road.
Policy 10.2.3 The old Dollarton Highway and Riverside Drive shall be retained as collector/minor arterial roads, retaining their public transit service.
Policy 10.2.4 Berkley Road shall be extended to join Dollarton Highway as a high priority. The final route selected to be determined after environmental and geo-technical studies and in conjunction with the Vancouver Port Authority.
Policy 10.2.5 Ensure the safe and efficient movement of truck traffic by providing convenient access to the new Dollarton Highway, in consultation with industrial users.
Policy 10.2.6 Forester Street will act as the primary access to the eastern commercial and industrial areas.
Policy 10.2.7 Conduct a traffic and parking study for Maplewood Farm with emphasis on provision of parking on “special event” days.
Policy 10.2.8 Review traffic calming options for the portion of Riverside Drive- connecting Dollarton Highway and Mt Seymour Parkway- and for the old Dollarton Highway.
Policy 10.2.9 After the new Dollarton Highway opens, conduct traffic monitoring to ensure that traffic does not continue to use the old Dollarton Highway as a convenient bypass route.

Objective 10.3 To improve bus and bicycle service

Policy 10.3.1 Translink to be encouraged to provide a transit service plan that reflects the community’s needs for transit services –such as better links to Ron Andrews Rec Centre, Maplewood Farm and better access to Park and Tilford shopping centre.
Policy 10.3.2 Expand the Bicycle Master Plan to take advantage of the proposed extensive trail system in Maplewood.
Policy 10.3.3 Promote education programmes to improve bicycle safety.
Policy 10.3.4. Translink should be requested to substantially upgrade the comfort level and attractiveness of the Phibbs bus exchange and to look in the long term to a new conveniently located replacement site.
Policy 10.3.5 Work with Translink to effect better transit service in future to the Maplewood Centre.

Objective 10.4 To optimise use of rail facilities

Policy 10.4.1 The use of current rail facilities should be considered in the design of any new industrial or employment areas.

Objective 10.5 To ensure both a road network and a utility system capable of meeting future demand for service

Policy 10.5.1 Work with the public and private utilities in planning for a utility system that reflects the future growth of Maplewood.
Policy 10.5.2 Undertake a road improvement programme for industrial areas in conjunction with local businesses.

Objective 10.6 To ensure that all road and public utility hardware is attractively designed to reflect the community’s history

Policy 10.6.1 Introduce public art into the design of street signs, utility manhole covers, pump stations etc, art that reflects on Maplewood’s history.

Objective 10.7 To improve water transportation connections

Policy 10.7.1 In conjunction with the VPA Harbormaster, examine the feasibility of a new commuter ferry connection to Maplewood near the foot of Riverside Drive.
Policy 10.7.2 Work with the VPA to determine the long-range need for industrial water transport to Maplewood.
11. Community Facilities and Services

Key Plan Strategy: to upgrade and improve Maplewood's community facilities so they are primed for the challenge of new population and growth.

Maplewood is a small community with a varied institutional base (Map 5). The Maplewood Elementary School on Seymour River Place provides elementary school services for 222 students and is an important public facility for the community. This school is slated for replacement in the near future by the North Vancouver School District. Plymouth Elementary School (300 students) is outside Maplewood but does service the Windridge area. Windsor High School, east of Windridge with 1000 students, serves Maplewood. The Canadian International College provides language training for overseas students and is the aim of this plan to see this college integrated better with the community so that its facilities - meeting rooms and recreational services - can be accessed by the community.

The Ron Andrews Recreation Centre provides gym, pool and meeting facilities for west Seymour and is a magnet for people with young families so improved transit services to this facility are of prime importance. The nearby Youth Centre and Ice Rink are complementary uses. Nearby is the Kiwanis Lodge providing care for the elderly. This plan seeks to integrate this home into the fabric of the community with better pedestrian trail links and school visits. The new Windridge Centre plan will create better physical integration of all these important public facilities in Windridge, which were planned and built in isolation of each other. The Environment Canada Science Centre is also quite isolated but may have the potential as serving as an interpretative centre for the nearby mudflats and bird sanctuary.

Maplewood is an interesting community in that within a small and compact area resides an historic community with a substantial heavy industrial base that co-exists with a significant wildlife refuge and shares the community with beautiful rivers and streams, the Burrard Inlet waterfront, mudflats and substantial open space and park areas. This character should be reflected in any public art planned for Maplewood, but more than that, Maplewood should capitalize on its unique character and central location by encouraging public art, festivals and events and by creating a plan for community-based cultural facilities.

Objective 11.1 To improve the Arts and Culture sector in Maplewood

Policy 11.1.1 Ensure that the public art is encouraged within all new developments and especially in any new community facilities.
Policy 11.1.2 Encourage provision of artists' loft units within Maplewood Centre.
Policy 11.1.3 Develop a plan for community-based cultural facilities (rehearsal, exhibition and performance space) to serve the performing, visual and media arts and other cultural industries.
Policy 11.1.4 Support the development of local festivals/events that celebrate the unique character of the Maplewood Community.

Objective 11.2 To ensure that schools can accommodate increased residential development

Policy 11.2.1 Work with the North Vancouver School District in identifying new residential development and in planning for school capacity capable of handling any population increase.

Objective 11.3 To ensure that recreation services are accessible and adequate for the future

Policy 11.3.1 Ensure that the new Maplewood population is properly provided with recreational facilities.
Policy 11.3.2 Examine the need for an additional soccer field close to Windsor School.
Policy 11.3.3 Provide a basketball court adjacent to the Youth Centre in Windridge.
Policy 11.3.4 Work with Translink to identify youth and seniors transit access needs to recreational facilities in Maplewood.

Objective 11.4 To provide for community facilities for all population segments

Policy 11.4.1 Provide additional youth space in lower Maplewood.
Policy 11.4.2 Provide additional space for seniors' programmes in lower Maplewood.
Policy 11.4.3 Provide some small office space for community organizations.
Policy 11.4.4 Ensure that all new facilities are accessible to the disabled and that those barriers to mobility are reduced.
Policy 11.4.5 Work with the Kiwanis Lodge Intermediate Care Home and other seniors-oriented complexes to determine what additional recreational programmes might be required at the Ron Andrews Recreation Centre in the future.

12. Urban Design and Heritage

Key Plan Strategy: to upgrade the appearance of Maplewood so that its distinguished history and natural setting are reflected in new building and public works; to respect the community’s historic past and preserve what remains.

The plan emphasises building on Maplewood’s past as a means of re-creating a strong sense of community. Maplewood is not some new suburb; it is a community with a proud and distinguished past. This past has been obscured especially within the industrial areas. Nevertheless it is felt to be important to ensure that any new development is in keeping with the feeling of Maplewood – that of an historic settlement, endowed with a lovely natural environment, with strong maritime and transportation connections and a robust industrial image. Architectural design and landscape design guidelines will be needed to have this Maplewood image emerge. There will be much new development and redevelopment in Maplewood’s future. Since Maplewood is at the entranceway of North Vancouver and of Seymour, certain strategic sites will also be designated as “entranceway sites” where special design guidelines will prevail. Maplewood Centre provides a transition from the industrial areas to the south – with functional industrial architecture- to the residential areas to the north— with the emphasis on nature and landscaping –so the village centre has the opportunity of straddling both landscapes in any architectural theme that is developed.

Objective 12.1 To create an identity for the community by reflecting community history and sense of place in any new development

Policy 12.1.1 Develop a policy for new entranceways to Maplewood featuring Maplewood history.
Policy 12.1.2 Develop an architectural theme for new design in Maplewood.
Policy 12.1.3 Develop landscape guidelines that are appropriate for the Maplewood identity and apply such guidelines to all new public and private development.

Objective 12.2 To preserve the community’s past

Policy 12.2.1 Prepare a survey of all historic buildings.
Policy 12.2.2 Identify and protect early remnants of the logging industry.
Policy 12.2.3 Erect heritage information plaques at strategic sites.
Policy 12.2.4 Encourage the recording of the First Nations influence in this area.
Policy 12.2.5 Fund the preparation of a history of Maplewood and distribute this to all local schools.

Objective 12.3 Improve the appearance of Maplewood

Policy 12.3.1 Prepare a street and streetscape improvement plan for all industrial areas.
Policy 12.3.2 Actively use District bylaws to clean up untidy sites and illegal dumping sites.
Policy 12.3.3 Designate specific locations as ‘entranceway sites’ and develop special architectural and landscape guidelines for these sites, which recognise the great impact of these sites in forming the first impressions of Maplewood.
Policy 12.3.4 Work with the Ministry of Transport and Highways towards better landscaping and identification signs at the community approaches off the Second Narrows bridge.
13. Special Areas- Windridge Centre/ Maplewood Village Centre

Key Plan Strategy: to provide for the comprehensive planning of the Windridge Centre and Maplewood Village Centre so that these areas will become dynamic and attractive focal points.

Windridge Centre and Maplewood Village Centre are two areas where the image of Maplewood can be most effectively enhanced:

Windridge Centre contains a variety of recreational and community uses (Map 6) at the top of a steep embankment with a major creek dissecting it and with an attractive forest cover, much of which should be retained within an expanded park around Blueridge Creek. There is an extensive network of pedestrian trails already in existence. This area has been developed incrementally and contains a variety of uses ranging from an intermediate care home for the elderly to a private ice arena and a youth centre. Future uses include a site suitable for congregate care or apartments lying south of Kiwanis Lodge, new multi family site suitable for families or seniors housing and a mixed-use retail /apartment site at the corner of Berkley Road and Mt Seymour Parkway. A site suitable for a new ambulance facility has been identified south of the Ice Rink. Blueridge Creek and Mc Cartney Creek will be protected with wider corridors and attention will be paid to vegetation retention along the creeks, to fish habitat restoration and to the development of a pedestrian trail system that knits the area together.

Maplewood Village Centre - this is the commercial and residential heart of Maplewood and a comprehensive layout plan is needed to guide future development. The concept plan (Map 7), contains the following features:
- a new retail /live-work/apartment “high street” street aligned along Front Street
- improvements to the Maplewood Plaza to focus better to Front Street
- new multi-family housing sites
- better pedestrian and transit services to Maplewood village centre
- more pedestrian-friendly public open space and new street furniture
- streetscape design guidelines
- new building design guidelines to reflect a Maplewood theme
- a place attractive to all ages with street trees and improved landscaping
- emphasis on Maplewood’s heritage
- a community trail system linking the village to the river and to Windridge
- adequate and convenient parking

Objective 13.1 To encourage the development of Windridge in a comprehensive manner

Policy 13.1.1 The District should proceed with rezoning and subdivision of the site based on the concept plan illustrated on Map 6.

Objective 13.2 To encourage the comprehensive development of Maplewood village centre to emphasise its role as the heart of Maplewood

Policy13. 2.1 Prepare a comprehensive design plan for Maplewood Centre based on Map 7 and the principles cited in this local plan.
Map 7  Maplewood Local Plan - Maplewood Village Centre Concept

- development sites (Table 1 Chapter 8)
  Site 1 - live / work lofts / retail
  Site 2 - apartments above retail
  Site 3 - entranceway - commercial
  Site 4 - entranceway - commercial
  ↑↑ - focus on Front Street as new "High Street"
  apartments above retail
  --- - trail
  - Maplewood Village Centre
  - open space
  * - MIACC guidelines apply. 8 units/acre. See Policy 6.1.8.
14. Plan Implementation and Staging

There are a number of specific major steps recommended following the completion and its incorporation into the District Official Community Plan. These are separate from the myriad of actions needed to realize the policies of this plan.

Plan Implementation:

1. **Annual monitoring of plan** - an annual audit should be undertaken in conjunction with the community to assess what steps are taken annually by the District to implement the plan financially and physically.

2. **Windridge Centre** - new zoning designations and subdivision should be implemented after plan adoption.

3. **Maplewood Village Centre Concept Plan** - priority should be given, in conjunction with Maplewood residents and businesses, to a concept plan for the village centre. Such a plan to contain recommendations of probable uses and density, type and location of public art, traffic and pedestrian circulation, parking and transit provision, trail development, landscaping, open space provision and the overall urban design framework, including recommendations on building form and sign guidelines. This concept plan should be completed within 24 months of the adoption of this plan.

4. **Entranceway Plan and Urban Design Guidelines** – specific entranceway sites on Map 7 shall have design guidelines prepared, with substantial resident input, to emphasise the important visual dominance of these sites and the special architectural, historic and artistic features that might come into play on development of such sites.


6. **Transportation and traffic impact studies** as required for specific developments.

7. **Maplewood Industrial Strategy** - working with industry and residents to define the future needs of industry in Maplewood in terms of road, rail and water access, public access to the waterfront, infrastructure demands, defining industrial succession, environmental requirements etc.

8. **Development costs charge bylaw** - fees generated by development in the District could be used to fund additional open space and utility improvements in Maplewood.

9. **Public Benefits Strategy** - all new developments in Maplewood should be measured by the contribution they make to improvements in the quality of life in Maplewood. A new Public Benefits Strategy will be developed to so define such contributions.

10. **Zoning Bylaw** - the zoning bylaw will be reviewed to determine what innovations in zoning designations and regulations are needed to implement the plans objectives with respect to the Windridge Centre, Maplewood Village Centre and the proposed business parks.

Staging:

1. **Residential staging** - there are currently 871 units within the local plan area and this is expected to increase to 1362 units by the end of the 10 year planning period, a difference of 491 units, some of which might be seniors housing/congregate care units. Over the 10-year period, residential construction will average approximately 49 units/year.

2. **Commercial Staging** - Maplewood has an existing commercial base of approximately 51,900 sq ft (retail/service and office space (see Chapter 7). It is estimated that an additional 117,000 sq ft of space will be constructed in Maplewood Centre and Windridge over the next 10 years. This translates into 11,700 sq ft on an annual basis.
3. **Light Industrial/Business Park staging** - the 1997 Urban Systems report *Economic Development Strategy Study* recommended staging based on the supply of 1.0ha (2.5 ac) per year for the first 5 years and then 1.4ha (3.5 ac) per year for the remainder of the 25-year period. There are approximately 25.5 ha (63 ac) of light industrial/business park development land provided for in this plan, which would mean that there is sufficient land available to fulfil the District’s needs for light industrial/business park land for just under 20 years.

**Costs:**

Capital items are shown in the following table. Items, which are already identified in the 5-year Financial Plan, are so identified:

<table>
<thead>
<tr>
<th>Identified in 5 year Financial Plan (all costs in 2001 dollars)</th>
<th>Transportation/Utilities</th>
<th>Parks/ Opens Space / Trails</th>
</tr>
</thead>
<tbody>
<tr>
<td>- New Dollarton Highway: fully funded</td>
<td></td>
<td>- Seymour River Park upgrade: $150k</td>
</tr>
<tr>
<td>- Old Dollarton Highway- Riverside Drive East to east of Forester: $1.5m</td>
<td></td>
<td>- Maplewood Farm upgrade: $75k</td>
</tr>
<tr>
<td>- Old Dollarton Highway- Riverside Drive East to Amherst: $1.2m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Riverside Drive East- Old Dollarton to Mt Seymour Parkway: $1.5m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Front Street: $1m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Forester Street- Ewen St to Old Dollarton: $400k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Upgrading of Forester St sewage lift station: $450k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Dollarton Bridge: $315k (design only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Dollarton Bridge: $5.68m (construction) unfunded</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beyond 5 year Financial Plan (all costs in 2001 dollars)</th>
<th>Transportation/Utilities</th>
<th>Parks/ Opens Space / Trails</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Old Dollarton upgrade Canadian Intl College to McCartney Ck: $2.4m (VPA cost only)</td>
<td></td>
<td>- Windridge Escarpment: $100k</td>
</tr>
<tr>
<td>- Berkley Road Extension: $3m (DNV $1.0m, VPA $2.0m)</td>
<td></td>
<td>- Community level park north of Old Dollarton: $100k</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Street Ends Openings: $100k</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Neighbourhood level park: $250k</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Playground north of school: $80k</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Windridge Park: $75k</td>
</tr>
</tbody>
</table>
15. Plan Map

The Plan Map (Map 8) illustrates, graphically, the objectives and policies of this local plan. The following legend pertains to uses designated on the plan map:

Residential:

**RS Residential Low Density.** Single family homes and low-density residential development with densities not in excess of 19.76 units/ha (8 units/ac).

**RM Residential Medium Density.** Multi-family residential development, including apartments, town houses, artists lofts, live/work units and other forms of multiple family housing with densities up to 138.32 units/ha (56 units/ac), but in the case of seniors housing or congregate care developments, densities to a maximum floor space ratio (FSR) of 2.0 are acceptable.

*In all areas of lower Maplewood affected by MIACC guidelines, residential densities shall not exceed 19.76 units/ha (8 units /ac) except as noted in Table 1, Chapter 6, where an average density shall be permitted on specific sites as per policy 6.1.8. However, such density restriction in areas designated on this plan as RM shall be removed when chlorine production at the Nexen Inc chemical plant stops permanently, or reviewed should Nexen Inc make plant changes that reduce risk.*

Commercial:

**C Commercial.** Small business catering to local market.

**CR Commercial/Residential.** Ground level retail/office with residential multi-family units above or such alternate combination of residential/commercial as befits the site.

Employment:

**BP Business Park.** Comprehensively developed business parks featuring co-ordinated building and landscape elements. Office, research and development, high quality industrial and light manufacturing uses which are environmentally safe and clean.

**LI Light Industrial.** Clean, light manufacturing, indoor storage, some offices.

**MI Medium Industrial.** Medium manufacturing and storage. Minimal office space.

**PI Port Industrial.** Port-oriented heavy industry with some rail/water transport needs. Contains heavy chemical industries which will be eventually relocated.

Open Space and Conservation:

**OS Open Space.** Includes developed parks and undeveloped, informal open spaces.

**CL Conservation Land.** Contains the Maplewood Conservation Area, a wildlife sanctuary.

**CW Conservation Water.** Contains parts of the original intertidal foreshore, some original, some as modified by dredging.

Institutional:

**S School Elementary.** Public elementary school (Maplewood Community School)

**SR School Residential.** Private residential school (Canadian International College)

**RC Recreation Centre.** Ron Andrews Recreation Centre; Ice Arena

**YC Youth Centre.** Seymour Youth Centre

**CH Care Home.** Kiwanis Lodge, intermediate care home

**A Ambulance.** BC Ambulance Services facility
Maplewood Employment Lands Strategy

For: District of North Vancouver

October 2016
Executive Summary

ASSESSMENT OF DEMAND FOR EMPLOYMENT LANDS

A key step in the process of determining appropriate future employment land uses in the Maplewood area is understanding what future demand may exist for such lands. This includes understanding what industries are likely to grow or contract in North Vancouver, what types of land and adjacencies/proximities different industries seek, how each industry uses lands (i.e. higher or lower densities, parking and outdoor storage requirements etc.), and which industries are more likely to be receptive to change in land use patterns over time.

Our team conducted an employment growth-driven projection of future employment land use needs in the District of North Vancouver. This process included:

- Industry-specific employment forecasts for District of North Vancouver, using industry categories as defined in Metro Vancouver’s Regional Growth Strategy (Figure A)

Figure A: Projected employment and employment growth by industry in the District, 2011 - 2031
- Forecast of employment specifically at fixed places of work, not at home, in the District of North Vancouver, by industry
- Allocation of fixed-place employment figures to light industrial/commercial business park, hybrid business park, or other employment lands, excluding lands for commercial or heavy industry
- Conversion of employment forecasts to built space requirements through employment densities (Table A), and conversion of built space requirements to land requirements through application of built densities by industry (Table B).

Table A: Net new built space (sq. ft.) needed in the District, 2016 – 2031

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Industries¹</td>
<td>2,251</td>
<td>1,364</td>
<td>1,647</td>
<td>5,263</td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td>61,087</td>
<td>53,635</td>
<td>53,383</td>
<td>168,105</td>
</tr>
<tr>
<td>Construction</td>
<td>18,013</td>
<td>11,819</td>
<td>13,544</td>
<td>43,375</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>13,190</td>
<td>6,893</td>
<td>9,236</td>
<td>29,318</td>
</tr>
<tr>
<td>Wholesale</td>
<td>59,398</td>
<td>50,219</td>
<td>50,552</td>
<td>160,169</td>
</tr>
<tr>
<td>Retail</td>
<td>8,067</td>
<td>4,788</td>
<td>5,861</td>
<td>18,716</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>5,876</td>
<td>4,549</td>
<td>4,749</td>
<td>15,174</td>
</tr>
<tr>
<td>Business Commercial Services</td>
<td>77,249</td>
<td>46,417</td>
<td>56,351</td>
<td>180,017</td>
</tr>
<tr>
<td>Info/Cultural Services + Accommodation &amp; Food Services</td>
<td>31,807</td>
<td>25,347</td>
<td>26,113</td>
<td>83,267</td>
</tr>
<tr>
<td>Education (Including trade schools)</td>
<td>4,572</td>
<td>3,410</td>
<td>3,627</td>
<td>11,609</td>
</tr>
<tr>
<td>Health &amp; Welfare</td>
<td>52,747</td>
<td>46,863</td>
<td>46,509</td>
<td>146,119</td>
</tr>
<tr>
<td>Public Administration</td>
<td>21,144</td>
<td>16,690</td>
<td>17,267</td>
<td>55,102</td>
</tr>
<tr>
<td>TOTAL</td>
<td>355,400</td>
<td>271,995</td>
<td>288,839</td>
<td>916,235</td>
</tr>
<tr>
<td>Average Annual</td>
<td>71,080</td>
<td>54,399</td>
<td>57,768</td>
<td>61,082</td>
</tr>
</tbody>
</table>

Table B: Projected land utilization in the District by sector, in each scenario (floor-space ratio²)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Scenario 1 - Status quo FSR</th>
<th>Scenario 2 - Higher FSR new construction in select categories</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Industries</td>
<td>0.2</td>
<td>0.2</td>
<td>No change anticipated due to outdoor space requirements</td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td>0.1</td>
<td>0.2</td>
<td>Slight densification possible</td>
</tr>
<tr>
<td>Construction</td>
<td>0.4</td>
<td>0.5</td>
<td>Slight increase</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.1</td>
<td>0.3</td>
<td>Small-scale manufacturers could operate in multi-level spaces</td>
</tr>
<tr>
<td>Wholesale</td>
<td>0.2</td>
<td>0.2</td>
<td>No change anticipated due to loading/parking requirements</td>
</tr>
<tr>
<td>Retail</td>
<td>0.4</td>
<td>0.4</td>
<td>No change anticipated due to required parking ratios</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>0.2</td>
<td>0.7</td>
<td>Significant densification possible through multi-level facilities and reduced parking</td>
</tr>
<tr>
<td>Business Commercial Services</td>
<td>0.3</td>
<td>0.4</td>
<td>Slight increase possible through multi-level space</td>
</tr>
<tr>
<td>Info/Cultural Services, Accommodation &amp; Food Services</td>
<td>0.3</td>
<td>0.4</td>
<td>Slight increase possible through multi-level space</td>
</tr>
<tr>
<td>Education (Including trade schools)</td>
<td>0.3</td>
<td>0.6</td>
<td>Multi-level space possibilities</td>
</tr>
<tr>
<td>Health &amp; Welfare</td>
<td>0.9</td>
<td>0.9</td>
<td>No change</td>
</tr>
<tr>
<td>Public Administration</td>
<td>0.2</td>
<td>0.5</td>
<td>Multi-level space possibilities</td>
</tr>
</tbody>
</table>

The following are highlights from the analysis:

1 Includes agriculture and resource extraction.

² FSR is calculated by dividing the gross floor area of a building by the total area of its site. A higher FSR implies a higher land utilization.
• From 2016 to 2031, the employment-based forecasts show a need for approximately 916,000 square feet of floor area in the District of North Vancouver on employment lands.

• Under two employment-driven demand scenarios – one at current density and one at anticipated higher densities – the 42 acres of vacant land in the DNV would be consumed in the next 4.5 to 9 years (Figure B).

• If we extend recent industrial land absorption trends – as recorded by Colliers International – into the future, 42 acres of vacant land would be consumed in 12 to 13 years (Figure B). This reflects the impact of scarcity; as land runs out, fewer potential occupants can find the ideal location, so rates of sales and development slow down. This may already be occurring.

Figure B: Employment land demand by scenario, with year of full capacity indicated

MAPLEWOOD ECONOMIC OPPORTUNITIES – INTERVIEW PHASE

3 Assuming ratios of those working at home and with no fixed place of work remain constant.

The Consultant Team interviewed 16 industry stakeholders and experts to achieve an understanding of market trends and forces, different land and building preferences by industry, and overall market attitude. The key findings of the interview process were as follows:

- There is more than enough demand to fill all available employment land area.
- Business with a mix of retail, warehouse, manufacturing and office on one site, that can make use of flexible space, will continue to be in high demand.
- Maplewood will be attractive to a wide range of business types. Offering flexibility in business type and proximity to key transportation infrastructure will ensure that the area remains in high demand from employers.
- Uses such as a spa could take up as much as 200,000 square feet (~4.5 acres) of land area; sloped land is not problematic, and may be an asset.
- A shortage of affordable housing is one of the barriers to businesses operating in North Vancouver over the long term.
- Some users would prefer to locate in Maplewood but currently cannot. An example is medical offices.
- There will also be continuing demand from trades and contractors, looking for smaller (e.g. 1,500 sf) units, on flat sites, with appropriate street and loading access. Those serve both local area and the heavy industrial hub to the south.
- Fitness and lifestyle-oriented users (for example climbing walls and gyms) are increasing their demand for industrial areas due to space flexibility and rent.
- Demand for peripheral port services is high and increasing.
- There may be demand for additional brewery-related space.
- One key group of business owners likely to remain in Maplewood are those who live on the North Shore.
- Distribution and large warehouse operations are struggling in Maplewood due to high rents and land values. It is increasingly difficult to locate on the North Shore rather than relocating to more affordable space in the Fraser Valley. This may be an opportunity to expand other sectors in their absence.

Some key challenges to businesses in Maplewood were frequently mentioned:

- Continued price escalation of industrial land
- Continue escalation of housing market, making it difficult for employees to live on the North Shore
- Potential worsening of parking and traffic challenges in Maplewood area
The interviewees also suggested some uses that may be appropriate for different locations in Maplewood, as follows:

- **Flat vacant lands** may be appropriate for a wide variety of potential uses and users, including:
  - Mixed business park, which typically includes office, warehouse, light manufacturing, distribution, warehousing
  - Small manufacturers
  - Film studio and other entertainment/info/cultural industries (North Shore Studio may be looking for 2 – 4 ac)
  - Live/work (appropriate for variety of business types including business commercial services, health/welfare, retail, wholesale and others)
  - Port-related logistics (e.g. storage)

- **Sloping vacant lands** has limited usability for employment, except in niche categories. Our research has indicated interest from a spa, which could occupy a sloping site up to 200,000 square feet. This could expand if demand warrants in the future.

- **Occupied, redevelopable lands**, which fall into two broad categories:
  - Much of this land is currently used by niche, small manufacturers and distributors for whom this is the best location. Most of these users could not afford new space if it were available
  - There are instances of lower intensity uses on some sites, which may prove the sites most easily redeveloped. These include the transfer station and a variety of distribution & storage users who may leave the area due to more affordable locations elsewhere. These spaces could then be redeveloped as mixed-employment lands with higher density structures.

**RETAIL ANALYSIS**

Table C projects the total commercial floor area supportable in Maplewood in 2031 based on assumed population, employment, income, and spending estimates. The supportable floor space is divided for the sake of interest into a residential- and employee-supported share.

<table>
<thead>
<tr>
<th>Business Type</th>
<th>Resident-supported</th>
<th>Employee-supported</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service commercial</td>
<td>35,324</td>
<td>943</td>
<td>36,266</td>
</tr>
<tr>
<td>Convenience goods</td>
<td>29,886</td>
<td>1551</td>
<td>31,437</td>
</tr>
<tr>
<td>Comparison goods</td>
<td>19,908</td>
<td>947</td>
<td>20,855</td>
</tr>
<tr>
<td>Food &amp; Beverage</td>
<td>8,421</td>
<td>6,706</td>
<td>15,127</td>
</tr>
<tr>
<td>Entertainment &amp; Recreation</td>
<td>658</td>
<td>61</td>
<td>719</td>
</tr>
<tr>
<td>Automotive</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94,197</strong></td>
<td><strong>10,208</strong></td>
<td><strong>104,405</strong></td>
</tr>
</tbody>
</table>

Table C indicates that more than 104,000 square feet of retail and commercial space will be supportable in Maplewood in 2031. This matches up fairly well to the current OCP projection of approximately 100,000 within Maplewood Village Centre by 2030. The Stong’s grocery store and adjacent retail space currently make up over 33,000 square feet.
We project that about 104,000 square feet of commercial space will be supportable in Maplewood by 2031, of which about 10,000 square feet is attributable to employees. Given that approximately 100,000 is already anticipated by the OCP in the Village Centre, the Consulting Team concludes that a small retail node within the Maplewood business park area is likely to be appropriate, in order to serve the in-site working population. This node should probably be limited to 8,000 – 10,000 square feet and would likely consist of four or five food & beverage, convenience, and personal service retailers. A larger, more diverse retail & service node in the Maplewood business park would also be viable, but only at the expense of the currently emerging retail hub.

ZONING & REGULATORY CONSIDERATION

The Consulting Team has analyzed the District’s industrial and comprehensive development zoning regulations with the aim of comparing the existing regulations to various industry sector preferences, according to interviewed stakeholders.

Observed discrepancies between stakeholder preferences and zoning restrictions include:

- Some light industrial users may find it difficult to operate in the I3, EZ-LI, CD33, and CD50 zones because these zones restrict “noise, glare, odour and air pollution... detectable from the parcel’s property line”. In the EZ-LI zone, the District has limited the good neighbour regulations to those sites next to residential uses – this flags the potential conflict for businesses before the conflict develops to the point where other bylaws like the noise bylaw or nuisance bylaw kick in. The motive behind including the good neighbour clause is to forewarn businesses when they are considering moving into a new site and thereby avoid frustrations, expensive renovations, or moves down the line.

- The EZ-LI zone has an upper limit on lot size (4,500 m²), which might prevent a film studio or spa from locating there, assuming they were limited to a single lot.

- Landscaping requirements in Maplewood typically mandate a complete screen between buildings and main roads. These could be adjusted to make retail uses more visible to the street, which would improve their viability. Locating buildings next to the sidewalk would also serve to improve visibility. Low visibility of retailers from the street was mentioned as an issue multiple times by existing Maplewood retailers that the Consulting Team interviewed.

The Consultant team anticipates that mixed-use business park will continue to be in high demand. Taking primary and accessory uses into account, the I3, EZ-LI, CD18, CD19, CD33, CD45, and CD50 zones are all more or less appropriate since they allow a mix of light manufacturing, office, and logistical uses.

Additional uses that could be considered in these zones to better match the market would be medical office and live-work space.
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1 Introduction

1.1 Project Understanding

G. P. Rollo & Associates, Land Economists and Urban Systems Ltd. (the Consultant Team) have been retained by the District of North Vancouver (the District) to perform an in-depth analysis of the market for employment lands in the Maplewood Area. The aim of this study is to position Maplewood within the marketplace in order to maximize its potential and bolster the District’s economic base by providing high-quality job opportunities for local residents.

The study consists of four phases:

- **Phase 1**: A quantitative assessment of demand for employment lands in the District generally, and in Maplewood in particular, based on a projection of employment growth by industry and modified in light of interview findings
- **Phase 2**: A qualitative assessment of Maplewood’s employment opportunities, based primarily on a comprehensive stakeholder interview process
- **Phase 3**: An analysis of the demand for accessory retail space in Maplewood
- **Phase 4**: A discussion of the design, planning, and regulatory considerations required to best position Maplewood to meet the District’s employment objectives.

1.2 Maplewood Employment Lands

Figure 1: Location of Maplewood Employment Lands (shown in red)
The Maplewood Employment Lands that are the object of this study are found within the Maplewood Village Centre, as indicated in Figure 1. The Village Centre surrounds Dollarton Highway and is bounded approximately by the Seymour River to the west, Mount Seymour Parkway to the north, Spicer Road and the nearby rail line to the south, and the Maplewood Conservation Area to the east. It also includes Goldenwood Hall School and the surrounding property, which is the largest undeveloped industrial-zoned parcel on the North Shore. Maplewood Village Centre is one of six Village Centres (along with Lower Capilano-Marine, Edgemont, Queensdale, Parkgate, and Deep Cove) in which the District aims to “build on their own unique characteristics to create distinct urban village environments” and one of four OCP-designated growth areas (along with Lynn Valley and Lower Lynn Town Centres and Lower Capilano-Marine Village Centre) with which the District aims to create a network of centres to “support effective transit, walking and cycling; and focus growth and renewal.” To that end, the Village Centre is home to a significant amount of recent and proposed residential and commercial development, with approximately 1,500 net new residences planned for construction by 2030 and 33,000 square feet of recently constructed retail space, intended to be approximately 100,000 by 2030.

With the exception of the large and undeveloped zone surrounding Goldenwood Hall School, most of Maplewood’s employment lands were developed many decades ago, and consist of a mix of manufacturing, warehousing, logistics, office, and service uses. The area specializes in locally-owned small and medium-sized businesses as well as marine-, science-, and engineering-related businesses that make use of and support the marine uses immediately to the south, including the Canexus Chemical plant. It contains a mix of industrial zones, lot sizes, and tenures.

Because it is one of the District’s principle industrial hubs, especially when viewed as a continuation of the heavy industrial uses immediately to the south, it is an important policy objective to ensure that the area remains productive and healthy as an employment zone. To this end, this study aims to identify the demand for these employment lands in the next 15 years, as well as the differing needs of the various employment sectors that occupy or may seek to occupy these lands.

---

2 Employment Lands Demand Assessment

An independent employment forecast for the District of North Vancouver, by industry, has been completed by the Rollo/USL team based on data received from both the District and Metro Vancouver, and an independent Metro-wide total employment forecast tied to Provincial GDP. Metro Vancouver provided their estimates and forecasts for employment by industry for the Region and the District of North Vancouver (to 2030). Ratios were calculated from these data sets and applied to the GPRA/Urban Systems forecast of future regional employment to arrive at an employment forecast, by industry, for the District of North Vancouver to 2031.

Projections of future employment by industry in the District have been converted to estimates of built space requirements per annum (i.e. square feet of absorption), and these in turn are converted into land requirements (acres) on the basis of both historic District-specific land utilization data, as well as higher density scenarios.

2.1 Metro Vancouver Employment Estimates & Forecasts

Metro Vancouver had nearly 1.21 million employees in 2011, including those working from home and those with no fixed place of work. Metro Vancouver’s internal population and employment forecasting model projects region-wide employment to reach nearly 1,579,000 by 2030.

The Rollo/USL team has elected to conduct an independent forecast of total region-wide employment as the basis for subsequent District of North Vancouver employment estimates. This employment projection is independent of any demographic projection; it is a product of a trend-based extension of the historical relationship between provincial economic activity (as measured by real Gross Domestic Product – GDP) and employment in the Metro Vancouver region. This method benefits from the long, accessible historical database of economic and employment activity, as well as published short-term assessments of near-future economic activity in the province.

The economic history of BC is characterized by significant (but slowing) growth in real GDP: in the 1960’s and 1970s, growth averaged 6.5% and 5.7% per annum respectively. In the recessionary 1980s, growth dropped to an average of 1.9% per annum. The pace of growth picked up in the 1990s, averaging 2.8% per annum. From 2001 to 2014, growth averaged 2.6% per annum; this included a drop of -2.4% in the 2008-2009 period.

A recent forecast from Central 1 Credit Union has projected real GDP growth in BC at an average rate of 3.1% per annum through to the end of 2019. We have adopted this short-term forecast in our projections. Extending historic and near-term future real GDP into the future to our forecast horizon of 2031 results in a projection where economic growth would fall from 3.1% per annum in the 2016-2019 period to 1.8% per annum between from 2020-2025, and 1.7% per annum between 2026 and 2031. This would see the BC economy grow by 31% over the 15 years from 2016-2031.

The projection of total employment in Metro Vancouver is developed using the observed historical relationship between total employment and BC’s real GDP, and the trend-based projection of real GDP described above. Combining these two elements yields a projection of
Metro Vancouver employment growing from nearly 1.21 million jobs in 2011 to 1.42 million by 2021 and 1.59 million by 2031, or 53% growth over a 30-year period. The 53% growth in region-wide employment compared to a 99% increase in GDP implies future productivity gains. This is shown in Figure 2. Figure 3 breaks the 2011 and 2031 employment totals into industry sectors.

Figure 2: Total employment in Metro Vancouver, 2001 – 2031
Figure 3: Employment by Industry Sector in Metro Vancouver, 2011 and 2031

Primary industries include agriculture and resource extraction.

---

7 Primary industries include agriculture and resource extraction.
2.2 District of North Vancouver Employment Estimates

2.2.1 Total District Employment Estimates

There were an estimated 28,257 people employed at businesses in the District of North Vancouver in 2011, including those working from home, those with no fixed place of work, and accounting for Census undercount. This compares to 28,940 DNV residents in the labour force, creating a very balanced jobs-to-labour-force ratio of 0.98. This compares to a 0.97 ratio for the Metro Vancouver region overall. By 2016, employment in the District of North Vancouver is estimated to have reached just over 30,000.

Overall, it is projected that there will be nearly 34,700 people employed at businesses, institutions, government agencies, etc. in the District of North Vancouver by 2031.

2.2.2 Employment at Home and With No Fixed Place of Work in District

For the purposes of this analysis, total employment figures by industry must be further analyzed to ‘net out’ those who work at home and those with no fixed place of work, as neither of these groups will require dedicated employment lands.

Home-Based Employment: In 2011, nearly 19% of those employed at DNV businesses (4,790 jobs) worked in private residences. This compares to approximately 7.5% for the region overall. In the DNV, home-based employment as a proportion of total employment in a given category is most prominent in Finance, Insurance and Real Estate (33.5%), Business Commercial Services (30.7%) and Retail Trade (26.2%), as indicated in Table 1.

Table 1: Home-based employment in the District in 2011

<table>
<thead>
<tr>
<th>Sector</th>
<th>Sector share of home-based employment</th>
<th>Portion of sector that is home-based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Industries</td>
<td>0.2%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td>2.5%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Construction</td>
<td>2.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>5.3%</td>
<td>14.5%</td>
</tr>
<tr>
<td>Wholesale</td>
<td>1.1%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Retail</td>
<td>16.3%</td>
<td>26.2%</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>12.3%</td>
<td>33.5%</td>
</tr>
<tr>
<td>Business Commercial Services</td>
<td>37.0%</td>
<td>30.7%</td>
</tr>
<tr>
<td>Info/Cultural Services, Accommodation &amp; Food Services</td>
<td>9.5%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Education (including trade schools)</td>
<td>7.9%</td>
<td>13.8%</td>
</tr>
<tr>
<td>Health &amp; Welfare</td>
<td>2.5%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Public Administration</td>
<td>3.4%</td>
<td>16.4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>18.8%</strong></td>
</tr>
</tbody>
</table>

No Fixed Workplace: employment in the DNV at no fixed places of work accounted for approximately 16% of total jobs in 2011 (4,400 jobs). This compares to approximately 13% for the region overall. Employment with no fixed place of work, as a proportion of total employment in given category was most prominent in Construction (54%), Primary Industries (33%) and Transportation, Communication and Utilities (32%), as indicated in Table 2.
Table 2: Employment with no fixed place of work in the District in 2011

<table>
<thead>
<tr>
<th>Industry</th>
<th>Sector share of no-fixed-workplace employment</th>
<th>Portion of sector with no fixed workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Industries</td>
<td>0.9%</td>
<td>33.1%</td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td>9.7%</td>
<td>32.0%</td>
</tr>
<tr>
<td>Construction</td>
<td>28.7%</td>
<td>53.6%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2.6%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Wholesale</td>
<td>2.6%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Retail</td>
<td>5.2%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>4.0%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Business Commercial Services</td>
<td>18.3%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Info/Cultural Services, Accommodation &amp; Food Services</td>
<td>9.8%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Education (including trade schools)</td>
<td>5.7%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Health &amp; Welfare</td>
<td>6.2%</td>
<td>13.0%</td>
</tr>
<tr>
<td>Public Administration</td>
<td>6.3%</td>
<td>25.2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0%</td>
<td>15.7%</td>
</tr>
</tbody>
</table>

2.2.3 Employment at a Fixed Workplace other than Home

On the whole, 66% of those employed at businesses in the District had a ‘usual place of work’ (fixed but not at home) in 2011. The industries where more than 75% of employees had a usual place of work were Manufacturing, Wholesale, Information/Cultural Services, Accommodation and Food Services, Education, and Health & Welfare. The industries with between 50% and 75% of employees at usual workplaces were Primary, Transportation, Communications and Utilities, Retail, Finance, Insurance and Real Estate, Business Commercial Services, and Public Administration. Only the Construction industry showed less than 50% of employees at a usual workplace (42%). Table 3 compares the industry sectors in this respect.

Table 3: Employment in the District in 2011

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total FTE(^8)</th>
<th>Excluding ‘at home’ and ‘no fixed place’</th>
<th>Portion with usual place of work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>116</td>
<td>68</td>
<td>58%</td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td>1,348</td>
<td>786</td>
<td>58%</td>
</tr>
<tr>
<td>Construction</td>
<td>2,373</td>
<td>996</td>
<td>42%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1,939</td>
<td>1,541</td>
<td>79%</td>
</tr>
<tr>
<td>Wholesale</td>
<td>841</td>
<td>668</td>
<td>79%</td>
</tr>
<tr>
<td>Retail</td>
<td>3,300</td>
<td>2,207</td>
<td>67%</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>1,942</td>
<td>1,113</td>
<td>57%</td>
</tr>
<tr>
<td>Business Commercial Services</td>
<td>6,383</td>
<td>3,610</td>
<td>57%</td>
</tr>
<tr>
<td>Info/Cultural Services, Accommodation &amp; Food Services</td>
<td>3,732</td>
<td>2,793</td>
<td>75%</td>
</tr>
<tr>
<td>Education (including trade schools)</td>
<td>3,044</td>
<td>2,369</td>
<td>78%</td>
</tr>
<tr>
<td>Health &amp; Welfare</td>
<td>2,134</td>
<td>1,724</td>
<td>81%</td>
</tr>
<tr>
<td>Public Administration</td>
<td>1,105</td>
<td>645</td>
<td>58%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>28,257</td>
<td>18,519</td>
<td>66%</td>
</tr>
</tbody>
</table>

For the projections of future built space and employment land demand, these proportions have been held constant.

---

\(^8\) ‘FTE’ stands for ‘full-time equivalents’, which reflects total hours according to the number of full-time schedules those hours would fill.
2.3 District of North Vancouver Employment Projections, 2011 – 2031

2.3.1 Employment overall and by sector

Projections of future employment in the District have been conducted based on the following key assumptions:

- BC’s real GDP will grow from $229 billion in 2015 to $319 billion by 2031, and Metro Vancouver’s total employment growth will be tied to real Provincial GDP growth

- Allocation of employment by industry for Metro Vancouver overall, and the allocation of industry-specific employment to the District, have both been determined using data received from Metro Vancouver for 2011 and 2030, with interpolation for years between.

On this basis, employment within the District has been projected to grow from 28,257 in 2011 to nearly 34,700 by 2031, an addition of 6,430 employees or 23% growth. Figure 4 below shows projected growth by industry as well as each industry’s respective rate of change.

Figure 4: Projected employment and employment growth by industry in the District, 2011 - 2031
2.3.2 Employment at a Fixed Workplace other than Home

Of the projected additional employees in the District of North Vancouver over the next 15 years, over 4,300 or 67% are expected to have a fixed-place of work in the DNV, not at home, as shown in Table 4.

Table 4: Employment in the District at a fixed workplace other than home

<table>
<thead>
<tr>
<th>Sector</th>
<th>2011</th>
<th>2021</th>
<th>2031</th>
<th>Change, 2011-31</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Industries</td>
<td>68</td>
<td>74</td>
<td>78</td>
<td>10</td>
<td>15%</td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td>786</td>
<td>948</td>
<td>1,095</td>
<td>309</td>
<td>39%</td>
</tr>
<tr>
<td>Construction</td>
<td>996</td>
<td>1,100</td>
<td>1,173</td>
<td>177</td>
<td>18%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1,541</td>
<td>1,661</td>
<td>1,734</td>
<td>192</td>
<td>12%</td>
</tr>
<tr>
<td>Wholesale</td>
<td>668</td>
<td>790</td>
<td>897</td>
<td>229</td>
<td>34%</td>
</tr>
<tr>
<td>Retail</td>
<td>2,207</td>
<td>2,405</td>
<td>2,536</td>
<td>329</td>
<td>15%</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>1,113</td>
<td>1,274</td>
<td>1,403</td>
<td>290</td>
<td>26%</td>
</tr>
<tr>
<td>Business Commercial Services</td>
<td>3,610</td>
<td>3,941</td>
<td>4,159</td>
<td>549</td>
<td>15%</td>
</tr>
<tr>
<td>Info/Cultural Services, Accommodation &amp; Food Services</td>
<td>2,793</td>
<td>3,227</td>
<td>3,585</td>
<td>792</td>
<td>28%</td>
</tr>
<tr>
<td>Education (including trade schools)</td>
<td>2,369</td>
<td>2,683</td>
<td>2,928</td>
<td>559</td>
<td>24%</td>
</tr>
<tr>
<td>Health &amp; Welfare</td>
<td>1,724</td>
<td>2,094</td>
<td>2,433</td>
<td>710</td>
<td>41%</td>
</tr>
<tr>
<td>Public Administration</td>
<td>645</td>
<td>743</td>
<td>823</td>
<td>178</td>
<td>28%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>18,519</td>
<td>20,940</td>
<td>22,843</td>
<td>4,325</td>
<td>23%</td>
</tr>
</tbody>
</table>

2.3.3 Employment Lands in the District

Employment activities occur at a wide range of land types with a variety of OCP designations and land use zones. For the purpose of this analysis our Team is concerned with the proportions of future ‘fixed place’ employment that may seek land or built space in light industrial/commercial business park, hybrid business park, or other employment lands. This may include some institutional-type users (e.g. daycare, community health centre, labs, offices related to education), but would exclude the majority of heavy manufacturing users save for some office space.

For the following industry categories, it is assumed that at least 85% of the projected fixed-workplace employment may seek locations on employment lands as defined above:

- Primary Industries
- Transportation, Communication, Utilities
- Construction
- Wholesale
- Health & Welfare
- Public Administration.
For the remainder of categories, the following proportions have been allocated to employment lands:

- **Manufacturing, @25%**: much of the manufacturing-related employment in North Vancouver is likely to be related to port-oriented purposes (e.g., ship building) or other heavy manufacturing related to materials processing, infrastructure and the like. The remainder will be light manufacturing, which is appropriate for the type of employment lands being considered in this study. This would include industries related to electronics, furniture, textiles, plastics, pharmaceuticals, wood, and others located within fully-enclosed buildings.

- **Retail @ 20%**: this would account for accessory retail uses on employment lands.

- **Health & Welfare @ 20%**: this category includes a wide range of sub-industries, from offices for doctors, dentists and other health practitioners, to laboratories, ambulatory services, hospitals, nursing facilities and family/community/vocational/child services. Most of those employed within this industry would locate in health, community, and institutional-type buildings on commercial and institutional lands. Some uses may gravitate to office space in a business park environment.

- **Finance, Insurance, and Real Estate @ 25%**: there is significant alignment here with retail; most businesses in this grouping tend to land in commercial retail centres, comparatively few in stand-alone office buildings or business parks.

- **Education @ 10%**: this is not a common usage on employment lands. Most would go to dedicated institutional lands, with some ending up in commercial districts (e.g., language schools).

- **Business & Commercial Services @ 75%**: this category is an amalgamation of four Statistics Canada 2-digit NAICS categories\(^9\), and most businesses in this sector operate in the ‘business to business’ space (i.e., business that primarily offer services to other businesses). These types of users operate well in industrial/business park environments, although some businesses will gravitate to commercial zones.

- **Information/Cultural Industries @ 50%**: while the majority of employees in this category work either at home or at no fixed place, at least half of the remainder of employees and their companies are expected to gravitate toward space on employment lands. This industry sector includes businesses involved in publishing (including software, sound, TV, broadcasting), telecommunication, data processing, internet providers, and other information service industries.

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\(^9\) Comprised of the following categories (with 2 digit NAICS codes): Professional, Scientific and Technical Services (54); Management of Companies & Enterprises (55); Administrative and Support, Waste Management and Remediation Services (56); Other Services excluding public administration (81).
2.4 Employment Space Demand in the District, 2016 – 2031

To forecast the future space and land requirements for industry in the District of North Vancouver, the following approaches have been used:

1) Convert employment forecasts “on employment lands” as discussed above into built floor space, and subsequently convert built floor space into land requirements:
   a. Convert built space to land using existing densities in the District
   b. Convert built space to land using anticipated future densities (by sector) in the District

2) Project future land requirements on the basis of recent historical absorption of industrial floor space in the District.

2.4.1 Employment-driven Built Space Demand

Data sets provided to the Consultant Team by the District provide employment density calculations by business type, measured in square feet of built space per full-time-equivalent (FTE) job. By applying these ratios to projected employment expected to locate at employment lands, we arrive at estimates of future built space requirements by industry (gross floor area), year-over-year, as shown in Table 5:

- From 2016 to 2031, the employment-based forecasts show a need for approximately 915,000 square feet of floor area in the District of North Vancouver on employment lands.
- Demand is projected to be highest in the next 5 years, averaging over 71,000 square feet per year from 2016 – 2021. Between 2021 and 2026 average annual demand is expected to taper to around 54,000 square feet, before increasing to just under 58,000 square feet in the 2026 – 31 period. Variability is a function of projected employment growth in the region overall, which is tied to anticipated pace of Provincial GDP growth.

Table 5: Projected net new built employment space needed (sq. ft.) in District, 2016 – 2031

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Industries</td>
<td>2,251</td>
<td>1,364</td>
<td>1,647</td>
<td>5,263</td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td>61,087</td>
<td>53,635</td>
<td>53,383</td>
<td>168,105</td>
</tr>
<tr>
<td>Construction</td>
<td>18,013</td>
<td>11,819</td>
<td>13,544</td>
<td>43,375</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>13,190</td>
<td>6,893</td>
<td>9,236</td>
<td>29,318</td>
</tr>
<tr>
<td>Wholesale</td>
<td>59,398</td>
<td>50,219</td>
<td>50,552</td>
<td>160,169</td>
</tr>
<tr>
<td>Retail</td>
<td>8,067</td>
<td>4,788</td>
<td>5,861</td>
<td>18,716</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>5,876</td>
<td>4,549</td>
<td>4,749</td>
<td>15,174</td>
</tr>
<tr>
<td>Business Commercial Services</td>
<td>77,249</td>
<td>46,417</td>
<td>56,351</td>
<td>180,017</td>
</tr>
<tr>
<td>Info/Cultural Services, Accommodation &amp; Food Services</td>
<td>31,807</td>
<td>25,347</td>
<td>26,113</td>
<td>83,267</td>
</tr>
<tr>
<td>Education</td>
<td>4,572</td>
<td>3,410</td>
<td>3,627</td>
<td>11,609</td>
</tr>
<tr>
<td>Health &amp; Welfare</td>
<td>52,747</td>
<td>46,863</td>
<td>46,509</td>
<td>146,119</td>
</tr>
<tr>
<td>Public Administration</td>
<td>21,144</td>
<td>16,690</td>
<td>17,267</td>
<td>55,102</td>
</tr>
<tr>
<td>TOTAL</td>
<td>355,400</td>
<td>271,995</td>
<td>288,839</td>
<td>916,235</td>
</tr>
<tr>
<td>Avg. Annual</td>
<td>71,080</td>
<td>54,399</td>
<td>57,768</td>
<td>61,082</td>
</tr>
</tbody>
</table>
2.4.2 Employment-driven Land Demand Forecasts (Scenarios 1 & 2)

Each industry utilizes industrial and mixed-employment lands in a different way. Some industries are more building-intensive, including logistics, warehousing, manufacturing, production, distribution and industrial-related accessory uses such as on-site retail and office. Other are more land-intensive, requiring significant outdoor space for storage, loading and parking. Some industries are more readily adaptable to denser, multi-level industrial building forms than others, provided that these typologies still allow all core needs to be met, including cost of construction and parking.

As the industrial land market in the Metro Vancouver region becomes increasingly constrained, the pace at which certain industries are adapting or looking for ways to adapt is accelerating. For this analysis, consideration has been given to two future land utilization scenarios in conjunction with the DNV-level forecast of employment, which are then compared to land availability in the District. The scenarios are as follows:

Scenario 1 – Using Employment Forecasts and Status Quo Development Densities: The densities of buildings in each sector in the District, and thus their utilization of land, will not change in the District over the next 15 years.

Scenario 2 – Using Employment Forecasts and Select Increases in Development Densities: Land utilization (i.e. built space density) will increase in certain categories, reducing the amount of land required.

Densities for each of the above scenarios are shown in Table 6 below.

Table 6: Projected land utilization in the District by sector, in each scenario (floor-space ratio\(^{10}\))

<table>
<thead>
<tr>
<th>Industry</th>
<th>Scenario 1 - Status quo FSR</th>
<th>Scenario 2 - Higher FSR new construction in select categories</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Industries</td>
<td>0.2</td>
<td>0.2</td>
<td>No change anticipated due to outdoor space requirements</td>
</tr>
<tr>
<td>Transportation, Communication, Utilities</td>
<td>0.1</td>
<td>0.2</td>
<td>Slight densification possible</td>
</tr>
<tr>
<td>Construction</td>
<td>0.4</td>
<td>0.5</td>
<td>Slight increase</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.1</td>
<td>0.3</td>
<td>Small-scale manufacturers could operate in multi-level spaces</td>
</tr>
<tr>
<td>Wholesale</td>
<td>0.2</td>
<td>0.2</td>
<td>No change anticipated due to loading/parking requirements</td>
</tr>
<tr>
<td>Retail</td>
<td>0.4</td>
<td>0.4</td>
<td>No change anticipated due to required parking ratios</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>0.2</td>
<td>0.7</td>
<td>Significant densification possible through multi-level facilities and reduced parking</td>
</tr>
<tr>
<td>Business Commercial Services</td>
<td>0.3</td>
<td>0.4</td>
<td>Slight increase possible through multi-level space</td>
</tr>
<tr>
<td>Info/Cultural Services, Accommodation &amp; Food Services</td>
<td>0.3</td>
<td>0.4</td>
<td>Slight increase possible through multi-level space</td>
</tr>
<tr>
<td>Education (including trade schools)</td>
<td>0.3</td>
<td>0.6</td>
<td>Multi-level space possibilities</td>
</tr>
<tr>
<td>Health &amp; Welfare</td>
<td>0.9</td>
<td>0.9</td>
<td>No change</td>
</tr>
<tr>
<td>Public Administration</td>
<td>0.2</td>
<td>0.5</td>
<td>Multi-level space possibilities</td>
</tr>
</tbody>
</table>

\(^{10}\) FSR is calculated by dividing the gross floor area of a building by the total area of its site. A higher FSR implies a higher land utilization.
Under Scenario 1, the District would see demand for approximately 10 acres of land per year over the next 5 years, and an average of 8.5 acres per year over a 15-year period. Assuming that none of this land demand is fulfilled through adaptive re-use and redevelopment, the inventory of vacant land in the District (~42 acres\(^{11}\)) would be consumed within 5 years.

Under Scenario 2 the District would see demand for approximately 5 acres of land per year over the next 5 years, and an average of 4.5 acres per year over a 15-year period. Again assuming that none of this land demand is fulfilled through adaptive re-use and redevelopment, the inventory of vacant land would be consumed within 9 years. These outcomes are shown in Table 7.

### Table 7: Land demand, 2017 – 2025, based on employment & density forecasts (ac)

<table>
<thead>
<tr>
<th>Year</th>
<th>Scenario 1 – Employment-based, status quo density</th>
<th>Scenario 2 – Employment-based, higher density</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Land required</td>
<td>Cumulative land required</td>
</tr>
<tr>
<td>2017</td>
<td>9.9</td>
<td>9.9</td>
</tr>
<tr>
<td>2018</td>
<td>9.9</td>
<td>19.7</td>
</tr>
<tr>
<td>2019</td>
<td>9.9</td>
<td>29.6</td>
</tr>
<tr>
<td>2020</td>
<td>9.9</td>
<td>39.4</td>
</tr>
<tr>
<td>2021</td>
<td>9.9</td>
<td>49.3</td>
</tr>
<tr>
<td>2022</td>
<td>7.7</td>
<td>57.0</td>
</tr>
<tr>
<td>2023</td>
<td>7.7</td>
<td>64.7</td>
</tr>
<tr>
<td>2024</td>
<td>7.7</td>
<td>72.5</td>
</tr>
<tr>
<td>2025</td>
<td>7.7</td>
<td>80.2</td>
</tr>
</tbody>
</table>

### 2.4.3 Trend-based Land Demand Forecast (Scenario 3)

Over the last 5 years up to the end of Q4 2015, net absorption of industrial land in North Vancouver has averaged approximately 60,000 square feet per year. In the first quarter of 2016, net absorption already reached 60,000 square feet, and is likely to exceed 80,000 square feet by year-end. Assuming that the net absorption of space at year-end 2016 is 80,000 square feet, a trend-based forecast would see average annual demand of 50,000 built square feet. Using an average density of 0.39 FSR, this translates to annual requirements of approximately 3 acres of land. This pace of growth would consume all available lands within 14 years, as indicated in Table 8.

---

\(^{11}\) Metro Vancouver (2015). Industrial Lands Inventory Technical Report
Table 8: Land demand, 2017 – 2030, based on absorption trends (ac)

<table>
<thead>
<tr>
<th>Year</th>
<th>Scenario 3 – Trend-based</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Land required</td>
</tr>
<tr>
<td>2017</td>
<td>3.0</td>
</tr>
<tr>
<td>2018</td>
<td>3.0</td>
</tr>
<tr>
<td>2019</td>
<td>3.0</td>
</tr>
<tr>
<td>2020</td>
<td>3.0</td>
</tr>
<tr>
<td>2021</td>
<td>3.0</td>
</tr>
<tr>
<td>2022</td>
<td>3.0</td>
</tr>
<tr>
<td>2023</td>
<td>3.0</td>
</tr>
<tr>
<td>2024</td>
<td>3.0</td>
</tr>
<tr>
<td>2025</td>
<td>3.0</td>
</tr>
<tr>
<td>2026</td>
<td>3.0</td>
</tr>
<tr>
<td>2027</td>
<td>3.0</td>
</tr>
<tr>
<td>2028</td>
<td>3.0</td>
</tr>
<tr>
<td>2029</td>
<td>3.0</td>
</tr>
<tr>
<td>2030</td>
<td>3.0</td>
</tr>
</tbody>
</table>

2.4.4 Synopsis of Land Demand Forecast Scenarios

Under the employment-driven demand scenarios (Scenarios 1 and 2) – one at current density and one at anticipated higher densities – the 42 acres of vacant land in the DNV would be consumed in between 4.5 and 9 years. If we extend recent absorption trends into the future (Scenario 3), the 42 acres of vacant land would be consumed in about 14 years. All three scenarios are shown in Figure 5.

Figure 5: Employment land demand by scenario, with year of full capacity indicated
Even under a situation of significant densification in industries where it is most feasible, all available land may be consumed within 9 years (Scenario 2). This assumes that employment growth as forecast based on Metro Vancouver’s proportionate allocations is realistic and that the constrained land situation does not itself cause an early tapering of DNV’s employment allocations (reflected in Scenario 3); as land runs out, fewer potential occupants can find the ideal location, so rates of sales and development slow down. This may already be occurring.

There may be opportunities for redevelopment of employment lands (in Maplewood and elsewhere) that would be considered ‘underutilized’ based on the current ratios of improvement-to-land values. It is important to keep in mind however that older, depreciated building stock provides opportunities for certain businesses and business categories to operate, opportunities that may not exist in newer space due to the rents and sale prices that would be required to make redevelopment viable. This is not to say that redevelopment should not occur, but rather to highlight one of the inevitable trade-offs that redevelopment will require.

Through the interview process (discussed at greater length in Section 3) we have ascertained some key opportunities for particularly challenging portions of the vacant lands in Maplewood, notably the areas with significant slopes at the northern ends of the Port lands. There may be some industry categories that are well suited to these lands, in which case it would be wise to retain these lands for future employment uses. If it is determined that there is limited usability of these lands for industry, or that the industries best suited to these lands are unlikely to be major growth sectors in the District over the next 10 – 15 years, then consideration could be given to re-designation for residential, mixed-use, live-work or other uses.

With regard to allowing additional vacant lands in Maplewood to be converted to industrial and/or mixed-employment uses, this policy is not recommended by the Consultant Team because a shortage of affordable housing is one of the barriers to businesses operating in North Vancouver over the long term, and such an approach may do more harm to the District’s businesses than good.
3 Maplewood Economic Opportunity Assessment

The Employment Lands Demand Assessment presented in Section 2 produced an understanding of how employment is likely to grow in the District as a whole, how that employment is likely to utilize built space and land, and how that compares to what is currently and potentially available. To gain a sense of demand for employment lands in the Maplewood Area in particular, a more qualitative approach is required, since demand for land in Maplewood depends more on sector-specific locational preferences and less on regional-scale trends.

This section reports the results of a detailed interview process in which the Consulting Team contacted and spoke with 16 stakeholders and experts, each with unique perspectives on the Maplewood Area. Interviewees included:

- Three realtors
- A developer
- Two manufacturers of boats, boat parts, and nautical technology
- A manufacturer of industrial parts
- A manufacturer of chemicals
- A wholesale & distribution company
- A stevedoring service
- Two research and technical service companies
- A business services company
- A film studio
- A spa
- The Port of Vancouver.

This section discusses some high-level findings of the interview process, and then presents several pages of tables that summarize the interview findings on a sector-by-sector basis.

3.1 General Stakeholder Comments

According to the Consultant Team’s realtor contacts (and corroborated by many other stakeholders), the 2016 market for industrial and office space on the North Shore is very hot; there have been many sales and leases in the area in recent years, including industrial, retail, and office space. Local commercial realtors have never seen this level of scarcity. There is effectively zero current supply of North Shore industrial space, and products are spending as little as one day on the market. Office has relatively more vacancy, but this still amounts to very little. Developer/realtor Great West Life is fully built-out and looking for more land.

Currently the most popular products include buildings that mix office and light industrial uses, and small-bay office strata that can be combined. Big warehouses are not in demand as much as smaller spaces for specialty businesses.

In Maplewood, a developer has sold one standalone office building, two standard industrial buildings, and one hybrid office & industrial building. All of it sold quickly, although the hybrid space is particularly popular and highlights the benefit of flexible use regulations. Their four
buildings on Forester Street now contain a huge variety of occupants, indicating Maplewood’s appeal to a broad range of businesses:

- Engineering firm
- Mechanical contractor
- Garage
- Small manufacturing
- Athletic uses
- Cafes
- Bike manufacturing
- Luxury car service
- Civil contractor
- Language school
- Property management firm
- Design and marketing companies.

New industrial space in Maplewood is selling for $285 - $300 per square foot, and leasing for $15 - $18 per square foot per year. New office space in Maplewood is selling for $410 - $450 per square foot, and leasing for $25 per square foot per year.

Parking is the big constraint on density in this area. Businesses need a certain amount of parking and unground parking is prohibitively expensive, so ground parking is unavoidable.

### 3.2 Industry Sectors with Growing Demand

According to several stakeholders, the following sectors exhibit growing demand for land in Maplewood:

- Mixed-use developments
- Live-work space (which has the benefit of requiring less parking)
- Retail
- Light industrial
- Trades and contractors
- Locally-owned businesses
- Service commercial
- Office
- Brewery
- Fitness & lifestyle (including gym and spa uses)
- Peripheral port services
3.3 Employee Attraction & Retention

Maplewood is generally considered a good place to operate a business or to work. Its attractiveness is increasing as residential development brings more amenities to the area such as restaurants, retailers, and services. However, there are a number of issues that stakeholders identified that may be improved to better attract and retain employees:

- The difficulty of travelling to Maplewood from some parts of the region is frequently mentioned as a barrier to employment in the area. Transit service to Maplewood has been improved in recent years, but further improvements would have a positive impact.

- A second frequently mentioned barrier to employment in Maplewood is the high cost of North Shore living in general, and of housing costs in particular. Ensuring that affordable housing exists in the District may allow workers to live closer to Maplewood.

- The development of Northwoods Village has introduced new retail, restaurant, and service amenities that are appreciated by those businesses currently operating in Maplewood. Further increasing the area’s offering of amenities would continue to increase its attractiveness to employees.

- Further to that point, a pedestrian crossing connecting Northwood Village to the south side of Dollarton Highway would make the existing and proposed amenities in the Village easier for Maplewood’s workers to access.

3.4 Maplewood Industry Sector Analysis

This section presents an analysis of Maplewood’s strengths, weaknesses, opportunities, and constraints (SWOC) from the perspective of a number of industry sector stakeholders, primarily including businesses currently operating in the area, but also prospective Maplewood occupants such as the film and spa sectors.

Table 9 is a matrix showing each sector’s perspective on Maplewood’s SWOC. Table 10 compares the locational requirements and preferences of each sector.
Table 9: Interview results showing Maplewood’s strengths, weaknesses, opportunities, and constraints according to various industry sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Strengths</th>
<th>Weaknesses</th>
<th>Opportunities</th>
<th>Constraints</th>
</tr>
</thead>
</table>
| Maplewood in general (industry non-specific) | • Good regional accessibility due to Highway 1. It. creates a worker catchment that includes the North Shore, Burnaby, and East Vancouver.  
• Beautiful green space attracts workers and customers.  
• Maplewood is very attractive to business owners who live in North Vancouver.  
• Adjacent amenities (food, stores, etc.) are a boon to businesses.  
• Good bike infrastructure.  
• Maplewood has a tight-knit community of businesses, providing a customer base for business service operations. | • The heavy industrial properties to the south present adjacency issues for some tenants, including smell and traffic.  
• Safety is a concern for business owners next to heavy chemical operations.  
• The North Shore is too expensive for most employees to live locally.  
• Parking is a constant issue in most industrial sectors.  
• Traffic congestion is a nuisance, and may impede emergency vehicles.  
• Bus service is present but poor.  
• In general Maplewood doesn’t have the customer pull of Lonsdale, for example. | • The growth in nearby retail creates a general amenity attractive businesses and employees.  
• The Port lands represent a vast development opportunity (employment or otherwise)  
• Neighbourhood walkability has improved and may improve further.  
• Some of the area’s older homes may be replaced by employment uses.  
• Space for medical and counselling offices; and automotive and heavy equipment shops are in demand but are not permitted. | • Land is in short supply in Maplewood, the District, and the Region generally. The North Shore is particularly impacted in all sectors.  
• The housing shortage threatens all businesses, as residential and accompanying retail uses “crowd out” the market for land.  
• Already long-term tenants are leaving due to affordability issues.  
• Switching to a toll bridge system may make the area less affordable for commuters.  
• On the other hand, traffic jams appear to be worsening.  
• Restrictions on permitted uses (for example medical offices and live-work spaces) may limit flexibility. |

12 This row of the SWOT analysis reflects overall strengths, weaknesses, opportunities, and constraints in Maplewood that apply to all industry sectors. The items shown below refer only to industry-specific SWOT characteristics.
<table>
<thead>
<tr>
<th>Sector</th>
<th>Strengths</th>
<th>Weaknesses</th>
<th>Opportunities</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>• The introduction of newer retail is a positive development for many sectors as it creates a better workplace environment.</td>
<td>• It is tougher for retailers to locate in Maplewood than in other parts of the North Shore because it is a relatively low-income area without a large residential catchment.</td>
<td>• The newer commercial tenant mix, especially office workers, tend to be more affluent and may support local retail.</td>
<td>• Retail potential is set to grow with the development of the area’s residential market.</td>
</tr>
<tr>
<td>Light Industrial</td>
<td>• Very appropriate existing space. • Good proximity to bridge and railroad. • Good proximity to waterfront, as many light industrial operations are marine-related. • Appropriate rents (for now).</td>
<td>• Parking is insufficient. • Traffic is an issue (from the transfer station especially)</td>
<td>• The presence of nearby heavy industrial uses makes Maplewood less appropriate for many other uses such as residential, but ideal for light industrial operations.</td>
<td>• Demand for residential could crowd out this sector. • Higher-yield employment types could crowd out this sector. • There is no other location on the North Shore where these operations could go. Already businesses are moving to the Fraser Valley.</td>
</tr>
<tr>
<td>Heavy Industrial</td>
<td>• The area south of Maplewood is ideal for its current heavy industrial use because of logistical and transportation convenience. The supply chain is largely in one place. • There are several businesses in the Maplewood area that provide technical and support services to the large operations across the railway.</td>
<td>• The chemical plant poses a safety concern for surrounding uses.</td>
<td>• The introduction of newer retail is a positive development for this industry as it creates a better workplace environment, by providing amenity to employees.</td>
<td>• Transportation to this sector’s large, static locations is a growing issue that impedes employee retention.</td>
</tr>
<tr>
<td>Sector</td>
<td>Strengths</td>
<td>Weaknesses</td>
<td>Opportunities</td>
<td>Constraints</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Wholesale &amp; Distribution</td>
<td>- High lease rates and land prices make distribution increasingly unviable. Particularly when compared to warehousing districts in the Fraser Valley (such as Burn Road), operating this kind of business on the North Shore is not very attractive.</td>
<td>- There is a potential opportunity for other industries to expand if this sector relocates.</td>
<td></td>
<td>- Potential crowding out by residential and retail uses is a real threat.</td>
</tr>
<tr>
<td>Office employment</td>
<td>- Having a mix of nearby employment types is beneficial for this sector, as is nearby residential.</td>
<td>- Office employment tends to require more parking (although it requires less open space overall).</td>
<td></td>
<td>- Congestion is an issue in the area, and nearby residential development is perceived to exacerbate this.</td>
</tr>
<tr>
<td>Film</td>
<td>Not an existing use in Maplewood.</td>
<td></td>
<td>- North Shore Studio is looking for a new location, and the Port Lands are one of the largest pieces of undeveloped industrial-designated land in the District.</td>
<td></td>
</tr>
<tr>
<td>Spa</td>
<td>Not an existing use in Maplewood.</td>
<td></td>
<td>- Strom Spa is looking for a location in North Vancouver.</td>
<td>- This industry requires a quiet location, which may be an issue in Maplewood.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- North Vancouver in general and Maplewood in particular provide exceptional proximity to nature, which this industry prizes.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Maplewood is already an emerging fitness and wellness hub (Arc’teryx, climbing gym, etc.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Proximity to Deep Cove is positive.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- A spa can be almost invisible from the outside, which makes it a perfect transitional use for Maplewood North.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Rugged terrain and slopes are no barrier to this use.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Rail noise and highway noise may be an issue for this sector.</td>
<td></td>
</tr>
</tbody>
</table>
Table 10: Sector locational requirements & preferences

<table>
<thead>
<tr>
<th>Site</th>
<th>Light industrial</th>
<th>Distribution</th>
<th>Shipping</th>
<th>Office&lt;sup&gt;13&lt;/sup&gt;</th>
<th>Film&lt;sup&gt;14&lt;/sup&gt;</th>
<th>Spa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighbours</td>
<td>Flat</td>
<td>Decent egress</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighbours</td>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighbours</td>
<td>discouraged</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighbours</td>
<td>Heavy industrial clients preferred</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preferred built size&lt;sup&gt;15&lt;/sup&gt;</td>
<td>1,500</td>
<td>&lt; 10,000 ft&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
<td></td>
<td>15,000 – 20,000 ft&lt;sup&gt;2&lt;/sup&gt;, plus attached office, warehouse, and mill shop.</td>
<td>20,000 – 25,000 ft&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>Lot size</td>
<td>Greater than 50 ac</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ideally none</td>
</tr>
<tr>
<td>Height</td>
<td>9 – 10 ft. ceiling</td>
<td>16 ft. clearance for trucks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearance</td>
<td>20 – 22 ft.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setback</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Could be zero setback from property line.</td>
</tr>
<tr>
<td>Preferred parking&lt;sup&gt;16&lt;/sup&gt;</td>
<td>1 stall per 1,000 ft&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage</td>
<td>Outdoor preferred or necessary, depending on business</td>
<td></td>
<td>More than 200 ft&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Freeway access</td>
<td>Freeway access</td>
<td>Rail access</td>
<td>Proximity to water</td>
<td>Proximity to water</td>
<td></td>
</tr>
</tbody>
</table>

---

<sup>13</sup> Mandate elevators for disabled workers.

<sup>14</sup> Film industry tax credits are sometimes used to entice this industry.

<sup>15</sup> Units smaller than 1,500 square feet only attract storage, which is low yield and low employment. The ideal product (according to realtors and developers) is a 2,500 square foot unit with office in the front and warehouse in the back.

<sup>16</sup> Less parking than this amount is difficult to sell. Parking requirements assume street parking in addition to stated amount.
Table 10 presents the stated locational preferences of a number of Maplewood’s employment sectors. Some observable conclusions include:

- The sectors that primarily occupy Maplewood at present – light industrial, distribution, and office – have no strict requirements vis a vis lot size, although preferences may exist, as mentioned in Section 3.1
- Shipping, film, and spa uses require large sites, which may explain why these sectors have less presence in Maplewood at present
- Most sectors require flat sites and vehicle access, although the spa sector is able to operate on a sloping site, and may even prefer it
- Interviewees report that building setbacks are purely aesthetic, and do not impact their operations.
- Requirements with respect to transportation infrastructure, clearance, building heights, lot sizes, and parking minimums vary by sector, but are typically well met by Maplewood and by the District’s zoning bylaw (further discussed in Section 5).

3.5 Maplewood Economic Opportunity Assessment Summary

There is more than enough demand to fill all available employment land area in Maplewood:

- Employment land with a mix of retail, warehouse, manufacturing and office on one site, that can make use of flexible space, will continue to be in high demand.
- Maplewood will be attractive to a wide range of business types. Offering flexibility in business type and proximity to key transportation infrastructure will ensure that the area remains in high demand from employers.
- Uses such as a spa could take up as much as 200,000 square feet (~4.5 acres) of land area; sloped land is not problematic, and may be an asset.
- A shortage of affordable housing is one of the barriers to businesses operating in North Vancouver over the long term.
- There will also be continuing demand from trades and contractors, looking for smaller (e.g. 1,500 sf) units, on flat sites, with appropriate street and loading access. Those serve both local area and the heavy industrial hub to the south.
- Fitness and lifestyle-oriented users (for example climbing walls and gyms) are increasing their demand for industrial areas due to space flexibility and rent.
- Demand for peripheral port services is high and increasing.
- Distribution and large warehouse operations are struggling in Maplewood due to high rents and land values. It is increasingly difficult to locate on the North Shore rather than relocating to more affordable space in the Fraser Valley. This may be an opportunity to expand other sectors in their absence.
- Requirements with respect to transportation infrastructure, clearance, building heights, lot sizes, and parking minimums vary by sector, but are typically well met by Maplewood and by the District’s zoning bylaw (further discussed in Section 5).
4 Accessory Retail Analysis

The long-term potential for existing and new retail uses in Maplewood will be driven by both residential population and daytime employment population in the area. Having completed District-wide employment forecasts and a Maplewood-specific assessment of demand potential, the Consulting Team now has a sense of the total employment in the Maplewood Area in 2031, which we have used to create a projection of retail demand in Maplewood in that year. This section describes and explains this projection, including a discussion of the type, amount, and market position for future accessory retail uses in the area.

4.1 Employment Assumptions

Applying our District-wide employment projection to the question of retail demand at Maplewood is significantly simplified by the fact that of the District’s 42 acres of under-utilized industrial land\textsuperscript{17}, nearly all is either within the Maplewood Area, or immediately to the south of it in the adjacent waterfront employment zone, and therefore still within a reasonable commercial catchment.

Based on the allocation of employment described in Section 2.3.3, the Consulting team estimates that the equivalent of 9,051 full-time employees (FTE) work on employment lands in the District in 2016. Of these, about 760 work in the Maplewood area\textsuperscript{18}. The consulting team projects that from 2016 to 2031, District-wide employment on employment lands will rise from 9,051 to 10,475, or an increase of 1,424. Because nearly all of the District’s vacant industrial land is within walking distance of Maplewood, the Consulting team projects that 75% of this growth will occur in this area (with the remainder going to other intensifying parts of the District). This results in a total employee retail catchment of 1,828 FTE IN 2031.

ICSC Research indicates that on average, each downtown office employee spends almost $6,600 (2015 dollars) per year on a variety of goods and services that are likely to be available in Maplewood, including those who spend nothing\textsuperscript{19}. The Consulting Team assumes that since this is not a downtown location, employee spending will be somewhat lower, at just over $5,900 per year. We also assume that this spending pattern will not change in real terms\textsuperscript{20}.

\textsuperscript{17} Metro Vancouver (2015). Industrial Lands Inventory Technical Report
\textsuperscript{18} This figure is extrapolated from a 2011 District estimate of employment in Maplewood.
\textsuperscript{19} ICSC (2011). Office worker spending, urban downtown, including those who spend nothing.
\textsuperscript{20} I.e. before inflation.
4.2 Residential assumptions

To estimate the retail space that can be supported by a local population, it is important to estimate both the size and affluence of the population.

District staff report that Maplewood’s residential capacity is approximately 1,500 net new units by 2030, in addition to 315 existing units. This results in a 2031 residential total of approximately 1,815. Assuming an average household size of 2.5 individuals, this indicates a total Maplewood population of over 4,500.

Compared to the total population of the neighbourhood, the affluence of the neighbourhood can only be projected in the most approximate terms. For the sake of simplicity, the Consulting Team assumes that Maplewood’s average household income in 2031 will be equal to the District’s average household income in the same year. Extrapolating from an Environics Analytics projection going as far as 2023\(^{21}\), we project that the average household income in 2031 will be more than $176,000 in 2015 dollars, or almost $71,000 per capita.

4.3 Gross Retail Expenditure Potential

Gross retail expenditure potential is the amount of retail spending (by category) that a given population is statistically likely to do. It is a measure of an area’s ability to support retail and service commercial establishments overall and, as such, is the next step after income forecasting to determining the total potential commercial demand for an area. Expenditure potential is a function of an area’s population, income, and overall expenditure patterns.

Real employee spending and residential income projections (as presented in Sections 4.1.1 & 4.1.2, respectively) are converted to real expenditure projections by category using provincial-level retail trade data from Statistics Canada; calculations are performed to determine both how spending by category is likely to change in real terms over time, and how differentials in incomes between the provincial average and the trade areas translate into differences in spending profiles on an individual basis. The gross annual retail expenditure in 2031 from Maplewood’s residential population is projected at $93 million, and the gross annual retail expenditure from Maplewood’s employee population is projected at $11 million.

\(^{21}\) This is a linear projection of the following estimations and projections from Environics Analytics, expressed as “(year, average household income in 2005 dollars)”: (2008, $109,198), (2013, $114,770), (2016, $123,994), (2018, $128,436), (2023, $140,067).
4.4 Net Retail Expenditure & Warranted Commercial Floor Area Potential

The next step in determining the amount of warranted service and retail commercial space in Maplewood is to determine how much retail spending in any given retail category may be attracted to Maplewood instead of other destinations, and how that spending converts to square feet supportable. The amount of spending that may reasonably be attracted to Maplewood was determined based on a number of factors including:

- Existing competition in the marketplace
- Site-specific conditions including traffic and parking considerations, existing and intended adjacent land uses, and the relative age and attractiveness of Maplewood’s buildings.

Ultimately the question of ‘dollar capture’ is one of appropriate tenant mix and market positioning. Based on the above factors, in conjunction with our market expertise, it was determined that Maplewood should be positioned as a local-serving commercial hub specializing in convenience shopping (for example grocery stores), food and beverage establishments, and services such as banks.

With this market positioning in mind, capture rates were applied to gross retail expenditures by category, and the resulting ‘net’ retail expenditures deemed feasible for local capture were converted to warranted retail floor area by applying sales-per-square foot requirements.

Table 11 projects the total commercial floor area supportable in Maplewood in 2031 based on the assumed capture rates and retail performance, divided for the sake of interest into a residential- and employee-supported share.

<table>
<thead>
<tr>
<th>Business Type</th>
<th>Resident-supported</th>
<th>Employee-supported</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service commercial</td>
<td>35,324</td>
<td>943</td>
<td>36,266</td>
</tr>
<tr>
<td>Convenience goods</td>
<td>29,886</td>
<td>1,551</td>
<td>31,437</td>
</tr>
<tr>
<td>Comparison goods</td>
<td>19,908</td>
<td>947</td>
<td>20,855</td>
</tr>
<tr>
<td>Food &amp; Beverage</td>
<td>8,421</td>
<td>6,706</td>
<td>15,127</td>
</tr>
<tr>
<td>Entertainment &amp; Recreation</td>
<td>658</td>
<td>61</td>
<td>719</td>
</tr>
<tr>
<td>Automotive</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94,197</strong></td>
<td><strong>10,208</strong></td>
<td><strong>104,405</strong></td>
</tr>
</tbody>
</table>

Table 11 indicates that more than 104,000 square feet of retail and commercial space will be supportable in Maplewood in 2031. This matches up fairly well to the current OCP projection of approximately 100,000 within Maplewood Village Centre by 2030. The Stong’s grocery store and adjacent accessory retail space currently make up over 33,000 square feet.
4.5 Accessory Retail Recommendations

We project that about 104,000 square feet of commercial space will be supportable in Maplewood by 2031, of which about 10,000 square feet is attributable to employees. Given that the OCP calls for the majority of supportable space to be directed to the Village Centre, building upon the emerging Strong’s-anchored retail node and other existing smaller-scale retail and service operators in the vicinity, the Consulting team believes that a small-scale accessory retail node within the Maplewood business park area is most appropriate. This node would serve primarily the on-site working population, and would be limited to 8,000 to 10,000 square feet. Its ideal tenant mix would consist of four or five food & beverage, convenience, and personal service retailers. A larger, more diverse retail & service node in the Maplewood business park may also be viable, but only at the expense of the currently emerging retail hub as designated in the OCP.

An example of built form and usage mix that may be appropriate for an accessory commercial hub in Maplewood is the Campbell Station commercial area, which offers high-quality, professionally managed retail and office space, and serves the Campbell Heights Business Park. It includes eight 1,250 – 1,650 square foot units suitable for restaurants and retailers, as well as a liquor store, a standalone furniture store, and some adjacent office space. This concept, which is shown in Figure 6, is somewhat larger scale than what we recommend for Maplewood, but can be scaled down as appropriate.

Figure 6: Campbell Station Commercial Area, image courtesy of Colliers International
5  Planning & Regulatory Considerations

The Consulting Team has analyzed the District’s industrial and comprehensive development zoning regulations with the aim of comparing the existing regulations to various industry sector preferences, according to interviewed stakeholders. The Appendix summarizes the requirements of the District’s seven industrial zones as well as the five comprehensive development zones that currently allow industrial uses in the Maplewood Area. In total, the Appendix summarizes:

- Waterfront Industrial Zone (I1)
- General Industrial Zone (I2)
- Light Industrial Zone (I3)
- Interim Industrial Zone (I4)
- Storage Industrial Zone (I5)
- Employment Zone – Industrial (EZ-I)
- Employment Zone – Light Industrial (EZ-LI)
- Comprehensive Development Zones 18, 19, 33, 45, & 50 (CD18, CD19, CD33, CD45, & CD50, respectively).

Comparing the location requirements mentioned by business owners and developers with the industrial and comprehensive development zones described in the zoning bylaw reveals certain elements that might merit further investigation and revision.

Observed discrepancies between stakeholder preferences and zoning restrictions include:

- Some light industrial users may find it difficult to operate in the I3, EZ-LI, CD33, and CD50 zones because these zones restrict “noise, glare, odour and air pollution… detectable from the parcel’s property line”. In the EZ-LI zone, the District has limited the good neighbour regulations to those sites next to residential uses – this flags the potential conflict for businesses before the conflict develops to the point where other bylaws like the noise bylaw or nuisance bylaw kick in. The motive behind including the good neighbour clause is to forewarn businesses when they are considering moving into a new site and thereby avoid frustrations, expensive renovations, or moves down the line.

- The EZ-LI zone has an upper limit on lot size (4,500 m²), which might prevent a film studio or spa from locating there, assuming they were limited to a single lot.

- Landscaping requirements in Maplewood typically mandate a complete screen between buildings and main roads. These could be adjusted to make retail uses more visible to the street, which would improve their viability. Locating buildings next to the sidewalk would also serve to improve visibility. Low visibility of retailers from the street was mentioned as an issue multiple times by existing Maplewood retailers that the Consulting Team interviewed.

The Consultant team anticipates that mixed-use business park will continue to be in high demand. Taking primary and accessory uses into account, the I3, EZ-LI, CD18, CD19, CD33, CD45, and CD50 zones are all more or less appropriate since they allow a mix of light manufacturing, office, and logistical uses.

Additional uses that could be considered in these zones to better match the market would be medical office and live-work space.
6 Conclusion

The Maplewood Employment Lands are a thriving and successful business hub, with a balanced mix of business types that are well-suited to the location both locally and regionally. The businesses in Maplewood make use of the nearby transportation infrastructure, the nearby marine access, and do business with one another and with the heavy industrial users immediately to the south, such as the Canexus chemical plant. Few changes to the District’s zoning bylaw are called for, as it seems to match the needs of existing and potential businesses fairly well.

Realtors and developers are selling available industrial properties at unprecedented speed for unprecedented prices. In other words, there has never been more of an industrial land shortage in the Metro Vancouver Region, and this is especially true on the North Shore. High demand is expected to continue, with many industrial operators and other businesses fleeing to more affordable locations such as the Fraser Valley. Although Maplewood and its immediate environs contain almost all of the District’s vacant industrial land, the Consulting Team estimates that only 4.5 – 14 years of supply remains, depending on the demand scenario.

Barriers to businesses locating in Maplewood include a general shortage of affordable housing in the District, as well as regional-scale transportation challenges and rising land prices. Businesses requiring large building footprints, such as warehousing, are particularly pressed by the land shortage, and have tended to leave the North Shore.

Based on interviews with stakeholders, the Consulting Team projects that businesses with a mix of retail, warehouse, manufacturing, and office on one site, that can make use of flexible space, will continue to be in high demand. Maplewood will be attractive to a wide range of business types in the next several decades. Offering flexibility in business type and proximity to key transportation infrastructure will ensure that the area remains in high demand from employers. Uses such as a spa could take up as much as 200,000 square feet (~4.5 acres) of land area, and have less of an issue with sloped terrain than other employment uses. A small-scale accessory commercial hub may also be appropriate as part of the Maplewood Employment Lands, but should not exceed 10,000 square feet.

To further the District’s objective of ensuring that the Maplewood Employment Lands remain as successful and productive as possible, one logical next step is to research best practices and locally-specific options for high-yield business attraction.

---

Appendix – Summary of Selected Land Use Zones

<table>
<thead>
<tr>
<th>Zone</th>
<th>Uses</th>
<th>Height</th>
<th>FSR</th>
<th>Lot dimensions</th>
<th>Coverage</th>
<th>Storage</th>
<th>Parking</th>
</tr>
</thead>
</table>
| Waterfront Industrial Zone (I1) | • Port-oriented uses except for manufacturing of hazardous substances  
• Accessory offices, display, sales, and reception areas | ≤ 60 ft. | | | • Buildings & structures: ≤ 60% of site | | 1 per 1,150 m² GFA of storage space for goods exclusively handled by machinery |
| | | | | | | | |
| General Industrial Zone (I2) | • Numerous, except for manufacturing of hazardous substances  
• Accessory retail, offices, caretaker, display, sales, and reception areas. No more than 15% of GFA of a tenancy or building | ≤ 40 ft. | | | • Buildings & structures: ≤ 60% of site  
• Buildings, structures, parking, loading, aisles, driveways, and storage: ≤ 95% of site | | In cases of unidentified built space: a minimum of one stall per 40 m² of GLA to a maximum of 15% of GLA of building plus one stall per 100 m² of other GLA |

23 All Industrial Zones have the following parking requirements: 1 stall per 100 m² of warehouse, 115 m² of industrial and interior storage, 575 m² of outdoor display space, 535 m² of mini warehousing, or 45 m² of other uses (all areas refer to GFA). Further requirements are in addition to these.

24 Includes animal shelter, auction room, automotive body shop, automotive repair shop, construction services, contractor services, custom manufacturing, delivery services, equipment rental establishments, gun shop, heavy manufacturing, hobby beer & wine-making, light manufacturing, mini-warehousing, parking lot, pet care, research & development, trade school, specialized light industrial and technological establishments; transportation; veterinarian, warehousing, wholesaling, and works yard.
<table>
<thead>
<tr>
<th>Zone</th>
<th>Uses</th>
<th>Height</th>
<th>FSR</th>
<th>Lot dimensions</th>
<th>Coverage</th>
<th>Storage</th>
<th>Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Light Industrial Zone (I3)</strong></td>
<td>Clean, safe, and buffering uses including office including office all in an enclosed building</td>
<td>≤ 40 ft.</td>
<td>≤ 1.2</td>
<td></td>
<td></td>
<td>Buildings &amp; structures: ≤ 60% of site</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accessory admin office, caretaker unit, display, sales, reception, outdoor customer service, and storage. No more than 25% of GFA of a tenancy or building</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Buildings, structures, parking, loading, aisles, driveways, and storage: ≤ 90% of site</td>
<td></td>
</tr>
<tr>
<td><strong>Interim Industrial Zone (I4)</strong></td>
<td>Interim uses including mining, garbage disposal, and soil screening</td>
<td>≤ 40 ft.</td>
<td></td>
<td></td>
<td></td>
<td>Buildings &amp; structures: ≤ 60% of site</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accessory admin office</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Storage Industrial Zone (I5)</strong></td>
<td>Outdoor storage, excluding hazardous materials</td>
<td>≤ 20 ft.</td>
<td></td>
<td></td>
<td></td>
<td>Buildings &amp; structures: ≤ 10% of site</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accessory admin office</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Buildings, structures, parking, loading, aisles, driveways, and storage: ≤ 95% of site</td>
<td></td>
</tr>
</tbody>
</table>

25 Includes animal shelter, artists’ studio, auction room, automotive body shop, automotive repair shop, billiard hall, building supply establishment (of no more than 40,000 sq. ft.), business/office support services, clubs, contractor services, custom manufacturing, delivery services, equipment rental, fitness centre, gun shop, hobby beer and wine-making, industrial product sales, light manufacturing, media-related establishments, mini-warehousing, parking structure, pet care, recreation vehicle sales/rental/leasing, research and development, retail food services, trade school, specialized light industrial and technological establishments, veterinarian, warehousing, wholesaling, and works yard.
<table>
<thead>
<tr>
<th>Zone</th>
<th>Uses</th>
<th>Height</th>
<th>FSR</th>
<th>Lot dimensions</th>
<th>Coverage</th>
<th>Storage</th>
<th>Parking</th>
</tr>
</thead>
</table>
| Employment Zone – Industrial (EZ-I) | • Employment land adjacent to the Port and rail corridor, including manufacturing, port-oriented use, service, transportation, waste and recycling, wholesale, and equipment sales and rental  
• Office use on upper floors, taking up no more space than above uses, and not exceeding 2,500 m²  
• Up to three dwellings in separate buildings, depending on size of lot  
• Accessory uses of up to 25% of floor space | ≤ 82 ft. |     |                | • Lot size: ≥ 1,100 m²  
• Lot width: ≥ 79 ft.  
• Lot depth: ≥ 112 ft. or 79 ft. on corner lots | | In cases of unidentified built space: a minimum of one stall per 100 m² of GFA |
| Employment Zone – Light Industrial (EZ-LI) | • Numerous low-impact manufacturing and service businesses in enclosed buildings  
• Accessory uses of no more than 25% of GFA of a tenancy or building | ≤ 4 storeys or 50 ft.  
≤ 30 ft. if within 15 m of an RS or C9 zone |     |     |                | • Lot size: 1,100 m² – 4,500 m²  
• Lot width: ≥ 79 ft.  
• Lot depth: ≥ 112 ft. or 79 ft. on corner lots | ≥ 50% of site must be covered by single building facing the street  
≤ 90% of site covered  
Building width: ≤ 150 ft. | In cases of unidentified built space: a minimum of one stall per 45 m² of GFA |
| Comprehensive Development Zone 18 (CD18) | • High-quality light manufacturing and industrial augmented with a range of other uses, all in an enclosed building  
• Various accessory uses. No more than 25% of GFA of a tenancy or building | ≤ 40 ft. | 1.0 | Lot size: ≥ 12,000 ft² | Buildings & structures: ≤ 50% of site | | In cases of unidentified built space: a minimum of one stall per 40 m² of GLA to a maximum of 25% of GLA of building plus one stall per 100 m² of other GLA |

26 Includes manufacturing, office on upper floors, recreation or community centre, one residential unit per parcel to a maximum of 500 m², restaurant, personal service, service, social gathering on upper floors to a maximum of 500 m², warehouse, and retail to a maximum of 2,500 m² including appliances and furniture, auctioneer, building supplies, equipment sales and rental, garden supplies, sports equipment, and vehicle sales.
27 Includes: Business & office support services, car wash, courier and messenger services, custom manufacturing, fitness centre, gas bar, industrial product sales, light manufacturing, media-related establishments, mini-warehousing, office equipment rental, office, research & development, retail food, trade school of up to 7,200 ft², service station, specialized light industrial and technology, warehousing, and wholesaling.
28 Includes: administrative office; conference, display, sales, and reception areas; interior storage; outdoor customer service areas; retail sales; servicing, repair, or testing of goods associates with principal use, and fleet storage for courier and messenger services. Office and media-related establishments shall not exceed 50% of GFA.
<table>
<thead>
<tr>
<th>Zone</th>
<th>Uses</th>
<th>Height</th>
<th>FSR</th>
<th>Lot dimensions</th>
<th>Coverage</th>
<th>Storage</th>
<th>Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive Development</td>
<td>• Business park uses(^{29}) all in an enclosed building</td>
<td>≤ 60 ft</td>
<td>1.0</td>
<td></td>
<td>Buildings &amp; structures: ≤ 50% of site</td>
<td>In cases of unidentified built space: a minimum of one stall per 40 m(^2) of GFA</td>
<td></td>
</tr>
<tr>
<td>Zone 19 (CD19)</td>
<td>• Various accessory uses(^{30}): No more than 40% of GFA of a tenancy or building</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Includes: business &amp; office support services, courier &amp; messenger services, fitness centre, industrial product sales, media-related establishment, office, research &amp; development, restaurant, retail food services, specialized light industrial and technology, warehousing, and wholesaling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Administrative office; conference, display, sales, and reception areas; interior storage; outdoor customer service areas; retail sales; servicing, repair, or testing of goods associates with principal use, and fleet storage for courier and messenger services. Office and media-related establishments shall not exceed 50% of GFA.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Includes: administrative office; conference, display, sales, and reception areas; interior storage; outdoor customer service areas; retail sales; servicing, repair, or testing of goods associates with principal use, and fleet storage for courier and messenger services. Office and media-related establishments shall not exceed 50% of GFA.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>• Buildings &amp; structures: ≤ 50% of site</td>
<td></td>
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\(^{29}\) Includes: business & office support services, courier & messenger services, fitness centre, industrial product sales, media-related establishment, office, research & development, restaurant, retail food services, specialized light industrial and technology, warehousing, and wholesaling

\(^{30}\) Includes: administrative office; conference, display, sales, and reception areas; interior storage; outdoor customer service areas; retail sales; servicing, repair, or testing of goods associates with principal use, and fleet storage for courier and messenger services. Office and media-related establishments shall not exceed 50% of GFA.

\(^{31}\) Includes: business & office support services, custom manufacturing, fitness centre, industrial product sales, office, research & development, retail food services, specialized light industrial and technology, and wholesaling

\(^{32}\) Includes: administrative office; conference, display, sales, and reception areas; interior storage; outdoor customer service areas; retail sales; servicing, repair, or testing of goods associates with principal use
### Comprehensive Development Zone 45 (CD45)

- **Uses**: Clean and safe industrial and servicing uses as well as limited commercial all in an enclosed building except for customer service, storage, and animals.
  - Accessory admin office, caretaker unit, display, sales, reception, outdoor customer service, and storage. No more than 25% of GFA of a tenancy or building.
- **Height**: ≤ 40 ft.
- **FSR**: 1.2
- **Lot dimensions**: ≤ 40 ft.
- **Coverage**: ≤ 50% of site
- **Storage**: Exterior storage is limited to:
  - Vehicles at automotive body and repair shops
  - Building supply establishments
  - Equipment rental establishments
  - Fleet vehicles at contractor or delivery services
  - Recreation vehicle establishments

- **Parking**:
  - In cases of unidentified built space: a minimum of one stall per 40 m² of GLA to a maximum of 25% of GLA of building plus one stall per 100 m² of other GLA.

### Comprehensive Development Zone 50 (CD50)

- **Uses**: Clean, safe, and buffering light industrial park uses all in an enclosed building except for fleet storage, contractor services, film set construction, industrial product sales, and light manufacturing and specialized technology establishments.
  - Various accessory uses. No more than 25% of GFA of a tenancy or building, except in case of media-related establishments, research & development, or specialized light industrial and technology.
- **Height**: ≤ 40 ft.
- **FSR**: ≤ 1.0
- **Lot dimensions**: ≤ 40 ft.
- **Coverage**: ≤ 50% of site
- **Storage**: Buildings: ≤ 50% of site
  - In cases of unidentified built space: a minimum of one stall per 40 m² of GLA to a maximum of 25% of GLA of building plus one stall per 100 m² of other GLA.
  - In the case of film sound stages, 1 space for each 51 m² of GFA.

---

33 Includes: artist’s studio, auction room, automotive body shop, automotive repair shop, billiard hall, business & office support services, clubs, contractor services, custom manufacturing, delivery services, equipment rental, entertainment & recreation, fitness centre, hobby beer and wine-making, household repair, industrial product sales, light manufacturing, liquor store, mini-warehousing, office, parking structure, pet care, recreation vehicle sales/rental/leasing, research & development, retail food, trade school, specialized light industrial and technological establishments, veterinary, warehousing, wholesaling, and building supplies or retail of no more than 40,000 f².

34 Includes: business & office support services, call centre, contractor services, courier and messenger services, custom manufacturing, fitness centre, household repair, industrial product sales, light manufacturing, media-related establishments, mini-warehousing, office, research & development, specialized light industrial and technology, warehousing, and wholesaling.

35 Includes: administrative office; conference, display, sales, and reception area; exterior storage; film set construction; interior storage; retail related to principal use; servicing, repair, and testing of goods associated with principal use; instruction associated with custom manufacturing.
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PART 1: INTRODUCTION AND BACKGROUND

1 INTRODUCTION

1.1 SUMMARY AND PLAN CONTEXT

Identified as a Village Centre in the District of North Vancouver’s 2011 Official Community Plan (OCP), Maplewood is one of the four key centres identified for growth in the Network of Centres Concept (see Figure 1). Roughly 1,500 new residential units are planned for, along with capacity for an additional 9,290 square metres (100,000 square feet) of new commercial space by 2030.

There are existing employment lands within, and immediately adjacent to, Maplewood including both heavy and light industries. One of the cornerstones of this plan is to protect and enhance existing employment lands and dramatically expand job-creating land uses in the Maplewood area. This plan aims to capture approximately 4,500 net new jobs and over a million square feet of employment floor area in the District by 2030 through new land use policies and regulations to support wealth-generating investment, create new employment opportunities and increase tax revenue, benefiting the entire community. The resulting mix of land uses will include options for living, working, playing, creating, and learning.

Recognizing the importance of locating good jobs in close proximity to housing options, 900 residential units are contemplated in the Innovation District to provide employee-oriented housing as a supportive use for the dramatic expansion of jobs contemplated in this implementation plan.

From a mobility standpoint, there is currently no standard street grid in Maplewood and cycling and pedestrian routes within the neighbourhood are sporadic and not connected to key destinations. Improvements for traffic and goods movement, circulation, and connectivity for all modes of travel (including, walking, cycling, transit, and driving) are contained in the plan to accommodate the anticipated growth in Maplewood.

Maplewood has significant green spaces within, and surrounding it. This includes the Maplewood Conservation Area, Windridge Park, Hogan’s Pools Park, Maplewood Creek Park and Seymour River Heritage Park. These parks are largely natural areas and currently there is a limited amount of active recreational park space located directly within the community.

This plan aims to expand active recreational park space within the community and protect and enhance green spaces and environmentally sensitive features including steep escarpment slopes, watercourses, remnant forested areas, and riparian and mature forests, which support wildlife and resident and migratory bird species for future generations to experience and appreciate.
1.2 PURPOSE, APPLICATION, AND INTENT

The purpose of this document is to guide development and regulate the design of buildings and public realm improvements in Maplewood in support of the vision, goals, objectives, and principles outlined in the District’s OCP.

The policies and guidelines contained in this document provide recommendations for future development, which should be used to design, review, and approve new developments (built form) and new public realm improvements (streetscape, public open spaces, parks, etc.).

This plan is intended to be used by the community, the District, land-owners, and developers to understand the likely forms and location of new development and public realm improvements that may occur to 2030. The policies and guidelines should be used to guide development in a comprehensive way that helps meet the vision for Maplewood. The District will use this plan when designing civic and public realm improvements.

This plan is neither prescriptive nor exhaustive, but rather illustrates anticipated key directions for Maplewood. It does not represent final decisions. Generally, decisions on specific development applications and civic improvements will be made by District Council, with public input, on a case-by-case basis. As part of the implementation of
the OCP, this document should be used in conjunction with the 2011 OCP Bylaw 7900, as amended, including the Development Permit Areas as described in Schedule B of the OCP.

1.3 Other Relevant Documents

Other existing policies, studies, and regulations that should be reviewed in conjunction with this document:

- Development Servicing Bylaw 8145, as amended (DSB)
- Maplewood Village Centre Transportation Study Update, Urban Systems, 2017
- North Shore Area Transit Plan, TransLink, 2012
- Maplewood Village Seymour River Flood Protection, KWL, 2017
- Maplewood Village Centre Community Needs Assessment, RC Strategies + PERC, 2017

1.4 Organization and Scope

This document is organized as follows:

Part 1: Introduction and General Planning and Design Considerations provides the purpose and background for the plan and describes the overall existing context and identity of the area.

Part 2: Plan and Policies presents the land use plan and policies for the future of Maplewood that apply to new development.

Part 3: Design Guidelines provides detailed urban design guidelines for the exterior of buildings and the public realm.
1.5 **Planning Area**

The Maplewood planning area is approximately 80 hectares (198 acres) in size and is outlined in dashed red in Figure 2. It is bounded by the Seymour River to the west, Mount Seymour Parkway and the Windridge escarpment to the north, Blueridge and McCartney Creeks to the east, and the light industrial areas located on the south side of Dollarton Highway to the south. Each of the three areas identified below has its own character and serves a specific role in achieving the overall vision for Maplewood.

![Map of Planning Area](image)

**Figure 2: Planning Area**

1.6 **History of the Area**

Maplewood lies in the heart of the Salish Sea where First Nation peoples have lived for thousands of years. In particular, the Maplewood area has a long history of First Nation cultural, spiritual and physical connection with the land. Salmon populations in local creeks and rivers, shellfish from the intertidal wetlands, and other sustenance from the sea were the basis for many spiritual teachings that have been passed down generation to generation by First Nation elders in the area.

In 1917, San Francisco lumberman Robert Dollar, opened the Dollar Mill near the mouth of Indian Arm, which was the focus of the community at Dollarton until it closed in 1942. From the 1940’s to the 1970’s, an informal but cohesive community of squatters lived in a cluster of ramshackle cabins that lined the area’s intertidal zone known as the Maplewood Mudflats. The community attracted an assortment of artists, displaced
loggers, and hippies, many of whom sought out nature and self-sufficiency. Among the most acclaimed residents were the English-born writer Malcolm Lowry, who completed his novel *Under the Volcano* while living here from 1940 to 1954; Dr. Paul Spong, who later led Greenpeace’s “Save the Whales” campaign; and artist Tom Burrows.

In 1975 Maplewood Farm, originally run in the early 1900’s as a dairy farm by Mr. Akiyo Kogo, was opened to the public as a 5-acre farm site. Today the farm is home to over 200 domestic animals and birds and strives to provide a unique experience, incorporating enjoyment, education, and a recollection of the area’s rural heritage. Vancouver’s first fixed connection to the North Shore was provided with the construction of the original Second Narrows Bridge in 1925. In 1960 a much larger six lane bridge was built – today’s Ironworkers Memorial Second Narrows Crossing.

Today this area is emerging as a vibrant community that continues to inspire a respect for nature, creativity and innovation.

### 1.7 Existing Conditions

Maplewood is currently defined by its eclectic mix of land uses and buildings of varying styles and ages set amidst significant natural green spaces. Maplewood has a unique urban structure that reflects its physical location, topography, and history. It is comprised of several distinct areas, each with its own unique characteristics. See Figure 3 for existing features.

1. **Maplewood Village Centre** is characterized by a mix of low rise apartments, purpose built rental townhouses, single family homes, and commercial and mixed-use developments all of varying ages. The area includes an elementary school, iHope family services, North Vancouver Arts Council, and Maplewood Farm. East of Riverside Drive are largely undeveloped lands, predominantly owned by the District.

2. **Maplewood North** is the site of a former gravel pit and is largely undeveloped. It is criss-crossed with informal trails and is where the former International College is located. In the westerly portion there is a former landfill site owned by the District.

3. **Dollarton Highway Light Industrial** is a mix of older light-industrial businesses to the west of Amherst Avenue, and more recent business parks east of Amherst Avenue.

4. There are significant green spaces including Maplewood Conservation Area, Windridge Park, Hogan’s Pools Park, Maplewood Creek Park and Seymour River Heritage Park.

5. Currently limited active recreational park space is located directly in Maplewood.

6. Maplewood Farm attracts over 100,000 visitors annually and strives to provide a unique experience - with enjoyment, education, and a recollection of rural heritage.

7. Maplewood does not have significant views as Burrard Inlet is largely obscured by the industrialized waterfront and Maplewood Conservation Area. However, views do exist from the slopes of windridge escarpment and the Maplewood North area towards Burrard Inlet. There is potential for creating views across the Burrard Inlet from taller buildings depending on the height, siting, and orientation of buildings. Views north towards the mountains are also available in some areas.
1.8 IMPLEMENTATION PLANNING AND ENGAGEMENT PROCESS

The implementation planning and public engagement process to create the Maplewood Village Centre and Innovation District Implementation Plan and Design Guidelines followed the adoption of the OCP. Planning included undertaking technical economic, social, environmental, and transportation studies, conducting collaborative, community and stakeholder consultation, establishing planning principles, and developing a detailed concept plan as the basis for the policies and design guidelines. The planning process and timeline is summarized in Figure 4.

Figure 3: Site Analysis Diagram showing existing features of Maplewood Area

Figure 4: Maplewood Planning Process
Phase 1: Opportunities, Principles, and Big Ideas – invited the public and stakeholders to help identify guiding principles, opportunities, and constraints for the future of Maplewood. A two-week online survey followed to receive public feedback which was then used to provide direction on the Phase 2 concept design.

Phase 2: Concept Design Development – conceptual designs were developed based on direction from Phase 1. Concept options included land use, mobility, and open space network ideas, proposed transportation networks and linkages, diagrams, sketches, and photos to illustrate the ideas.

A two-day charrette, followed by an interactive public open house was held. A two-week online survey followed to receive public feedback on the Maplewood community design concept developed through the charrette event.

Phase 3: Policy and Plan Development – preparation of a draft plan was based on a review of feedback received on concept options and refinement of a preferred option, which was feasibility tested, i.e., detailed infrastructure, transportation modeling, community needs assessment etc. Key directions in the draft plan were presented at a public open house followed by a two-week online survey to receive public and stakeholder feedback. Refinements to the draft plan were prepared based on feedback received and presented to Council for consideration and then approval.
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PART 2: VISION, PRINCIPLES AND POLICIES

2 MAPLEWOOD LAND USE PLAN AND IMPLEMENTATION POLICIES

2.1 VISION FOR MAPLEWOOD

The Official Community Plan vision for Maplewood Village, developed in consultation with the local community, is that Maplewood will be:

“a complete and balanced community with local jobs equalling the local labour force. In particular, jobs for local people and especially jobs for local young people should be encouraged and this will also have the merit of increasing the municipal tax base. New employment areas will reflect a high environmental standard and will also have high aesthetic standards, reflecting the community’s outstanding natural environment. There will be a variety of housing for all ages and incomes and family circumstances centred on a newly invigorated, walkable Maplewood village centre. Old Dollarton Road will become a key focus of pedestrian activity, a street lined with new retail business with apartments and live/work units above. The Maplewood village centre will be convenient for transit and pedestrians and will be the nerve centre of an extensive system of trails, which wend through the community stretching from the Seymour River to Windridge and from Hogan’s Pool to Burrard Inlet.”

(Schedule A, District Official Community Plan, 2011).
2.2 Guiding Urban Design Principles to Support the Vision

**Compact Village Core:**
The highest development densities and building heights, as specified in this plan, should be located within the village core area and include residential and mixed use residential/commercial uses.

**Distinct Neighbourhood Districts:**
distinct, yet connected precincts within Maplewood, each with its own unique purpose and character, should be fostered.

**Connected and Diverse Public Realm and Green Space:**
unique places should be created to integrate existing parks and trails with a series of interconnected community, and smaller active parks, natural park areas, and plazas within the community.

**Strong Commercial Centre and Clustered Community Services:**
small plaza spaces and a community hub should be integrated within the village core to serve as the primary commercial and service areas for Maplewood Village Centre.

**Walkable Community:**
buildings presenting an attractive face to the street, with architectural details, public art, wayfinding, and site-design elements that are inviting and friendly to people walking. The Village Centre should include a pedestrian-friendly High Street and shared street.

**A “Green and Innovative” Character:**
an authentic sense of place centred on integrating natural elements and places, green infrastructure, green building design, and the support of a sustainable lifestyle (including transit, walkable neighbourhoods, a complete community, and, live-work-recreation) should be fostered.
Diverse Development and Housing Types: development at various scales, types and forms should be provided that offers a range of options and tenures. Options for business, car-free development, and housing for a workforce living directly within the community.

Connect to the Water: public connections to the waterfront (river or inlet) should be provided where opportunities exist, while respecting and acknowledging river and coastal floodplains in the design of new development.

Clear Hierarchy of Streets, Improved Access and Multi-Modal Options: transportation connections and access for all modes (walking, cycling, transit, and driving), to/from/within the community should be improved, including a strong connection from the Village Centre to Maplewood North following a “complete streets” model.

Prioritize Environment: sensitive areas and wildlife corridors should be protected with opportunities for education, programming, and pilot projects such as daylighting of creeks.

Promote Innovative Employment Generation: new industry, innovative business opportunities, and small scale local start-ups as well as required municipal and protective services should be supported.
2.3 **Area Structure and Scale**

Maplewood is approximately 80 hectares (198 acres) in area. Maplewood Village Centre is compact, with relatively small blocks making access to shopping and community services convenient. Maplewood North is about an 8-minute walk to the Village Centre, for an average person, and currently only connected via Dollarton Highway.

The concept plan for Maplewood illustrates a compact, complete, connected and energy-efficient community that includes a mix of land uses to provide residents with the opportunity to live, work, play, learn and create within their community.

To achieve this vision for Maplewood the plan divides the area into three precincts: each with their own unique purpose, character and identity.

1. **Maplewood Village Centre** is the central commercial hub and includes a diversity of multi-family housing, mixed-use commercial/residential, live/work and small-scale artisan industrial housing, as well as institutional uses including a school and local community services.
2. **Maplewood North Innovation District** is a new district offering an innovative mix of employment, educational, recreational and limited residential and community uses in a campus-style structure. This area will be connected to the Village Centre by major arterial routes and an active transportation network. Parks, open space and natural areas are integrated throughout to create a connected network.

3. **Dollarton Highway South** is a strong industrial and employment area with opportunities to intensify as existing and local business expand and provides opportunities for the expansion of business park uses.
Design Concept Highlights

1. Village Heart - mixed-use commercial-residential, mid-rise apartment and live/work
2. Multi-family townhouses and/or low rise apartments
3. Light Industrial - Commercial - Business: Intensification of uses
4. Industrial Live/Work Precinct - artisan manufacturing
5. Innovation District Light Industrial / Commercial Business - with employee dedicated housing
6. Natural Park & Conservation Areas (within the planning area boundary)
7. Innovation District - Light Industrial Commercial-flexible employment area
8. Active Park Spaces
Figure 7: Illustrated Concept Plan for Maplewood
2.4 Land Use Designations and Densities

Land use designations and associated densities are cited below:

Figure 8: Maplewood Land Use Plan
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<tr>
<th>Land Use Category</th>
<th>Description</th>
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<tr>
<td>Residential Level 4: Transition Multifamily</td>
<td>Areas designated for transitional multifamily are intended predominantly for multifamily uses within or in close proximity to centres and corridors, or as a transition between higher density sites and adjacent detached and attached residential areas. This designation typically allows for a mix of townhouse and apartment developments up to approximately 1.20 FSR.</td>
</tr>
<tr>
<td>Residential Level 6: Medium Density Apartment</td>
<td>Areas designated for medium density apartment are intended predominantly to provide increased multifamily housing up to approximately 2.50 FSR at strategic locations in centres and corridors. Development in this designation will typically be expressed in medium rise apartments. Some commercial use may also be permitted in this designation.</td>
</tr>
<tr>
<td>Commercial Residential Mixed-Use Level 1</td>
<td>Areas designated for commercial residential mixed-use level 1 are intended predominantly for general commercial purposes, such as retail, service and offices throughout the District. Residential uses above commercial uses at street level are generally encouraged. Development in this designation is permitted up to approximately 1.75 FSR.</td>
</tr>
<tr>
<td>Commercial Residential Mixed-Use Level 2</td>
<td>Areas designated for commercial residential mixed-use level 2 are intended predominantly for medium density general commercial purposes, such as retail, service and offices at limited sites within the District. Residential uses are typically expected to accompany commercial uses. Development in this designation is permitted up to approximately 2.50 FSR.</td>
</tr>
<tr>
<td>Commercial</td>
<td>Areas designated for commercial are intended predominantly for a variety of commercial and service type uses, where residential uses are not generally permitted. Development in this designation is permitted up to approximately 1.0 FSR.</td>
</tr>
<tr>
<td>Institutional</td>
<td>Areas designated for institutional are intended predominantly for a range of public assembly uses, such as schools, churches, recreation centres, and public buildings. Some commercial and accessory residential uses may be permitted.</td>
</tr>
<tr>
<td>Light Industrial Commercial</td>
<td>Areas designated for light industrial commercial are intended predominantly for a mix of industrial, warehouse, office, service, utility and business park type uses. Supportive uses including limited retail and limited residential uses may be permitted.</td>
</tr>
<tr>
<td>Light Industrial Commercial Mixed-Use - Innovation District</td>
<td>Areas designated for light industrial commercial mixed-use - innovation district are intended predominantly for a mix of industrial, warehouse, office, service, utility and business park type uses up to approximately 1.10 FSR. Light industrial uses at street level are generally encouraged, and commercial uses, such as retail, service and office, are typically expected above street level. Supportive uses including limited institutional, and limited recreational uses may be permitted.</td>
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<tr>
<td>Light Industrial Residential Mixed-Use - Innovation District</td>
<td>Areas designated for light industrial residential mixed-use - innovation district are intended predominantly for a mix of industrial, warehouse, office, service, utility, and business park type uses up to approximately 1.10 FSR. Light industrial uses at street level are generally encouraged, and residential uses are typically expected above street level. Supportive uses including limited institutional, limited recreational, and residential-only uses may be permitted.</td>
</tr>
<tr>
<td>Light Industrial Artisan</td>
<td>Areas designated for light industrial artisan are intended predominantly for a mix of small-scale light industrial, warehouse, service, utility and residential uses up to approximately 2.50 FSR. Light industrial uses at street level are generally encouraged, and residential uses are typically expected above street level. Supportive uses including limited office, and limited retail uses may be permitted.</td>
</tr>
<tr>
<td>Parks, Open Space and Natural Areas</td>
<td>Areas designated for parks, open space and natural areas are intended for a range of public and private uses focused principally on the protection and preservation of ecologically important habitat areas, the regional drinking water supply, or the provision of diverse parks, outdoor recreational, or tourism opportunities.</td>
</tr>
</tbody>
</table>
LAND USE POLICIES

- Require land uses to be in accordance with the Maplewood Land Use Plan (Figure 8).
- Proposals for rezoning of lands should be evaluated relative to the uses identified on the Land Use Plan, the policies of this plan and other District plans and policies.
- Encourage redevelopment in the Village Centre that is consistent with the Land Use Plan and at densities that support local commercial and transit service.
- Support mixed-use, medium-density housing with retail or live/work options at street level along Old Dollarton Road (west of Riverside Drive) and west of Seymour River Place.
- Support mixed-use, medium-density housing with industrial at street level and industrial or office on the second storey along Old Dollarton Road (east of Riverside Drive) where small business owners can live, work and create.
- Support light industrial commercial uses, including intensification of light industrial commercial uses on existing employment lands in Dollarton Highway South.
- Introduce an Innovation District in Maplewood North to encourage a flexible mix of light industrial commercial, institutional, recreational and residential uses within the same area to co-locate people and jobs and provide for the changing nature of employment.
- Promote opportunities for renewable energy technology industries and jobs in the Maplewood area recognizing the growth potential in the renewable energy sector.
- Focus most new local-serving commercial and services in the Village Centre, except a limited amount of small scale services that directly support daily worker needs within the Maplewood North Innovation District.
- Incorporate a new community hub with community services that promote physical and social activity and a diversity of space offerings in the Village Centre.
- Incorporate civic facilities to relocate municipal and protective services, such as a consolidated fire station and fire training centre in the Maplewood North Innovation District area to improve fire response.
- Continue to work with School District 44 to investigate the opportunity to retain the school use at its current location within the Village Centre.
- Provide a community park and neighbourhood park for active recreational opportunities within the Village Centre and improve green space connections within the overall area.
- Develop a cohesive Public Art Master Plan that identifies clear opportunities and priorities for the provision of public art.
- Support alternative forms and tenures of multi-family housing, such as fee simple rowhousing, co-housing and lock-off suites within the Village Centre.
Support auto repair uses in the light industrial areas, where appropriate and ensure sufficient access, parking and on-site provision for spill and nuisance containment is provided.

Strongly discourage self storage and auto retail uses as stand-alone uses in developments.

Enhance and improve designated landscape features, natural and environmentally sensitive areas.

Figure 9: Maplewood Building Heights

2.5 Building Heights

The concept plan outlines the approximate type and location of potential future buildings and heights to allow enough employment and residential density to create a vibrant community that support local retail activities, allow for improved transit and service over time, and assist in providing a diversity of housing. While building footprints are expected to be refined through the development review process, key urban design principles related to spacing of taller buildings and elevation are important considerations. Heights should maintain a human-scale, low to mid-rise character in the area, minimize shadowing of streets and public spaces and acknowledge views from upslope.

a. Heights should generally comply with the range of building heights shown in Figure 9.
b. Heights for specific buildings shall be determined through the rezoning process and will consider the following:

- Shadowing of public and/semi-public open spaces, such as plaza and parks.
- Impact on views from elsewhere in the District and overlook onto private spaces.
- Appropriate building scale for the area to reflect the quality and character identified for different precincts within the plan.
- Promote ‘human-scaled’ public space at the ground level (i.e. setback of upper storeys).

c. Taller buildings (up to a maximum 12 storeys) may be permitted in the Village Centre on a case by case basis, generally in accordance with the area identified in Figure 9, in order to achieve housing and community amenity objectives identified in this plan. Taller buildings should minimize overshadowing of key public open spaces and be separated from each other by a minimum of 30 m.

2.6 Housing Mix

Maplewood Village Centre has a target of 1,500 net new residential units and an additional 9,290 square metres (100,000 square feet) of new commercial space by 2030. The plan aims to provide a diversity of housing types to accommodate all ages, incomes, and family circumstances including townhouses, co-housing, fee simple row housing, lock-off suites, apartment units, live/work and other innovative forms of housing. In addition, a mix of tenures including fee-simple ownership, strata, rental, purpose-built rental, co-op and non-market housing is encouraged. Maplewood currently has approximately 250 lower end of market purpose-built rental housing units within the Village Centre. The plan includes policies to increase the number of non-market housing units through a mix of strategies outlined in Section 2.7.

The plan includes employee-oriented housing (approximately 900 residential units) in the Maplewood North Innovation District to co-locate jobs and residents. The employee-oriented housing is intended to support employment-generating uses. The plan anticipates these employment lands can capture approximately 4,500 net new jobs in the District by 2030 and over a million square feet of employment floor area.

Policies

- Support a diversity of housing types including townhouses, row houses, co-housing, live/work, and apartments in mixed-use buildings in the Village Centre.
- Encourage residential lock-off units in multi-family developments to provide flexible housing options to fit changing household incomes and family sizes over time.
- Introduce innovative forms of live/work/studio housing in the area designated for Light Industrial Artisan east of Riverside Drive identified in the Land Use Plan.
- Provide opportunities for employee-oriented housing in townhouses, row houses
and apartments in the area designated for Light Industrial Residential Mixed-Use - Innovation District in Maplewood North.

- Encourage new, purpose-built market rental buildings, where appropriate.
- Consider sale restrictions, housing agreements and other methods to ensure housing in the Innovation District supports local employees.

2.7 Non-Market Housing

Development in Maplewood should support the District’s Rental and Affordable Housing Strategy by providing, where possible, non-market housing secured through a number of innovative approaches including the following policies.

Non-market housing is encouraged in Maplewood Village Centre as well as in the Innovation District. A portion of the roughly 900 residential units anticipated in the Innovation District should be comprised of a mix of non-market rental and below-market ownership.

POLICIES

- Encourage the replacement of the approximately 250 existing purpose-built, market rental units in Maplewood as development occurs.
- Use District-owned lands to generate innovative, non-market housing opportunities, where appropriate.
- Require a portion of non-market rental or price controlled/restricted ownership units, or non-market units as part of new market housing development projects, or require provision of a cash-in-lieu contribution from development projects to the District’s Affordable Housing Fund to be used to establish new non-market housing units, where possible.
- Encourage and incentivize purpose-built non-market rental buildings, where appropriate.
- Consider additional height and density in order to achieve housing objectives, up to a maximum of 12 storeys, as identified on Figure 9 within Maplewood Village Centre.
- Target up to 300 net new non-market housing units in the Maplewood Village Centre.
- Ensure below-market ownership units in the Innovation District are offered to employees in the Innovation District first.
- Ensure non-market employee-oriented rental housing in the Innovation District is offered to employees in the Innovation District first.
- Secure a minimum of 50% of the employee-oriented rental housing units as non-market.
- Secure non-market employee-oriented housing for the life of the buildings.
2.8 **Phasing**

A significant portion of the overall Industrial/Commercial floor space in the Innovation District should be coordinated with any supporting residential uses to provide housing options for employees needing to locate proximate to their work.

- Ensure a minimum of 50% of the Industrial/Commercial floor space and any accessory or supportive uses to support the vision occurs in the first phase of development.
- Ensure employee-oriented housing occurs concurrent with development of Industrial/Commercial floor space.
- Phase two of Innovation District development should include the remaining Industrial/Commercial uses and be coordinated with the remaining employee-oriented housing.

2.9 **Village Centre**

Maplewood has an evolving village heart between Old Dollarton Road and Dollarton Highway, west of Riverside Drive. This plan aims to further enhance the village heart as a vibrant, pedestrian-friendly area with a mix of residential, retail and community uses.

**Policies**

- Create a mix of street level retail or live/work opportunities with residential uses above in mixed-use buildings along Old Dollarton Road, the emerging High Street.
- Create a rhythm of retail storefront widths of 5-10 metre within the village heart.
- Create plazas and gathering places with sun exposure, that are safe, attractive, universally accessible, have a variety of seating opportunities, and include spontaneous play features.
- Create attractive, streetscapes that are universally accessible, safe and comfortable for pedestrians and cyclists and that include places to sit and meet.
- Ensure public spaces promote social connectedness and inclusivity for people of all ages and abilities.
- New public spaces should ensure seniors, as well as people with cognitive or mobility disabilities are comfortable and can easily navigate through the Village Centre.
- Design the new shared street, connecting Old Dollarton Road and Front Street, to be shared between pedestrians and slow-moving cyclists and vehicles.
- Include two plaza spaces at each end of the shared street and ensure the shared street includes infrastructure and multi-use features (e.g. power, water, staging, shelter, and refuge areas) to accommodate community events, street festivals and outdoor markets.
• Encourage retail uses fronting onto plazas and gathering spaces.
• Encourage pedestrian connections within large blocks to promote walkability within the Village Centre.

2.10 Community Amenities

The Maplewood Village Centre Community Needs Assessment (2017) provides a summary of needed community amenity spaces in Maplewood to serve its growing population. Maplewood is currently home to the I Hope Centre and North Vancouver Community Arts Council, both located in an older building on the Maplewood Farm site. Currently, childcare opportunities are limited within the community and will require expansion to meet the needs of a growing population. Community meeting spaces and general programming spaces currently do not exist in the Village Centre.

Policies

• Secure sufficient space to re-locate the I Hope Centre and other community service providers into new multi purpose-built space with flexible community facilities (e.g. meeting rooms) in Maplewood Village Centre.
• Ensure the indoor amenities of the community hub facility include multi-use program rooms and meeting spaces, youth spaces, wellness/fitness facilities and seniors spaces in addition to the family programs and art programs offered by I Hope and the North Vancouver Community Arts Council.
• Community amenity spaces should be flexible and should promote physical and social inclusivity, and meet the needs of a variety of user groups (e.g. seniors, youth, families, and the general community).
• New community amenities should serve the residents and employees of Maplewood Village Centre and the Maplewood North Innovation District, including child care, outdoor play spaces, trails and green spaces, plazas, and gathering spaces.
• Support the provision of a continuum of childcare services in Maplewood Village Centre and Maplewood North Innovation District to include infant/toddlers, age 3-5 and before and after school care.
• Encourage outdoor play structures and opportunities for spontaneous play.
• Provide end of trip facilities for active transportation commuters.
• Incorporate opportunities to grow and buy fresh/locally produced fruits, vegetables and other goods through community gardens and farmers markets.
• Encourage public art installations, where appropriate.
• Incorporate interpretive signage along trail networks into public space planning.
• Improve trails and off-street cycling and pedestrian networks.
2.11 Mobility

Mobility policies aim to improve how people and goods move, circulate and connect to accommodate the anticipated growth in the Maplewood area. Streets should safely accommodate all users - people walking, cycling, taking transit or driving - for a range of uses (such as access to businesses or to accommodate deliveries).

**POLICIES**

**Streets**

- Extend Berkeley Road, to connect Mount Seymour Parkway with Dollarton Highway to provide an additional north-south connection for all modes and to provide access to the Maplewood North Innovation District.
- Design all streets to be universally accessible, where feasible.
- Connect Seymour River Place south to Front Street to create a unique shared street that can be shared between pedestrians and slow-moving cyclists and vehicles.
- Ensure portions of the shared street can be easily closed to vehicular traffic for local markets and festivals.
- Design Old Dollarton Road as the High Street through Maplewood Village Centre.
- Provide a north-south lane east of Riverside Drive to access the new active park space and areas designated for new residential development.
• Extend the lane north of Kenneth Gordon Maplewood School to improve circulation, as a one-way eastbound connection to improve local circulation, road safety, and to reduce emissions.

• Extend Munster Avenue to Riverside Drive to improve east-west connections.

• Incorporate lanes through the area designated ‘Light Industrial Artisan’ to provide loading, deliveries, and connections to parking areas.

• Ensure that new development provides for electric vehicle charging facilities per the District’s Electric Vehicle Charging Infrastructure policy.

• Encourage transportation demand management measures such as transit, pedestrian, cycling, car-share to reduce motor vehicle trip and parking demand.

Transit

• Continue to work with TransLink to extend the frequent transit network to include the Maplewood area as residential and employment growth occurs.

• Design Old Dollarton Road to accommodate transit stops for B-line service or better including possible future transit station design.

• Continue to work closely with TransLink and Coast Mountain Bus Company (CMBC) to provide high quality transit stops and transit stations along Old Dollarton Road, Riverside Drive, and Dollarton Highway to provide easy access to frequent transit in the village heart.

• Design convenient crossing infrastructure to allow transit users and pedestrians to safely cross the street to access transit.

• Ensure transit stops are designed to improve visibility of those waiting at stops, provide ample weather protection from sun, wind, and rain, and ensure that those using mobility aids and strollers can easily access transit loading platforms.

• Where feasible, integrate transit shelter design into the building design to be consistent with the street and street furniture character and complement the surrounding public realm design.

• Encourage employers to provide public transit vouchers instead of free parking as part of salary packages or incentives such as bonuses to reduce vehicle use outside of work hours.
Figure 11: Walking and Urban Trail Connections

Walking

- Promote walking through an integrated network that connects all key destinations within the Maplewood area.

- Improve the quality and connectivity of sidewalks, especially along Riverside Drive and Dollarton Highway to allow direct access to shops, school, businesses, and amenities within the village heart and Maplewood North Innovation District.

- Utilize lanes and mid-block connections, where feasible, to provide additional options for those walking.

Urban Trails

- Create two types of trails within Maplewood to serve people walking and cycling: **paved urban trails** to accommodate people of all ages and abilities and **natural (unpaved) urban trails** to connect green spaces while protecting sensitive environmental areas.

- Extend the Spirit Trail alignment along Windridge Drive to complete the central section of the Spirit Trail to connect to Deep Cove.

- Create a continuous all ages and abilities urban trail from the west boundary of Maplewood from the look out over the Seymour River, through the forested natural parks to the trail network around Ron Andrews Community Recreation Centre and the Canlan Ice Sports Arena.
• Extend and improve the natural urban trail connection north-south within Seymour River Heritage Park, with a focus on the Seymour Greenway Trail.

**Figure 12: Cycling Connections**

**Cycling**

• Ensure a broad range of cycling needs are met for the safe travel of commuters and recreational users on urban trails and streets.

• Implement a range of cycling facility types, including neighbourhood bikeways and urban trails to provide a well-connected network throughout Maplewood Village Centre and Maplewood North Innovation District.

• Require a separation for cyclists from vehicle travel lanes where vehicle volumes are higher and/or speeds are higher, where feasible.

• Prioritize cycle tracks along Mount Seymour Parkway, Riverside Drive, Old Dollarton Road, Dollarton Highway and Berkley Road, where feasible.

• Make use of neighbourhood bikeways on lower volume streets such as Seymour River Place, Forester Street, and Front Street.

• Provide cyclists of all ages and abilities with slower east-west routes including the urban trail that connects from the lookout over the Seymour River to Canlan Ice Sports Arena or the Spirit Trail.
2.12 Conservation and Ecology - Environmentally Sensitive Areas

Maplewood has significant amounts of green space within and surrounding it including Maplewood Conservation Area, Windridge Park, Hogan’s Pools Park, Maplewood Creek Park and Seymour River Heritage Park. These parks are largely natural areas. Maplewood also has several environmentally sensitive features within it and these areas include steep escarpment slopes, watercourses, and groundwater-fed springs, remnant forested areas, and riparian and mature forests which provide foraging and nesting habitat to wildlife and resident and migratory bird species. The escarpment slopes provide habitat for wildlife, and are also a source of groundwater, feeding watercourses and wetlands.

The Environmentally Sensitive Areas (ESAs) include the most valuable ecological areas including wetlands, watercourses and associated riparian areas, escarpment and escarpment buffer areas and identifies areas to conserve as parks or undeveloped open spaces.

Figure 13: Parks, Open Space, and Environmentally Sensitive Areas
POLICIES

• Protect ESAs by restricting and buffering development.

• Enhance stream flows and wetlands by focusing flows to areas needing more water and managing stormwater through infiltration and surface management.

• Create or protect ecological and recreational connections between key natural areas with recreational trails and wildlife connections.

• Identify opportunities to integrate natural landscape into new development.

• Avoid development in areas where impacts to terrestrial and aquatic resources would be high and/or difficult to replace as compensation for loss of habitat.

• Consider opportunities to enhance ecological function and to restore fish access by removing barriers and re-establishing connections to Burrard Inlet.

• Consider opportunities to enhance or augment stream flows to wetlands in the Maplewood Conservation Area.

• Maintain forested vegetation on steep slopes to provide stability and continuity of forested wildlife habitat and provide for appropriate buffers from development at the toe and top of slope.

• Consider how impacts of development can be minimized on-site and without impacting adjacent habitats.

• Consider ways to maintain or improve the water quality of surface runoff.

• Groundwater should not be discharged or pumped to the municipal storm or sanitary sewer system. A hydrogeological report may be required to demonstrate how the impact to the existing groundwater table is to be mitigated.

• Encourage energy conservation and use of alternative energy sources.

• Enable flexibility in achieving energy efficiency objectives through supporting consideration of on-site or neighbourhood renewable energy generation systems and connections.

• Work with industry partners, large energy consumers, and agencies to facilitate and advance opportunities for alternate, renewable, and sustainable energy sources.

• Promote rainwater collection infrastructure in the design of all new buildings.
2.13 Parks and Recreation

Maplewood is served by the existing Kenneth Gordon Maplewood School play fields, Seymour River Park, Maplewood Farm, Maplewood Conservation Area, Canlan Ice Sports Arena and Ron Andrews Community Recreation Centre. Walking connections to these latter two facilities are somewhat restricted by a lack of formalized trails and the steep Windridge escarpment. This plan aims to expand the parks and recreation system to accommodate the expected population and employment growth in the area.

Policies

• Support a variety of park amenities, including active sports fields, passive grass areas for informal use, seating, play spaces (natural and active play), public art, street trees, hard surfaced sport court, lit trails and community gardens.

• Create a community level park on District parkland north of Kenneth Gordon Maplewood School which incorporates the Spirit Trail and provides recreational amenities with natural features.

• Retain and enhance the urban forest along the northerly edge of the community park to create a treed buffer, where possible.

• Work co-operatively with School District 44, through joint user agreements and other means, to retain and upgrade the school field.

• Create a neighbourhood park on District-owned lands east of Riverside Drive providing active parkland opportunities for residents living in this area.

• Provide an additional sportsfield in the neighbourhood park if the current sportsfield located at Kenneth Gordon Maplewood School is decommissioned.

• Connect park spaces with a network of paved and natural urban trails.

• Explore opportunities in the natural parkland areas to incorporate interpretative trails and educational signage and nesting boxes, where appropriate.

• Expand park amenities and provide a park presence at the street for Maplewood farm to optimize vehicular, pedestrian and cycling connections to the farm and optimize parking at the farm.

• Enhance the farm entrance so that it celebrates the farm and includes both typical farm and ranch elements such as gates, public art, where appropriate, and improvements to landscaping.

• Consider a combination of heavy timbers and natural stone or other materials to reference both farm use and natural areas.
2.14 Proximity to Heavy Industry

Industry contributes significantly to the prosperity and success of the District, by providing employment opportunities, goods, and services enjoyed by businesses and residents. Heavy industrial activity does create some risk to nearby areas. In the District, studies and assessments have determined chemical hazard associated to an accidental release of chlorine as a risk having potential off-site impacts to neighbouring or proximate areas. The District’s intention is to manage risk associated with development in these areas through appropriate site planning and building design.

Risk contours have been established for the Maplewood area due to the proximity of hazardous substances potentially used in areas designated for heavy industrial activities. Each risk contour identifies allowable land uses and densities permitted, based on the distance from the risk source.

Figure 14: Risk Contours

POLICIES

- Encourage safety in the location and construction of development.
- Land uses, densities, building design and construction should generally be consistent with the MIACC (Major Industrial Accidents Council of Canada) best practice recommendations for appropriate land uses and densities from the risk source, or any similar, successor or replacement agency that may exist from time to time.
2.15 Flood Protection and Resilience

Maplewood is located within both the coastal and river floodplains and is prone to flood risk from both sea-level rise and the Seymour River. The District’s flood risk management strategy along the Seymour River will help to protect the area from flood hazards including channel avulsion, erosion, bedload deposition, and large woody debris impacts. Properties subject to potential flood risk are identified in the OCP’s Creek Hazard Development Permit Area. Flood Construction Levels (FCLs) have been established for each parcel to ensure floor levels are elevated above street level to mitigate potential flood issues.

Figure 15: Flood Protection Strategy
POLICIES

- Refer to Parts 3 and 4 of Schedule B to the Official Community Plan for applicable policies and guidelines.

- Require Seymour River flood protection in the form of land raising to be integrated with development for an additional 30 metre wide area beyond the riparian setback to produce a continuous, wide platform of fill, where appropriate and possible.

- Ensure established FCLs for Maplewood are incorporated for all residential development to ensure that habitable space is adequately protected from possible flooding.

- Continue to develop the coastal sea-level component of the District’s flood risk management strategy in partnership with other agencies and stakeholders such as Port of Vancouver, CN Rail and local industries.

- Incorporate identified sea-level rise mitigation works within the District’s control to raise the eastern portion of Dollarton Highway to 4.7 metre geodetic elevation.
2.16 **UNDERGROUND UTILITIES**

Communication infrastructure for Maplewood is intended to provide a connected broadband fibre optics network for the entire community.

Figure 16: Broadband Fibre Network

**POLICIES**

- Ensure new and renewed water, sewer, drainage, electrical, telecommunications, and broadband infrastructure is provided and paid for by developers in accordance with District bylaws, policies, plans and standards.

- Electrical telecommunications and broadband infrastructure should be undergrounded, where feasible.

- Ensure development projects provide for fibre-optic infrastructure in required off-site civic works and servicing upgrades, where possible.

- Ensure communication duct assets are installed for future fibre optics network builds, where appropriate.

- Allow third party broadband carriers to provide choice of service for residential and business customers in the Maplewood community.
PART 3: MAPLEWOOD DESIGN GUIDELINES

The Maplewood Design Guidelines describe area-wide and precinct-specific design guidelines and strategies to enable the sensitive addition of new built form and public open space to the existing community. The guidelines apply across the entire Maplewood planning area, as well as within each of the unique precincts within Maplewood: the Village Centre, Maplewood North Innovation District, and Dollarton Highway South. As each precinct draws design inspiration from current and historic activities specific to the area, so do the built form and landscape design elements. The combination of area-wide and precinct-specific features and design elements will help maintain a level of consistency throughout Maplewood while allowing a unique character for each precinct to emerge.

The Maplewood Village Centre and Innovation District Implementation Plan and Design Guidelines are intended to augment the Form and Character guidelines in Schedule B of the Official Community Plan (2011), as amended.
3 **Area-wide Guidelines**

3.1 **Overall Intent**

Maplewood’s charm lies in the diversity of uses and styles that co-exist within a green and natural setting close to the Burrard Inlet. The intent of these guidelines is to support its emerging “eclectic mixed-use industrial” character. The plan establishes a clear vision for the neighbourhood as a highly sustainable, livable, and unique place that fits within and draws from its context and natural areas.

The overall intent of these guidelines is to create a vibrant, safe and accessible environment, whether urban or more natural, that is well connected, promotes pedestrian activity and comfort, and vibrant street life. This is achieved through supporting active transportation, transit-oriented design, creating a vibrant Village Centre and well-considered residential areas, as well as intensifying industrial commercial uses in Dollarton Highway South and establishing the Maplewood North Innovation District. These overall guidelines apply to all three precincts in the plan.

3.2 **Orientation and Siting Considerations**

a. Building design should reflect the natural topography and context, and, to the extent possible, retain existing individual trees and forested areas.

b. Development should avoid ESAs (Figure 13).

c. Ensure new buildings meet energy efficiency standards and performance targets as guided by the BC Energy Step Code and promote the transition to net zero energy ready buildings by 2032.

d. Encourage building energy benchmarking and labelling.

e. For parcels located within the 1 x 10-6 risk contour, new buildings or structures and associated accessory buildings or structures with residential components should incorporate the following measures in their design:

   i. HVAC systems that maintain a slight positive pressure inside the building to prevent chlorine from entering.

   ii. Toxic gas detectors for chlorine on building HVAC systems to automatically shut down air intake on high chlorine levels.

   iii. Adequate exit routes (stair wells, doors, etc.) for evacuation, including battery backup lighting and/or other failsafe means of directional signage and guidance.

   iv. Sealable doors at each floor level and/or within floor levels to restrict airflow movement as necessary.

   v. Emergency phones for contact with emergency responders and building residents.

   vi. Building public address systems for contact and communication with building occupants.

   vii. Emergency plans clearly defining for all building occupants what to do to protect themselves should they be asked to evacuate or to shelter inside.
viii. Designated “shelter in place” locations within buildings, where merited.

3.3 **Natural Areas, Parks and Open Space Guidelines**

Plan policies aim to improve pedestrian connections by connecting park spaces with a network of paved and natural urban trails and expand active recreational park opportunities in the community.

**Natural Areas and Passive Parks**

a. Buffer development with natural vegetation and features adjacent to ESAs, where ever possible.

b. Enhance stream flows and health of wetlands by focusing flows to areas needing more water.

c. Manage stormwater through infiltration and surface management.

d. Create or protect ecological and recreational connections between key natural areas with recreational trails and wildlife connections.

e. Explore opportunities in natural parkland areas to incorporate interpretative trails and educational signage.

**Active Parks and Recreation**

a. Support a variety of park amenities, including active sports fields, passive grass areas for informal use, seating, play spaces (natural and active play), public art, street trees, hard surfaced sport court, lit trails, and community gardens.

b. Incorporate the Spirit Trail and recreational amenities with natural features in the community level park on District parkland north of Kenneth Gordon Maplewood School.

c. Retain and enhance the urban forest along the northerly edge of the community park to create a treed buffer, where possible.
d. Create a neighbourhood park on District parklands east of Riverside Drive to provide active parkland for residents living in this area.

e. Provide an additional sportsfield in the neighbourhood park if the current sportsfield located at Kenneth Gordon Maplewood School is decommissioned.

TRAILS

Maplewood’s trail connections should be enhanced and extended to create better access and linkages between the riverfront, Village Centre and the new Maplewood North Innovation District. Two types of cycling networks should be established:

1. On-street (separated cycle tracks, and neighbourhood bikeways), and,

2. Off-street trail network for all ages and abilities

Extend the east-west urban trail along Windridge at the base of the escarpment connecting the riverfront with Canlan Ice Sports Arena across the Maplewood community.

Extend and improve the north-south natural urban trail connection within Seymour River Heritage Park, with a focus on the Seymour Greenway Trail.

Two types of trails should be implemented in Maplewood:

a. Paved urban trails in the village centre that connect through the village core. Ensure pathways are well lit, a minimum 3.5 metre wide (asphalt [or concrete]) surface, and multi-use. Ensure additional space is provided for seating and landscaping. Provide a minimum of 4 metre wide (asphalt [or concrete]) surface for Spirit Trail sections.
b. Natural (unpaved) urban trails outside of the village core through the ESAs. Ensure natural urban trails are, a minimum 3.5 metre wide (gravel [compacted rock dust]), and multi-use. Encourage habitat protection fencing and boardwalks along pathways, as required, to protect ESAs. Provide a minimum of 4 metre wide gravel (compacted rock dust) surface for Spirit Trail sections. Generally, the character and materials of urban trails should fit within the context of the area they are passing through (e.g. compacted rock dust, boardwalk, asphalt, and paving).

3.4 ACCESSIBILITY

INTENT
To design for pedestrian environments and streets that are safe for all user groups.

a. Avoid changes of grade or gaps in paved surfaces greater than 6 mm, where possible.

b. Provide tactile strips adjacent to crossings and between surfaces, such as at curbs.

c. Avoid pavement slopes greater than 5% in direction of travel and 2% cross slope, where possible.

d. Provide smooth walking surfaces to assist the visually impaired, where feasible.

e. Prioritize the use of sawcut joints over tooled joints, where possible.

f. Ensure that transit stops utilize the new Universally Accessible Bus Stop (UABS) Design Guidelines designed by TransLink.

g. Provide bench pads that are 1.0 metre longer than the proposed bench to accommodate strollers, wheelchairs, scooters and other mobility aids, where space permits.

h. Include audible tones and pedestrian countdown signals at signalized crossings and consider fully accessible pedestrian signals including braille, vibrating plate and audible location identifier.
3.5 **Public Realm and Streetscape Guidelines (General)**

The street design guidelines are intended to support a high quality public realm and to complement existing street design elements in Maplewood. Included in the relevant precinct sections are guidelines for specific streets including the village High Street (Old Dollarton Road), shared street, Riverside Drive, Dollarton Highway, and Berkley Road. Where possible, developers should be required to underground any fronting overhead hydro and telecommunications wires at the time of development.

a. Street lighting on new streets, paths, and public realm areas should have a unified character.

b. Locations for street lighting, including pedestrian level lighting for Maplewood Village Centre, Maplewood North Innovation District and Dollarton Highway South are illustrated on Figure 18.

c. Banner brackets are recommended for all street lights on Old Dollarton Road, Seymour River Place (shared street portion), Riverside Drive, and Berkley Road.

**Light Distribution**

a. Light fixtures should direct appropriate light levels effectively to desired areas, and avoid glare and light spillage to other areas, particularly residential uses.

b. Light levels should be consistent within areas of similar use, and should avoid creating bright and dark areas.

c. Consider including small scale, low level lighting along pedestrian routes, such as under benches, lighting associated with public art, and up-lighting of trees to add character and ambiance to pedestrian areas.

d. All light fixtures should be energy efficient and night sky compliant.
3.6 STREET TREES AND OTHER VEGETATION

INTENT
Healthy and attractive trees and plants are an important element of the public realm in Maplewood. The District has developed guidelines for street tree planting to ensure that trees can mature in healthy condition. Natural and environmentally sensitive areas are of particular importance and special care should be given to sensitively integrate new development and avoid the proliferation of invasive plants.

GENERAL GUIDELINES

a. Street trees should be planted to optimize health and extend lifespan.

b. Street trees should have a minimum caliper of 7cm when planted.

c. All street trees should follow BCLNTA (British Columbia Landscape & Nursery Association) and BCSLA (British Columbia Society of Landscape Architects) standards.

d. Best practices for street tree plantings should be used, which may include continuous tree trenches in boulevards, minimum recommended soil volumes, and soil cells and/or structural soil.

e. Landscape lighting should be included in areas of higher pedestrian use.

f. Permeable paving or landscaping should be provided at the base of trees.

g. Natural forms or clusters of trees referencing forest tree groupings should be encouraged along Berkley Road and where appropriate, such as open spaces of the Innovation District, and in and on edges of active parks.

h. Conifers are recommended where space permits (2.5 metre minimum depending on species) and where they do not impede sidewalks and other public spaces.

i. Retention of larger conifers on private property should be encouraged, where possible, in the Innovation District.

j. The following are recommended plant species for public spaces and streetscapes:

Example of a healthy tree
### TABLE B: PLANT LIST

<table>
<thead>
<tr>
<th>PLANT LIST</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Street Trees</strong></td>
<td></td>
</tr>
<tr>
<td>Acer rubrum ‘Armstrong’</td>
<td>Red Maple</td>
</tr>
<tr>
<td>Acer rubrum ‘Morgan’</td>
<td>Red Maple</td>
</tr>
<tr>
<td>Acer platanoides ‘Easy Street’</td>
<td>Norway Maple</td>
</tr>
<tr>
<td>Carpinus betulus ‘Frans Fontaine’</td>
<td>Hornbeam</td>
</tr>
<tr>
<td>Fraxinus americana ‘Autumn Applause’</td>
<td>White Ash</td>
</tr>
<tr>
<td>Liquidambar styraciflua ‘Worplesdon’</td>
<td>Worplesdon Sweet Gum</td>
</tr>
<tr>
<td>Zelkova serrata ‘Green Vase’</td>
<td>Japanese Zelkova</td>
</tr>
<tr>
<td>Quercus palustris ‘Green Pillar’</td>
<td>Green Pillar Pin Oak</td>
</tr>
<tr>
<td><strong>Trees and Shrubs for informal groupings and clusters</strong></td>
<td></td>
</tr>
<tr>
<td>Acer circinatum</td>
<td>Vine Maple</td>
</tr>
<tr>
<td>Acer griseum</td>
<td>Paperbark Maple</td>
</tr>
<tr>
<td>Acer glabrum var. douglasii</td>
<td>Douglas Maple</td>
</tr>
<tr>
<td>Amelanchier x grandiflora ‘Autumn Brilliance’</td>
<td>Apple Serviceberry</td>
</tr>
<tr>
<td>Carpinus betulus ‘fastigiata’</td>
<td>Fastigiate European Hornbean</td>
</tr>
<tr>
<td>Cornus nuttallii</td>
<td>Pacific Dogwood</td>
</tr>
<tr>
<td>Cercidiphyllum japonicum</td>
<td>Katsura Tree</td>
</tr>
<tr>
<td>Ginkgo biloba</td>
<td>Ginko</td>
</tr>
<tr>
<td>Nyssa sylvatica</td>
<td>Black Gum</td>
</tr>
<tr>
<td>Picea omorika</td>
<td>Serbian Spruce</td>
</tr>
<tr>
<td>Pinus nigra</td>
<td>Black Pine</td>
</tr>
<tr>
<td>Thuja plicata</td>
<td>Western Red Cedar (for natural areas)</td>
</tr>
<tr>
<td>Styrax japonica</td>
<td>Japanese snowbell tree</td>
</tr>
<tr>
<td><strong>Shrubs and Groundcover</strong></td>
<td></td>
</tr>
<tr>
<td>Adiantum pedatum</td>
<td>Northern maidenhair fern</td>
</tr>
<tr>
<td>Amelanchier x ‘grandiflora’</td>
<td>Autumn Brilliance Apple</td>
</tr>
<tr>
<td>Autumn Brilliance</td>
<td>Serviceberry</td>
</tr>
<tr>
<td>Arctostaphylos uva-ursi ‘Vancouver Jade’</td>
<td>Bearberry</td>
</tr>
</tbody>
</table>
### Recommended Plants for Raingardens

**Areas of periodic or frequent standing or flowing water**

**Emergent Plants**

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carex aquatilis</td>
<td>Water Sedge</td>
</tr>
<tr>
<td>Carex obnupta</td>
<td>Slough Sedge</td>
</tr>
<tr>
<td>Carex rostrata</td>
<td>Beaked Sedge</td>
</tr>
<tr>
<td>Carex stipata</td>
<td>Sawbeak Sedge</td>
</tr>
<tr>
<td>Eleocharis palustris</td>
<td>Creeping Spikerush</td>
</tr>
<tr>
<td>Iris tenax</td>
<td>Purple Iris</td>
</tr>
<tr>
<td>Juncus acuminatus</td>
<td>Taper tipped Rush</td>
</tr>
<tr>
<td>Juncus ensifolius</td>
<td>Dagger-leaf Rush</td>
</tr>
<tr>
<td>Juncus tenuis</td>
<td>Slender Rush</td>
</tr>
<tr>
<td>Scirpus microcarpus</td>
<td>Small-flower Bulrush</td>
</tr>
</tbody>
</table>

**Shrubs - Deciduous**

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornus sericea</td>
<td>Red-Osier Dogwood</td>
</tr>
<tr>
<td><em>Cornus sericea</em> <code>Kelseyi</code></td>
<td>Dwarf red-twig Dogwood</td>
</tr>
<tr>
<td><em>Cornus sericea</em> <code>Flaviramea</code></td>
<td>Yellow Dogwood</td>
</tr>
<tr>
<td><em>Cornus sanguinea</em> <code>Midwinter Fire</code></td>
<td>Blood-twig Dogwood Fire</td>
</tr>
<tr>
<td>Physocarpus capitatus</td>
<td>Pacific ninebark</td>
</tr>
<tr>
<td>Rosa pisocarpa</td>
<td>Clustered Wild Rose</td>
</tr>
<tr>
<td>Shrubs - Evergreen</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Spirea douglasii</strong></td>
<td></td>
</tr>
<tr>
<td>Steeplebush</td>
<td></td>
</tr>
<tr>
<td><strong>Salix purpurea ‘Nana’</strong></td>
<td></td>
</tr>
<tr>
<td>Dwarf Arctic Willow</td>
<td></td>
</tr>
<tr>
<td><strong>Myrica californica</strong></td>
<td></td>
</tr>
<tr>
<td>Pacific Wax Myrtle</td>
<td></td>
</tr>
<tr>
<td><strong>Vaccinium ovatum</strong></td>
<td></td>
</tr>
<tr>
<td>Evergreen Huckleberry</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shrubs - Deciduous</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acer circinatum</strong></td>
</tr>
<tr>
<td>Vine Maple</td>
</tr>
<tr>
<td><strong>Amelanchier alnifolia</strong></td>
</tr>
<tr>
<td>Western Serviceberry</td>
</tr>
<tr>
<td><strong>Corylus cornuta</strong></td>
</tr>
<tr>
<td>Beaked Hazelnut</td>
</tr>
<tr>
<td><strong>Rhamnus purshiana</strong></td>
</tr>
<tr>
<td>Cascara</td>
</tr>
</tbody>
</table>

Areas with dryer soils, infrequently subject to inundation or saturation (e.g. side slopes)

<table>
<thead>
<tr>
<th>Groundcovers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gaultheria shallon</strong></td>
</tr>
<tr>
<td>Salal</td>
</tr>
<tr>
<td><strong>Mahonia repens</strong></td>
</tr>
<tr>
<td>Spreading Oregon Grape</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shrub – Deciduous</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Holodiscus discolor</strong></td>
</tr>
<tr>
<td>Oceanspray</td>
</tr>
<tr>
<td><strong>Symphoricarpus albus</strong></td>
</tr>
<tr>
<td>Snowberry</td>
</tr>
<tr>
<td><strong>Symphoricarpus orbiculatus</strong></td>
</tr>
<tr>
<td>Coralberry</td>
</tr>
<tr>
<td><strong>Ribes sanguineum</strong></td>
</tr>
<tr>
<td>Red-flowering Currant</td>
</tr>
<tr>
<td><strong>Rubus parviflorus</strong></td>
</tr>
<tr>
<td>Thimbleberry</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shrub – Evergreen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arbutus unedo ‘Compacta’</strong></td>
</tr>
<tr>
<td>Strawberry Tree</td>
</tr>
<tr>
<td><strong>Mahonia nervosa</strong></td>
</tr>
<tr>
<td>Cascade Oregon Grape</td>
</tr>
<tr>
<td><strong>Mahonia aquifolium</strong></td>
</tr>
<tr>
<td>Tall Oregon Grape</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trees/Large Shrubs - Deciduous</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Malus fusca</strong></td>
</tr>
<tr>
<td>Pacific Crabapple</td>
</tr>
</tbody>
</table>

Perennials/Grasses

<table>
<thead>
<tr>
<th>Perennials/Grasses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aquilegia Formosa</strong></td>
</tr>
<tr>
<td>Red Columbine</td>
</tr>
<tr>
<td><strong>Aster subspicatus</strong></td>
</tr>
<tr>
<td>Douglas Aster</td>
</tr>
<tr>
<td><strong>Helictotrichon sempervirens</strong></td>
</tr>
<tr>
<td>Blue Oat Grass</td>
</tr>
<tr>
<td><strong>Hemerocallis var.</strong></td>
</tr>
<tr>
<td>Day Lily</td>
</tr>
<tr>
<td><strong>Recommended Plant Species for Informal Groupings on Private Property and Parks</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>Lupinus officinalis</strong></td>
</tr>
<tr>
<td><strong>Pennisetum alopecuroides ‘Hamelin’</strong></td>
</tr>
<tr>
<td><strong>Ferns</strong></td>
</tr>
<tr>
<td><strong>Polystichum munitum</strong></td>
</tr>
<tr>
<td><strong>Blechnum spicant</strong></td>
</tr>
<tr>
<td><strong>Trees (Large)</strong></td>
</tr>
<tr>
<td><strong>Acer macrophyllum</strong></td>
</tr>
<tr>
<td><strong>Carpinus betulus ‘fastigiata’</strong></td>
</tr>
<tr>
<td><strong>Cercidiphyllum japonicum</strong></td>
</tr>
<tr>
<td><strong>Cornus ‘Eddie’s White Wonder’</strong></td>
</tr>
<tr>
<td><strong>Ginkgo biloba</strong></td>
</tr>
<tr>
<td><strong>Nyssa sylvatica</strong></td>
</tr>
<tr>
<td><strong>Pseudotsuga menziesii / Douglas Fir</strong></td>
</tr>
<tr>
<td><strong>Thuja plicata / Western Red Cedar</strong></td>
</tr>
<tr>
<td><strong>Trees (Medium)</strong></td>
</tr>
<tr>
<td><strong>Abies lasiocarpa</strong></td>
</tr>
<tr>
<td><strong>Acer circinatum</strong></td>
</tr>
<tr>
<td><strong>Acer griseum</strong></td>
</tr>
<tr>
<td><strong>Acer glabrum var. douglasii</strong></td>
</tr>
<tr>
<td><strong>Betula platyphylla var. japonica ‘Whitespire’</strong></td>
</tr>
<tr>
<td><strong>Chamaecyparis nootkatensis ‘Green Arrow’</strong></td>
</tr>
<tr>
<td><strong>Davidia involucrate</strong></td>
</tr>
<tr>
<td><strong>Parrotia persica</strong></td>
</tr>
<tr>
<td><strong>Picea omorika ‘Pendula Bruns’</strong></td>
</tr>
<tr>
<td><strong>Picea glauca ‘Pendula’</strong></td>
</tr>
</tbody>
</table>
3.7 Public Art

Public art plays an important role in supporting the emerging character of Maplewood, and helps to articulate each precinct’s unique identity. ‘Eye catching’ sculptures along with finer grain elements such as banners and mosaics are encouraged to creatively explore, interpret, and reinforce aspects of the region that people feel connected to and want to celebrate. Artists are encouraged to draw upon Maplewood’s interesting history, its Coast Salish beginnings, industrial innovations, thriving bird sanctuary, bohemian artist community, environmental heroes, and celebrated urban farm. Public art marks gateways, enhances pedestrian streetscapes, and animates public plazas and gathering spaces. Public art reflects and gives expression to local stories while celebrating the character and identity of Maplewood.

a. Encourage the design of interactive public art features to animate the two plazas and gathering spaces in the Village Centre, and at a central location in the Innovation District (See Figure 8).

b. Consider large-scale gateway features at intersections entering Maplewood; Berkley Road, Riverside Drive at Mount Seymour Parkway, and Dollarton Highway at Old Dollarton Road.

<table>
<thead>
<tr>
<th>Shrub Species</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pinus sylvestris ‘Fastigiata’</td>
<td>Scotch pine</td>
</tr>
<tr>
<td>Populus tremula ‘Erecta’</td>
<td>Columnar European Aspen</td>
</tr>
<tr>
<td>Stewartia pseudocamellia</td>
<td>Japanese Stewartia</td>
</tr>
</tbody>
</table>

**Shrubs and Groundcover**

Shrubs and groundcover from public spaces may also be included as well as the following:

<table>
<thead>
<tr>
<th>Shrub Species</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperata cylindrical ‘Rubra’</td>
<td>Japanese blood grass</td>
</tr>
<tr>
<td>Chamaecyparis obtuse ‘Nana Lutea’</td>
<td>Golden Dwarf Hinoki Cypress</td>
</tr>
<tr>
<td>Liriope muscari</td>
<td>Lily turf</td>
</tr>
<tr>
<td>Pennisetum alopecuroides</td>
<td>Fountain grass</td>
</tr>
<tr>
<td>Santolia chamaecyparissus</td>
<td>Lavender Cotton</td>
</tr>
<tr>
<td>Sedum ‘Autumn Joy’</td>
<td>Autumn Joy Stonecrop</td>
</tr>
</tbody>
</table>
c. Integrate pedestrian-scale trail and trail-head markers at key locations on trails.

d. Promote artist-designed banners to reinforce Maplewood’s identity and locate along Dollarton Highway, Mount Seymour Parkway, Berkley Road Old Dollarton Road, and Riverside Drive.

e. Incorporate public art into private and public spaces that are accessible to the public.

f. Encourage multiple forms of public art, from stand alone sculptures, to integrated functional components that can be incorporated into, architecture, streetscape and the public realm.

g. Reflect First Nations history and culture, highlighting their stewardship of precious natural and environmental resources.

h. Celebrate the richness and diversity of the area’s unique ecological heritage: from the social and environmental history of the mudflats to the wetlands.

i. Highlight the area’s urban farming and industrial heritage, using materials and integrating design characteristics that reflect a strong sense of place.

j. Focus on themes of stewardship, sustainability and innovative practices in respect of the natural environment.
3.8 **ACCESS, SERVICING AND ON-STREET PARKING**

Plan policies aim to ensure developments provide adequate access, servicing and on-street parking for vehicles and bicycles, while minimizing negative impacts on the safety and attractiveness of the public realm.

**VEHICLE ACCESS, SERVICING, AND ON-STREET PARKING**

a. On-street surface parking should be located to the rear of the building with parking access from the lane or adjacent street with the lowest functional classification.
   
i. If not feasible, locate on-street surface parking beside or in front of the building, adjacent to the public sidewalk provided the area is properly screened from the public sidewalk and other active open space areas. Consider the use of landscaping as a screen provided it maintains clear visibility into the parking areas to promote personal safety and security.

b. Where property faces streets with the same functional classification, the following should be considered:
   
i. Access should be from the long face of the block.
   
ii. Minimal interruption of the public realm and streetscape treatment should be maintained.
   
iii. Appropriate surface treatments should be incorporated to denote designated cycle tracks or urban trails.
   
iv. Waiting or pick-up/drop-off areas should be located internal to the site and not be located in the public right-of-way.
   
v. Not more than one interruption per block face and one curb cut per street should be considered.

c. Underground parking or covered on-street parking should be required for new residential and mixed-use buildings, where possible.

d. Where underground parking is considered, ensure that groundwater is not discharged to the storm sewer or sanitary sewer.

e. Structured underground or “tucked-under” parking should be preferred over on-street surface parking.

f. Provide co-operative car and car sharing parking spaces on-site, and provide these parking spaces at grade and visible from the street, where possible.

g. Any vehicular entrance and its associated components (gates, ramps, etc.), whether from the street or lane, should be architecturally integrated into the building to minimize its exposure.

h. Shared parking and access is encouraged, where feasible.

i. Large parking lots should be discouraged.
j. Ensure that new development provides for electric vehicle charging facilities per the District’s *Electric Vehicle Charging Infrastructure* policy.

k. Explore opportunities for supporting infrastructure that meets the needs of renewably-powered vehicles.

l. Consider reductions in parking requirements for developments that include sufficient Transportation Demand Management (TDM) measures, and discourage excess parking for developments.

**BICYCLE PARKING, SERVICING AND ACCESS**

a. Long-term bicycle parking should be encouraged for multi-family residential and employment-generating uses, where possible.

   i. A minimum of two long-term bicycle parking spaces per residential unit in multi-family residential and employment-generating developments should be encouraged.

   ii. Long-term bicycle parking should be located in a secure bicycle storage facility that is only accessible to residents of the building.

   iii. Secure bicycle storage facilities should consider including waterproof bicycle lockers, and secured bicycle rooms or compounds with bicycle racks within a building.

   iv. Electrical outlets should be provided in all bicycle storage facilities, and bicycle parking spaces should be within 5 metre from an outlet.

b. Short-term bicycle parking should be encouraged throughout the Maplewood community, where feasible and where appropriate.

   i. Bicycle racks located outdoors should follow the design standard identified in this plan (See pages 66 and 76.)

   ii. Explore opportunities to provide weather protection for clusters of outdoor short-term bicycle parking (e.g. under canopies or shelters), where possible.

   iii. Bicycle parking should be located close to building entrances to provide a clear visual connection from the building entrance to the bicycle parking.

c. End-of-trip facilities (i.e. showers, lockers, change rooms, etc.) should be provided with employment-generating uses.
4 **VILLAGE CENTRE**

4.1 **OVERALL INTENT**

The Maplewood Village Centre area is envisioned to be a vibrant, pedestrian-friendly, mixed-use village centre with compact forms of commercial and mixed-use commercial/residential buildings as well as live/work and community uses.

4.2 **BUILT FORM GUIDELINES**

**TALL BUILDINGS**

a. Encourage siting, massing, and design of tall buildings (over 6 storeys in height) that minimizes negative impacts on views, privacy, and solar access for individual units, reduces the perceived bulk and minimizes impacts on adjacent public streets and open spaces.

b. Identity for the main entrance should be achieved by stepping back the base building (podium) at the primary entrance to allow the tall building to visually connect with the street. Locate primary entrances so that they are clearly visible and directly accessible from the public sidewalk, plaza, or other open space.

c. An interesting and varied roof form should be achieved (for example, by incorporating a top-level penthouse or amenity space to conceal appurtenances and mechanical equipment).
ARCHITECTURAL STYLE AND CHARACTER
Mixed Use and Live/Work

a. Buildings containing live/work uses should be identifiable by the design of frontages.

b. Façades which appear purely residential should be avoided.

c. Options could include differentiating the living zones from the working zones architecturally through façade design and colour.

d. Consider the use of canopies and upper storey step backs to further emphasize this character. This could be a glazed façade portion for artist or live/work studios and corner shop style designs for more traditional design approaches.

West of Riverside and east Artisan Industrial

a. Exterior materials and detailing should reflect the marine and industrial heritage of the site. Natural materials such as wood, architectural metal siding elements, glass, block, brick or concrete are appropriate for portions of mixed-use residential commercial and live/work buildings, for example.

b. Materials and finishes should be detailed and applied to emphasize their simplicity and integrity.

c. Building materials with low environmental impacts should be encouraged. This could include the use of recycled and recyclable materials, materials with recycled content, locally sourced products, and materials with low embodied energy.
BUILDING MATERIALS
Specific Building Materials

The form and character of Village Centre developments should support the “eclectic mixed-use industrial” theme and incorporate elements that reference Maplewood’s natural environment.

a. Natural building materials with bright accent colours are strongly recommended.

b. Building elevations emphasizing one or two natural building materials, in addition to glazing, are strongly encouraged.

c. The use of large timbers and overhangs is encouraged.

d. Well crafted, durable materials that support sustainability and Village Centre themes are expected throughout.

e. Natural building materials including wood, stone, concrete and brick should dominate the expression on lower floors and along the street wall including retaining and garden walls.

f. Materials on upper floors should be consistent with the quality, durability and craftsmanship on the lower levels.

g. Functional screens, shading devices and other passive solar design elements that complement the architecture are highly recommended.

h. Heavy timber and engineered wood elements especially along the base of the building and at entrances are strongly encouraged.

i. Wood elements should be protected from weathering using best building practices and appropriate finishes that preserve the natural colour and texture.
tinted products.

Material transitions should avoid a “wallpaper” look.

The use of vinyl or aluminum siding or other materials made to imitate natural finishes is discouraged.

PREFERRED COLOUR PALETTE

The use of colour is encouraged. The aim is to achieve a mix of colours and textures, while keeping the materials and colour scheme of each individual project within a cohesive palette.

a. The primary colour palette within the Village references local forest colours and materials.

b. Brighter, complementary accent colours should be used for smaller portions of building façades.

c. “Maple brown” colour, matching the existing street lights is to be used consistently for street lights along Old Dollarton Road (High Street).

d. Clear vision glass is preferred over tinted products.

e. Soffit materials should be consistent with the building’s overall durability and quality (vinyl and perforated materials are discouraged).

f. Wood soffits are preferred where feasible.

g. Colours should be chosen to complement the palette of natural stone and wood: tones of grey are considered most appropriate.

h. Soffit materials should be consistent with the building’s overall durability and quality (vinyl and perforated materials are discouraged).

i. The use of vinyl or aluminum siding or other materials made to imitate natural finishes is discouraged.

j. Wood soffits are preferred where feasible.

m. Clear vision glass is preferred over tinted products.

n. Material transitions should avoid a “wallpaper” look.

o. The use of vinyl or aluminum siding or other materials made to imitate natural finishes is discouraged.
5 RESIDENTIAL AREAS

5.1 INTENT
Maplewood’s residential areas, located to the north, west and east within the Village Centre are intended to provide a range of attractive housing types and tenures that support, and are well connected to, a vibrant walkable Village Centre.

5.2 BUILT FORM GUIDELINES
Many of the new residential dwellings in Maplewood will be infill and redevelopment sites, and the aim is to achieve an eclectic mix of colours and textures, while keeping the materials and colour scheme of each individual project within a cohesive palette.

BUILDING MATERIALS
In general, new buildings should incorporate natural building materials into façades to avoid a “thin veneer” look and feel. These can be incorporated with more contemporary treatments, including glass curtain walls (e.g. for live-work artist studio buildings).

Recommended:

a. Large dimension timber
b. Natural wood materials, including:
   Milled and un-milled timbers, window and door trim, canopy structures, signage
c. Brick masonry, stone
d. Glazed tiles, flat profile “slate” concrete tiles
e. Concrete

f. Wood and aluminum for windows

g. Powder-coated steel for exterior staircases, balconies and railings

h. Standing seam metal roofing

i. Corrugated metal siding/roofing

Acceptable:

a. Pre-finished metal, non-corrugated type, emphasizing either vertical or horizontal arrangements

b. Limited amounts of stucco in combination with other materials

Discouraged:

a. Vinyl siding

b. Large expanses of stucco

c. Vinyl window frames

COLOUR PALETTE

The use of colour is encouraged to achieve a mix of colours and textures, while still reflecting a cohesive palette.
6 Light Industrial Artisan Guidelines

6.1 Intent
Artisan-Industrial/Live-Work use along Old Dollarton Road east of Riverside Drive will allow for small manufacturers and craftspeople to live and work in a vibrant, pedestrian-friendly environment. Residential buildings integrated with small manufacturing/office functions need particular design attention. The design of these buildings must balance dual purposes. Their office and light industrial spaces define the public realm and should contribute to its scale and vitality.

6.2 Built Form Guidelines

Building Height and Massing

a. First and second storeys are dedicated to small manufacturing and office use, and upper storeys dedicated to residential use.

b. Upper residential storeys should be set back to optimize sunlight penetration, accommodate residential balconies, and reduce massing impacts.

c. First storey working spaces should have taller ceilings than typical residential floors.
COMPATIBILITY OF USES

a. Buildings should be designed to be compatible and use design features to mitigate negative impacts of employment uses on residential uses, including: noxious fumes, dust, lighting, vibration, sounds, and smells.

b. Residential entrances should be separate from light industrial employment uses.

RELATIONSHIP WITH STREET

a. Mixed-use artisan industrial buildings should be built close to the property line, while including space for outdoor displays.

b. Buildings should be designed to express the “industrial or manufacturing nature” of the first and second floor office/industrial uses.

c. Individuality within a unified appearance is encouraged for buildings with multiple units and uses which could be expressed through colour, materials and articulation of architectural elements.

CHARACTER AND MATERIALS

a. Small scale light industrial use with residential uses above should be expressed in character, colour, and materials of buildings.

b. Emphasize the “industrial/workshop” look and feel of this special use by encouraging the use of roll up doors and frames and higher ceilings in working areas.
c. Materials such as corrugated metal siding/roofing, different types of flat metal siding, galvanized powder coated steel, fiber cement siding are suitable.

d. Large expanses of stucco are not desirable.

**PREFERRED COLOUR PALETTE**

a. The bold use of accent colours is encouraged. This can be expressed in cladding materials, window/door frames and accessory elements.

b. Various tones of industrial greys and browns are encouraged to make up the primary colour palette.
6.3 **Public Realm and Streetscape Guidelines**

**HIGH STREET (Old Dollarton Road)**

**Intent**
To create a high quality pedestrian-oriented street through the centre of the Village with places to shop, live, work and create. The character of Old Dollarton Road will change from a village heart character west of Riverside Drive to a grittier artisan industrial character east of Riverside Drive.

**HIGH STREET (Old Dollarton Road – west of Riverside Drive)**

This section of Old Dollarton Road should be an attractive pedestrian-oriented street with wide sidewalks, street trees, special street furniture and lights with banners. The High Street should accommodate on-street parking pockets where feasible, and is intended to be a possible future B-line route for transit.

![Artist rendering of the High Street](image)

![Diagram of Old Dollarton Road - Seymour Pl to Riverside Dr (west segment mid-block)](image)
Old Dollarton Road - Riverside Dr to Cul-de-Sac (mid-block)

Old Dollarton Road transitions to an artisan industrial grittier character east of Riverside Drive. This street should be flush with unique paving materials to encourage a seamless integration of users moving across the street. Businesses should be encouraged to display their goods to create a shared sense of place along this street.

a. Separated cycle tracks will be denoted by a smooth surface to ensure an accessible and enjoyable riding experience.

b. The street should be designed to allow for weekend markets. Alternative access for loading and delivery and parkades through the use of lanes ensures a pedestrian-oriented environment through the centre of the artisan industrial space.

c. Abbotsford Standard Series ‘Charcoal’ herringbone concrete pavers are recommended for travel lanes and on-street parking.

d. Use a smooth surface to provide pleasant riding conditions for those who wish to cycle to the artisan industrial businesses, to adjacent amenities or for those travelling through.

e. Street furniture selections should reflect the artisan industrial character, and highlight the uniqueness of this node from adjacent areas.

f. Design the street to be easily closed off to vehicles from the mid-block lane to Forester Street to allow for weekend markets and festivals, while still providing access to the lane for parking, delivery access, and to the fire hall site.

g. Street frontages should be designed to provide adequate weather protection from wind, sun, and rain, to encourage people to stop and visit local businesses.

h. Provide separation between cycle tracks and vehicle parking.
SHARED STREET (OLD DOLLARTON ROAD – FRONT STREET)

The shared street runs north/south and joins Old Dollarton Road to Front Street. It should be designed as a flexible shared space, providing gathering spaces, plazas, and local markets - a vibrant, pedestrian oriented-street lined by mixed use commercial and multi-family residences. Pedestrians share the space with cyclists and slow moving vehicles.

a. Abbotsford Standard Series ‘Charcoal’ herringbone concrete pavers are recommended for travel lanes and on-street parking.

b. Infrastructure including structural support, electricity, water supply, and removable bollards (to accommodate seasonal and/or community events including the ability to close off portions of the street to vehicles, should be integrated).

c. Incorporate street trees in groupings alternating with on-street parking.

d. Flush curbs/concrete bands that incorporate trench drains with decorative covers are recommended for enhanced pedestrian mobility.

e. Consider incorporating public art in the plazas at the entrances to this street.

f. Provide a variety of seating opportunities.
RIVERSIDE DRIVE

Riverside Drive is the key north-south street in the Village Centre. It connects Mount Seymour Parkway and Dollarton Highway and provides direct access to key amenities within the village. Due to its proximity to the High Street, natural and active parkland, Kenneth Gordon play field and to local businesses, this street should be designed as the central spine through the Village Centre.

Intent

To create a high quality street through the centre of the village that is comfortable for all users with ample sidewalk space, separated cycling connections, and treed boulevards, where possible.

a. Create a multi-modal street that provides separated space for walking and cycling while still accommodating the efficient movement of goods and those who choose to drive and take transit.

b. Design boulevards to provide an ample buffer between those who are cycling and those who walking or driving, where feasible.

c. Provide safe and convenient pedestrian and cycling crossings for those crossing Riverside Drive to access the natural and active parks, the school as well as the urban and natural trails through Maplewood Park and on Windridge Drive.
PUBLIC PLAZAS

Two public plazas should be located at each end of the shared street in the village, at the intersections of Old Dollarton Road and Seymour River Place and Seymour River Place and Front Street (See Figure 8). These plazas should be positioned to benefit from sunlight during the day. Together they are intended to form gateways to the central gathering area within the Village Centre.

a. A variety of seating opportunities should be provided in locations that receive direct sun during the day and in places that have rain protection.

b. Plazas should provide universal access to people of all ages and abilities and offer spaces for informal play and rest.

c. Seating should be designed to be integral to the design concept and use materials that complement the material palette of adjacent buildings.

d. Coordinate site furnishings (e.g. garbage containers, bike racks, lighting, tables and seating) with streetscape furnishings.

e. Paving should be compatible with the streetscape materials palette and patterned to both respond to surrounding building architecture (entrances, pilasters, etc.) and merge seamlessly into the overall paving pattern of adjacent sidewalks.

f. Ensure a clear visual connection between the transit stop on Old Dollarton Road and the plaza.

g. Public art should be incorporated as either free-standing elements to enhance the gateway function of these plazas, or integrated into benches, storm grates, etc.

h. Facilities such as power and water should be considered to support future plaza programming opportunities.
STREET FURNITURE

Intent
Maplewood Village Centre furnishings are decorative and should continue the character already established with the Northwoods Village, a mixed-use development including benches, bollards, litter bins, and bike racks. In addition, special designs relating to Maplewood’s character are encouraged throughout the Village Centre including public art and artist-designed elements. Street furniture including street lights along Old Dollarton Road should be finished with brown (PROTEC 1672-4 Maple Brown) to match new street lights (See Appendix for additional details). Street furniture in other parts of the village and local streets should be finished black (e.g. Philipps Lumec textured black BKTX).

Street Lights
a. The pole and luminaire should be continued along all streets as identified on the Maplewood Lighting Strategy in Figure 17.

Street Lighting Types and Details
Maplewood Village Centre furnishings are decorative and should continue the character already established with the Northwoods Village development including benches, bollards, trash receptacles, and bike racks).

Maplewood Village Centre Furnishings - Pole and Luminaire
PROTEC 1672-4 Maple Brown.

Benches
a. Refer to adjacent images for preferred benches and seating designs.

b. Benches, litter bins and recycling containers should be part of the same product line to ensure visual consistency.

c. Pads for benches not within the boulevard should be 1.0 metre longer than the proposed bench of the same material as the sidewalk.
**Bicycle racks**

a. Bike racks should support the bicycle by the frame, not only by the wheels.

b. Bike racks should be selected to address the anticipated usage at locations throughout the Village Centre.

c. Explore the possibility of using bike racks as public art.

d. Individual rings or U-shaped racks offer the possibility to be placed in small or larger quantities as needed.

e. Consider covered bike racks for weather protection, and include outlets for e-bike charging where appropriate.

**Water fountains**

a. Use models that meet requirements for access by people in wheelchairs.

b. Seek opportunities for integrating public art into these elements.

c. Ensure that water fountains include drinking facilities for pets.

**Utility covers**

a. Should reflect Maplewood's character.

b. Consider local art competitions to develop customs designs for covers.
7 Maplewood North Innovation District

7.1 Intent

The Maplewood North Innovation District is one of three areas with a distinct character, purpose and identity. It will be a neighbourhood where high tech mixes with a beautiful natural setting while offering combinations of working and living that are new to this region. It will include educational institutions and local serving commercial uses. The goal of these guidelines is to support the creation of a physically-compact, visually diverse, transit-accessible and technically-wired neighbourhood with a campus-like character that respects the existing environment and promotes an active and healthy lifestyle.

7.2 Built Form Guidelines

Character
The built form and public realm of the Innovation District should work together to achieve an integrated, mixed-use neighbourhood that displays excellence in design and a commitment to sustainable development. This new neighbourhood should have its own identity recognizable in built form, public realm and public art. It should feature buildings sited within a campus-like setting, with a generous amount of landscaping around buildings, and should reflect
Green roofs help manage runoff and offer public/private amenity space.

Courtyards should be landscaped and façades offer views into yards.

The landscaping should be lush and reference forest themes.

Buildings and open spaces are designed in an integrated way and with people’s enjoyment in mind.

Maplewood’s cultural heritage and history while embracing new contemporary uses.

In general, developments should:

a. Be contemporary in appearance and expressive of building functions.

b. Buildings should express individuality with unique and distinct designs.

c. Express innovation in form with massing and detailing.

d. Provide daylighting by utilizing methods such as limiting building depths or providing atrium elements.

e. Provide end-of-trip facilities to support active modes of transportation (including showers, change rooms, lockers).

f. Provide retail and community uses at ground level where appropriate.

**HEIGHT AND MASSING**

a. Heights should range from 2-8 storeys and should be applied to achieve an appropriate response to the size, shape and orientation of the site.

b. Achieve height and massing that creates variety between separate developments.

c. Provide more prominent massing and architectural treatments on corner and other important sites.

**RELATIONSHIP TO STREET**

a. Avoid continuous unarticulated façades of over 45 metre in length.

b. Provide active façades that promote passive surveillance.
BUILDING MATERIALS

a. Building elevations incorporating one natural building material, in addition to glazing, are strongly recommended.

b. The use of innovative materials, and contemporary use of traditional materials is encouraged.

c. Well crafted, durable materials that support sustainability and Innovation District themes are expected throughout.

d. The nature of materials is derived from the rich historic and future innovative uses of the site.

e. Exterior materials and detailing should reflect the innovative nature of the development and be contemporary in expression.

f. Façade materials should be robust and durable and resist deterioration and fading.

g. Chose materials that minimize the need for cleaning and recoating.

h. Incorporate a range of materials, for example, ribbed or corrugated steel, cladding, panelised cladding (expressed joints), polycarbonate sheeting, glass, timber and louvre screening.

i. Avoid rendered finishes and large expanses of flat pre-finished steel cladding.

j. Sun-shading is an important component in the performance and comfort of buildings. Sun-shading should be integral to the design of the building.

k. Weather protection and overhangs are expected at building entrances, and along pedestrian walkways.
Incorporate three-dimensional elements in the facades

Large timbers and solar panels

Bright colours are encouraged

Bright colours are encouraged

**PREFERRED COLOUR PALETTE**

a. The use of vivid accent colours is encouraged and can reference building uses and/or the forest environment theme.
7.3 **Public Realm and Streetscape Guidelines**

**Berkley Road Extension**

The Berkley Road extension will provide direct access from Mount Seymour Parkway to Dollarton Highway for all users.

**_intent_**

To create a high quality street through the Maplewood North Innovation District that is comfortable for all users with ample sidewalk space, separated cycling connections, treed boulevards wherever possible and considers buffers to environmentally sensitive areas, where appropriate.

a. Design the Berkley Road extension as a key north-south connector for all modes of travel.

b. Encourage movement of goods on Berkley Road to shift heavy vehicle traffic away from Riverside Drive while still providing a pleasant experience along Berkley Road for pedestrians and cyclists.

c. Ensure Berkley Road maintains a grade that does not exceed 8%, and slopes for 30 metre on all sides of intersections should not exceed 4%.

d. Berkley Road should have no more than two intersections (including the existing Burr Place) between Dollarton Highway and Mount Seymour Parkway, with minimum intersection spacing of 200 metre. Up to three intersections may be considered.

e. Steeper segments for walking and cycling along this corridor should be minimized and should allow for resting platforms approximately every 100 metre.

f. Accommodate transit stops and transit-supportive features bus pull outs, shelters and benches as necessary.

g. Provide boulevard separated cycle tracks for the full length of the corridor.

h. Ensure the walking experience is enhanced by providing clear connections to properties, trails and other recreational amenities.

i. Provide clear links from adjacent trails to walking and cycling facilities on Berkley Road to improve access to amenities such as Ron Andrews Recreation Centre and Canlan Ice Sports Arena.

j. Provide a minimum 5 metre wide bioswale along Berkley Road adjacent to wildlife corridors and environmentally sensitive areas.

k. Incorporate boulevards and treed landscaped medians to create a more pleasant environment for those walking, cycling, driving and using transit.

l. Access points onto Berkley Road should be consistent with the planned intersections to preserve its mobility function for those walking, cycling, driving and using transit and to mitigate potential conflicts.
“ROAD A” – MAPLEWOOD NORTH INNOVATION DISTRICT

“Road A” should provide access and connectivity for those who choose to walk, cycle, or drive from their work or home to other key destinations.

a. Connect existing urban trails with walking and cycling facilities located on the road network.

b. Use clear signage and paint markings to denote where driveways intersect with walking and cycling facilities.

c. Use landscaped boulevards to create a welcoming and pleasant walking, cycling and driving environment through the industrial and residential areas in Maplewood North.

d. Ensure “Road A” intersects with Berkley Road east of the open space corridor. “Road A” should intersect with Dollarton Highway at the Pacific Environmental Science Centre.
RELATIONSHIP TO THE FOREST EDGE:

a. Provide a visual and ecological extension of the forest into the private and public realms through appropriate retention of existing trees, replanting displaced trees and/or naturalized landscape design.

b. Retain clusters of trees, where possible.

c. Maintain adequate buffer zones and development setbacks to respect and protect the natural forest edge.

EXISTING WETLANDS AND RUNOFF MANAGEMENT

a. Preserve, enhance, and incorporate existing wetland areas into the design of the Innovation District.

b. Development within the areas designated as environmentally sensitive (ESA) is not permitted.

c. Ensure adequate buffer zones and development setbacks respect and protect ESA’s as per the streamside DPA guidelines.

d. Employ best practices and, specifically, low-impact development techniques for street and landscape design to integrate runoff management, including quality and quantity considerations, and where appropriate, xeri-scaping for planted medians and boulevards.

MAPLEWOOD NORTH PLAZAS AND OPEN SPACES

A central plaza or series of plazas should be incorporated in the Innovation District.

a. Provide a variety of quality open space types: active and passive catering to all ages and abilities.
b. Ensure the location, distribution and organization of open space complements the built form arrangement.

c. Encourage opportunities for social interaction and play and a variety of seating opportunities in the design of outdoor spaces.

d. Provide barrier-free access to private and semi-private outdoor spaces.

e. Provide covered outdoor areas to increase livability and opportunities for social interaction during rainy months, including ground floor patios and covered, at-grade bike parking, where possible.

f. Offer connections to existing open space and recreational community infrastructure. Provide habitat protection fencing and native planting along edges of parks and environmentally sensitive areas.

g. Ensure materials are durable and easily maintained so the design remains attractive and flexible as the planting matures with time.

h. Maximize biodiversity throughout the area.

**LARGER PLAZAS WITHIN THE INNOVATION DISTRICT**

a. Plazas should be flexible, multi-purpose spaces designed with informal gatherings, programming of local events and celebrations in mind: food trucks, markets, seasonal ice skating, musical performances (e.g. temporary stage), shows, etc.

b. Plazas should be surrounded by active building edges and provide opportunities for outdoor eating in good weather.
c. Designs and orientation should take advantage of solar aspects and provide ample seating opportunities in both shaded and sunny areas, and weather protection along building façades.

d. Consider the incorporation of both hard and soft landscape surfaces, such as wood, lawn, paving (preferably single unit pavers of concrete or natural stone).

e. Large expanses of in situ concrete should be avoided. Concrete banding is acceptable.

f. Use shade trees and other vegetation to soften to provide shade, texture and seasonal changes.

g. Consider the inclusion of water fountains and surface water jets as additional attraction.

h. Ensure that the plaza is universally accessible.

i. Incorporate newest technologies to manage runoff, e.g. pervious paving, rain gardens and swales.
SITE FURNISHINGS AND LIGHTING

Site furnishings and lighting in the Innovation District should support the innovative contemporary character of the area and express the “District in the forest” theme through use of materials such as wood.

Poles and Luminaires

a. TANDEM Pole by Structura, model Ortho or Tilt depending on situation - Pole colour: Silver. Side Panel colour: Titanium (to match site furnishings). See Appendix for more specifications.

b. Luminaire: Lineal by Structura. Colour to match pole colour.

Benches

a. Bancal Bench from Landscape Forms in a variety of configurations. Always with arm rests.

b. Suggested colour: Titanium.

Bollard

a. Annapolis from Landscape Forms.

b. Suggested colour to match benches (Titanium).

Litter & Recycling Receptacle

a. Plexus from Landscape Forms.

b. Side Opening (20” x 40” x 30 Gal.)

c. Suggested colour to match bench frame (titanium). Liner colour: Black.

Bike Rack

a. Ring from Landscape Forms.

b. Colour: match benches (Titanium).
8 DOLLARTON HIGHWAY SOUTH

8.1 INTENT

The area south of Dollarton Highway will continue to be focused on light industrial uses. The intent is to allow intensification of this area over time to create more employment opportunities. Multi-storey buildings with smaller units are encouraged as long as parking requirements can be met.

8.2 BUILT FORM GUIDELINES

HEIGHTS AND MASSING

a. Additional storeys should be visually differentiated while complementing the existing building.

b. The use of materials should be consistent on all elevations.

c. Steel, metal, glass, manufactured or natural stone, and concrete are preferred materials.

d. Where materials on an office portion cannot be the same as on a plant portion, the materials should be compatible and designed in a unified manner.
PARKING

Intensification will require innovative approaches to parking to ensure sufficient supply is achieved on site while not using large surface areas of land.

a. Explore parking under buildings.

b. Explore rooftop parking.

c. Consider the potential for shared parking including sharing of parking where time of day usage applies.

d. Consider a parkade.
8.3 Public Realm and Streetscape Guidelines

DOLLARTON HIGHWAY

Dollarton Highway from the Seymour River to Forester Street acts as a gateway into Maplewood. Recognize this character by including a wide, treed and landscaped median and boulevard with walking and cycling facilities on either side to maintain this unique gateway characteristic.

**Intent**

Continue the streetscape established for Dollarton Highway and improve walking and cycling connections from Forester Street to Ellis Street.

a. Improve walking and cycling connections from the existing urban trail to separated facilities along Dollarton Highway from Forester Street to Ellis Street.

b. Allocate adequate separations between walking and cycling facilities.

c. Ensure the connections are appropriately signed for users transitioning from the existing urban trail to separated facilities in a manner that is safe and easy to understand.

d. Provide a safe and convenient transition from the separated cycling facilities on Old Dollarton Road to Dollarton Highway.

e. Collect data and monitor urban trail usage along Dollarton Highway for additional separation between people walking and cycling.
## APPENDIX

### LIGHTING STANDARDS AND SPECIFICATIONS

<table>
<thead>
<tr>
<th>Maplewood Village Centre Street Lighting Specifications</th>
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<tbody>
<tr>
<td>Pole and luminaire colour</td>
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<tr>
<td>Pole type</td>
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</tbody>
</table>
| Pole base cover | Type A: Nova Maplewood NSR059/16-30’
Type B: Nova Maplewood NSR059/16-25’ |
| Pole height | Type A: 30’
Type B: 25’ |
| Concrete base | Round sonotube / type B >343mm diameter |
| Luminaire and mounting arm – upper | Lumca CPGL0418 with CFMD12815 |
| Luminaire and mounting arm – lower | Type A: Lumca CPL0418 with CF50
Type B: n/a |
| Banner arms | Lumca BEN-S x 2 |
| Lamp type and colour temperature | LED 4000K |

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<thead>
<tr>
<th>Innovation District Street Lighting Specifications</th>
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<td>Pole and luminaire colour</td>
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<td>Pole base panel and colour</td>
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<td>Luminaire and mounting arm</td>
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<td>Lamp type and colour temperature</td>
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<tr>
<th>Dollarton Highway South Lighting Specifications</th>
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<tr>
<td>All lighting standards for the Dollarton Highway South precinct should meet District Lighting Standards</td>
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**NOTE:** Type A and Type B reference standards for specific streets.
Type A: Old Dollarton Road, Riverside Drive, Shared Street, Berkley Road
Type B: Seymour River Place, Front Street, Windridge Drive, Heritage Park Lane, Forester Street, Bridge Street

**NOTE:** Lighting for Dollarton Highway South also applies to Mount Seymour Parkway, Dollarton Highway, and Windridge Drive east of the Maplewood Village Centre Boundary
MAPLEWOOD VILLAGE CENTRE STANDARD: TYPE A

NOVA POLE

The District Of North Vancouver-Maple Wood
30'-Single Upper Street Light and Single Lower Ped Light
5 9/16' Round

File Name: 139-65-3DR301-F
Saved: 9/17/2013

IMPLEMENTATION PLAN
MAPLEWOOD VILLAGE CENTRE STANDARD: TYPE B

NOTES:
1. All units in metric (mm. kg) unless otherwise stated.
2. Stamp base plate "NP 8/16/12, 1" (YYMMYY).
3. Steel Silicon content:
   - Shaft: Si < 0.04%
   - Parts: Si < 0.04% or 0.1% - 0.22%
4. Welding: CSA W49, W47.1

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<tr>
<th>Ref.</th>
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<tr>
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<td>Ph Nguyen</td>
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<td>Edward Chang</td>
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NOVA POLE
The District Of North Vancouver - Maple Wood
25 Single Upper Street Light
5 9/16" Round

File Name: 139-65-3DR251-F

DISTRICT OF NORTH VANCOUVER
Configure Tandem to uniquely respond to your project’s needs. Mount street side luminaires high allowing for greater distance between poles and better light distribution. Mount low-wattage pedestrian scale luminaires at lower heights to bring a more human scale to public spaces.
MAPLEWOOD INNOVATION DISTRICT: POLE SPECIFICATIONS

ELEVATION DRAWINGS

A Side | B Side

A Elevation | Side Elevation | B Elevation

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# Maplewood Innovation District: Luminaire Specifications

## Ordering Guide

### Example: LIN-M2150-UNV430-3-C4-SP-WC-MSL/L3-STD

<table>
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### Color Temperature(3)
- 3000K
- 4000K

### Distribution(4)
- Type III
- Type III

### Metal Finish
- See color options on finishes technical sheet
- Custom Color

### Mounting
- Structure Pole(5)
- Square Steel Pole by Structure(5)

### Options
- Wireless Control(6)
- Metal Sensor/Photocontrol(7)
- 20kA Surge Protection(8)

### Special
- Standard
- Modified

---

1. Contact factory for alternative output options.
2. Step down transformers are required and only available with structure supplied poles.
3. Contact factory for other color temperature options.
4. Contact factory for other distribution options.
5. Structure pole specification sheet must be completed showing mounting location and quantities as a separate item.
6. Specify pole type on page 138 as separate item.
7. Surpass Wireless drapery controller must be tested separately. Please contact factory for design assistance.
8. Specify air pressure rating (see page 137 for details).
9. 20kA surge suppressor is only available when pole is supplied by structure. 20kA surge suppressor supplied as standard in the U.K.
MAPLEWOOD INNOVATION DISTRICT: LUMINAIRE SPECIFICATIONS

**ST** Straight Square Steel Pole

**FEATURES:**
- Heights available from 10 to 40'
- Galvanized then powder coated (AAMA 2604 standard)
- Supplied with a two-piece packed aluminum bowl cover
- Multiple mounting options

**ORDERING GUIDE:** EXAMPLE: ST-20-BLK-A12-B12-STD

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188 © 2017 STRUCTA INC.
The District of North Vancouver (DNV) undertook an implementation planning and engagement process for Maplewood to develop a detailed design concept and design guidelines to guide development, the form and character of buildings and public realm elements in Maplewood. Council approved the Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines (Implementation Plan) on November 6, 2017. The growth and revitalization anticipated in the Implementation Plan to 2030 triggered the need to update the transportation study to ensure the transportation network aligns with the community vision for Maplewood. The transportation analyses completed as part of this work includes: Maplewood Village Transportation Study Update (Study, 2017) and Maplewood Village Functional Design Report (Design Report, 2018).

The Study addresses the transportation system to accommodate all users - people walking, cycling, taking transit and driving. The Study includes an analysis of existing conditions, future base conditions, options analysis and recommendations. The consultant conducted the traffic analysis based on land use assumptions developed by DNV staff. These assumptions were based on the information available at the time. Outcomes of the Study include new walking, cycling and road connections needed to support the vision and goals outlined in the Implementation Plan as well as providing traffic data (e.g., volumes, queues) to guide the functional design.

Figure 1: Maplewood Transportation Network
In addition to cross-sections and conceptual plans for key roads, the Design Report contains information about the design principles, including key considerations about lane configuration, cycling network, transit facilities, cross-section requirements, etc. The Design Report also includes issues and constraints uncovered through the process, and cost estimates.

It is intended that these two documents are to be used in conjunction with one another.

Key Findings from the Study include:

- Extending Berkley Road from Mount Seymour Parkway to Dollarton Highway, prioritizing through movements for all users by minimizing intersections and no driveways. The new connection accommodates transit, and provides high quality walking and cycling facilities. The new facility provides an alternative to using Riverside Drive, allowing Riverside Drive to be redesigned for the village.

- Extending Seymour River Place from Old Dollarton Road to Front Street as a shared street. Traffic volumes on this facility should be slow moving to allow for all users to share the same space.

- The proposed land use changes enable improvements for active and healthy transportation. The Study identifies improvements for walking and cycling, including all-ages-and-ability cycling facilities on Old Dollarton Road, Dollarton Highway, Berkley Road and Riverside Drive.

- Extending the Spirit Trail from Lynn Creek Town Centre through the Village and Innovation District east towards Deep Cove.

Highlights from the Design Report include:

- Traffic signals assumed in several locations. Formal warrant analysis will be required to verify the level of traffic control needed.

- Level of traffic control (e.g., 2-way stop, all way stop, pedestrian signal) assumed at specific locations. Formal analysis will be required to verify level of traffic control needed.

- Identifies key laning and recommended turn lanes with associated storage lengths.

- Supports the extension of B-Line service to the Village and Innovation District by identifying and accommodating B-Line bus stations along Old Dollarton Road in the Village. All roads were also designed to accommodate articulated buses used by B-Lines.

A full copy of the Transportation Study follows.
Maplewood Village Transportation Study Update

Final Report

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355 West Queens
North Vancouver, BC
V7N 4N5

Attention: Ingrid Weisenbach
Transportation Planner, District of North Vancouver

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Niraj Sunuwar, P.Eng.
Transportation Engineer

Date issued: December 20, 2017

Project No.: 1333.0036.01

This report was prepared by Urban Systems Ltd. for the account of District of North Vancouver. The material reflects Urban Systems Ltd.’s best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Urban Systems Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.
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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AAA</td>
<td>All Ages and Abilities</td>
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<tr>
<td>DGR</td>
<td>Dangerous Goods Route</td>
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<td>FTN</td>
<td>Frequent Transit Network</td>
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<tr>
<td>LOS</td>
<td>Level of Service</td>
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<tr>
<td>MoTI</td>
<td>Ministry of Transportation and Infrastructure</td>
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<td>MRN</td>
<td>Major Road Network</td>
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<td>MUP</td>
<td>Multi Use Pathway</td>
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<td>OCP</td>
<td>Official Community Plan</td>
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<td>V/C</td>
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EXECUTIVE SUMMARY

The District of North Vancouver (District) is undertaking neighbourhood planning work in the Maplewood Area. This area includes the Maplewood Village Centre, as well as the surrounding industrial and employment lands and the undeveloped lands to the east (future Innovation District). Through the planning process, which included consultation with community members, the District has identified future potential for increased land use density in this neighbourhood. This report presents a recommended transportation network to accommodate the potential increase in residents and businesses and meet the community’s goals for a complete, balanced, liveable, and connected community.

The Maplewood neighbourhood can be considered as three sub-areas: the Maplewood Village, which is the existing community surrounding Riverside Drive; the Undeveloped Lands (future Innovation District) in the east side of the study area; and Dollarton Highway Light Industrial, south of Dollarton Highway. The planning process for Maplewood included a design charrette, where community stakeholders worked together to build a vision for the future of Maplewood. The concept plan was presented to the public and modified by technical experts and District staff to create a ‘refined concept’ plan for Maplewood. This ‘refined concept’ is shown in Figure E-1 and was used as a basis for the development of the recommended transportation network.

The plan shows the concentration of commercial / mixed use and live work land use around Old Dollarton Road and Front Street in the Village Heart, an ‘artisan industrial’ area around Old Dollarton Road east of Riverside Drive, and a diverse mix of residential uses through the neighbourhood. It also shows an emerging Innovation District with light industrial & commercial businesses and employee dedicated housing in the east portion of the neighbourhood along with a new District fire facility.

Vision for Maplewood (OCP)

- Complete and balanced community
- Local jobs, for those living in the community, especially jobs for young people
- A high environmental standard and high aesthetic standards
- Reflect the community’s outstanding natural environment
- Variety of housing for all ages and incomes and family circumstances
- Walkable Maplewood village centre, convenient for transit, extensive system of trails connecting community and nearby destinations

Figure E-1: Maplewood Concept Plan
The intent is to create a community with diverse employment opportunities and community amenities, a walkable core, and access to the natural environment, which remains connected to the urban streetscape. The community engagement process undertaken by the District envisions a vibrant Village Heart with a commercial High Street, high quality public spaces, an artisan industrial area, and a range of residential types and densities, including flexible live-work space. The transportation network must respond to this vision by creating roadways that are vibrant, walkable, public spaces, facilitate cycling for all ages and abilities, accommodate future frequent and rapid transit, and provide access for local goods movement.

The Maplewood neighbourhood is located between two major arterial roadways within the District – Mount Seymour Parkway and Dollarton Road. These roadways provide access to Maplewood, but they are also important connections between communities to the east and the rest of the District, the region, and Highway 1. Efficient and reliable travel eastbound and westbound along these roadways is an important transportation priority.

The existing transportation network in Maplewood has a number of issues that prevent the community from reaching its vision. Some of the most significant issues include:

- Limited local and regional connectivity for walking,
- Lack of local cycling infrastructure
- Low network resiliency
- Limited north-south connectivity
- Shortcutting traffic through the Village Centre
- Traffic delays at key intersections.

The proposed increase in the number of people that work and live in Maplewood will also increase the number of people walking, biking, taking transit, and driving, as well as the number of local goods deliveries. Without improvements to the transportation network, this increased activity can be expected to worsen existing issues and increasing traffic volumes can be expected to erode the liveability of the neighbourhood. Planning for a walkable village core, high quality cycling connections, improved transit service, and increased road capacity at key location is essential to deliver a vibrant and liveable community. TransLink plans to increase the frequency of transit service in Maplewood as part of the North Shore Area Transit Plan; however, vehicle delay on the arterial road network is also expected to have a negative effect on the efficiency and reliability of transit service. Existing and future issues and opportunities that are expected in the ‘do nothing’ or future base case are illustrated in Figure E-2: Future Base Issues and Opportunities.
Maplewood Village Transportation Study Update

DEVELOPING A NETWORK

The transportation network as a whole must be planned and designed to address existing issues, achieve the vision and objectives of the community, and to respond to proposed changes in land use. This means identifying desire lines for different modes of transportation and identifying corridors to accommodate the anticipated demand. The proposed land uses in the east part of the study area are located in an area that is undeveloped – i.e. with limited existing transportation infrastructure. Before finalizing the overall transportation network needs and recommended improvements to existing infrastructure, it is important to identify the connections made by new corridors and to determine the shape of the overall network at a high level. This study evaluated three high level options to determine which overall transportation network provided the greatest benefit to the Maplewood Area. The three options are described and illustrated below.

Figure E-2: Future Base Issues and Opportunities
Option 1 – Limited New Network

- Improvements to walking, cycling, and intersection geometry based on the recommendations of the Maplewood Village Centre Transportation Plan (Urban Systems, 2013).
- Access to the Innovation District provided via two accesses on Dollarton Highway.

Option 2 – New Berkley Road Connection

- Improvements to walking, cycling, and intersection geometry based on the recommendations of the Maplewood Village Centre Transportation Plan (Urban Systems, 2013).
- Berkley Road to connect Dollarton Highway to Mount Seymour Parkway and provide access to North Lands.

Option 3 – New Berkley Road Connection plus New Seymour Boulevard Connection

- Improvements to walking, cycling, and intersection geometry based on the recommendations of the Maplewood Village Centre Transportation Plan (Urban Systems, 2013).
- Berkley Road to connect Dollarton Highway to Mount Seymour Parkway and provide access to North Lands.
- Seymour Boulevard connected from Mount Seymour Parkway to the Highway 1 interchange at Dollarton Highway / Main Street.

Each option resolves some of the issues identified in the future base case and moves towards the vision identified for Maplewood. Key findings of the analysis of each option are summarized below:

Option 1 – Limited New Network

Investments in the local walking and cycling network within the Village Centre are expected to create a more pleasant, liveable, walkable, and bikeable core for the community. Improved regional walking and cycling connections will create transportation choice for residents and employees in Maplewood and represent an opportunity to reduce reliance on single occupancy vehicles. Reducing traffic speeds and prioritizing walking and biking on Riverside Drive can also be expected to reduce shortcutting; however, because there is limited network redundancy, shortcutting is expected to be a continuing issue. Traffic volumes on Riverside Drive in Option 1 are approaching the threshold for four lanes. Option 1 does not provide any increase in network connectivity or resiliency. Connectivity to emergency services is limited to Dollarton Highway, with no alternative access in case of an
incident or congestion. This option does little to address delays to transit caused by increased traffic congestion or to limit the impacts of goods movement through the Village Centre. The issues and opportunities associated with Option 1 are illustrated in Figure E-3.

**Figure E-3: Option 1 Issues and Improvements**

**Option 2 – New Berkley Road Connection**

The District has identified the need for a new connection along the Berkley Road alignment connected to development throughout historic transportation planning work, including in the 2011 Road Network Study. The addition of a new north-south connection at Berkley Road will become the new route for local and regional traffic travelling between Mount Seymour Parkway and Dollarton Highway. Providing this new connection is expected to reduce travel time for through traffic, as well as improve traffic operations and allow for the development of a vibrant, walkable village core on Riverside Drive. When combined with traffic mitigation measures on Riverside Drive, the Berkley Road connection is expected to reduce short-cutting traffic and truck movements through the village core, since Berkley Road will have fewer accesses and is designed to prioritize traffic flow. The reduction in vehicle volumes through the Village Centre, and especially along Riverside Drive and Old Dollarton Road provides an opportunity to further enhance community livability and reduce conflicts between vehicles, trucks, pedestrians, and cyclists. The new connection will also increase the resiliency of the network, improve access to emergency services, and reduce vehicle delay at key intersections.

In this option, volumes on Riverside Drive are within reasonable levels for a two-lane roadway. Delays to transit are expected to be lower and less frequent in Option 2, and goods movement can be rerouted to the new Berkley Connector. While traffic volumes within the Village Centre are
expected to decrease, traffic volumes on Dollarton Highway east of Riverside Drive are expected to increase and to exceed available capacity for the two-lane section of Dollarton Highway. The issues and opportunities associated with Option 2 are illustrated in Figure E-4.

Option 3 – New Berkley Road Connection plus New Seymour Boulevard Connection

The issues and opportunities associated with the Seymour Boulevard Connector were found to be largely outside of the Maplewood Area. There may be some benefits to the balance of traffic between Dollarton Highway and Mount Seymour Parkway, but these are difficult to quantify and are not expected to result in significant changes to expected operation within the study area. Seymour Boulevard does provide some additional network resiliency, but this will largely benefit the transportation network east of the Seymour River. Because of this, issues and opportunities were not summarized separately for this option.
The results of the evaluation of the options described above is summarized in Table E-1. The options were evaluated based on five categories: overall connectivity / network resilience, driving and goods movement, walking, cycling, and transit. Within Maplewood, Option 2 and Option 3 were found to have similar benefits. Option 3 is outside of the Maplewood Centre and is understood to be dependent on other projects and partners. For this reason, we have identified Option 2 as the recommended network for Maplewood. This work does not suggest that the District should not pursue the Seymour Boulevard Connector and it does not suggest that benefits identified through other work are not valid. Decisions concerning the Seymour Boulevard connector should be made independently from planning for the Maplewood Village Centre.

**Table E-1: Option Evaluation Summary**

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Overall, it is clear that providing a new connection between Mount Seymour Parkway and Dollarton Highway through the proposed new developments in the east part of the Maplewood neighbourhood has many transportation benefits. This connection allows for traffic travelling from the neighbourhoods east of Maplewood to choose the most efficient route through this area – Mount Seymour Parkway or Dollarton Highway – without negatively impacting existing residential neighbourhoods or the Maplewood Village Core. It provides strong, multimodal access to the proposed new Innovation District and access to the proposed District fire facility with a resilient network in case of incidents or congestion. Based on the results of the evaluation, the Berkley Road connection was included in the recommended transportation network, which is described further below.
The Maplewood neighbourhood will be served by a multimodal transportation network, which will be constructed over time in conjunction with changes in land development. Safe and efficient connections for walking and cycling will contribute to neighbourhood livability and vibrancy and encourage residents, employees, and visitors of all ages to choose active modes of transportation for short trips. Convenient, accessible, and frequent transit service to connect destinations within Maplewood and between Maplewood and other communities will support mode choice, reduce vehicle trips, and improve the accessibility of the neighbourhood for all people. The District is working with TransLink to provide frequent, and eventually, rapid transit service to Maplewood. The transportation network and public realm must be designed to accommodate high quality, high frequency transit. The vehicle network in and through Maplewood prioritizes efficient east-west through movements, discourages short-cutting, and provides appropriate local access for private vehicles and the movement of goods and services.

The recommended network identifies specific facilities for each mode of transportation. These facilities have been chosen because they work towards achieving the overall goals identified for Maplewood Village and the Innovation District. They provide connections that are appropriate for the planned land use and intent for each roadway corridor, and are consistent with the findings of the technical work. Through traffic analysis, a number of improvements to individual intersections were also identified. The recommended connections, connection types, and improvements for each mode are illustrated in Figure E-5.
With this network in place, the proposed land use can be accommodated within the study area with an increase in overall multi-modal mobility and reliability. Pedestrians and cyclists of all ages and abilities will have dedicated networks connecting east-west and north-south across the study area. The Berkley Road connection will reduce traffic volumes through the Village Centre, provide access to the new Innovation District and District fire facility, and increase the reliance of the network in times of congestion, during incidents, and during emergencies. The overall average delay at all intersections within the Study Area is expected to be remain at acceptable levels at the long-term horizon. While some movements at the most congested intersections will see higher levels of delay, the proposed improvements and signal timings allow the District to prioritize through traffic along Mount Seymour Parkway and Dollarton Road, while providing adequate storage for vehicles queuing to enter and exit the Village Centre. Within the Village Centre itself, operations of all movements are expected to be adequate with limited delay, which will allow for more efficient and reliable transit service.
1. INTRODUCTION

The Maplewood Area is a long-established community in the District of North Vancouver, located east of Seymour River between Mount Seymour Parkway and Dollarton Highway. This location is illustrated in Figure 1-1. The Maplewood neighbourhood can be considered as three sub-areas: the Maplewood Village, which is the existing community surrounding Riverside Drive; the Undeveloped Lands (future Innovation District) in the east side of the study area; and Dollarton Highway Light Industrial, south of Dollarton Highway.

Approximately 1,000 people live in Maplewood today in a mix of older, more affordable rental townhouses and low-rise apartments, and a blend of old and new single-family homes. Area residents enjoy some commercial development along Old Dollarton Road and a recreation centre that is located nearby in the Seymour Area. Maplewood is also a significant North Shore employment node, with established industrial and commercial uses to the south and with established and recently developed business parks along the new Dollarton Highway. Over 220 businesses are located here, and contribute significantly to the District’s job base and economy. The area includes — and is bordered by — significant green spaces and ecological areas including Maplewood Farm, Maplewood Conservation Area, forested lands, creeks and wetlands.

The Maplewood Village is the heart of the Maplewood Area. The Maplewood Village surrounds Riverside Drive between Mount Seymour Parkway and Dollarton Highway. The vision for the Maplewood Village was established in the District’s new Official Community Plan (OCP, Bylaw 7900) adopted by the District of North Vancouver Council in 2011. It is envisioned as a complete and balanced community with local jobs and business that reflect high environmental and aesthetic standards, complementing the community’s historic and natural character, which distinguishes this centre from other areas in the District. The Village Centre is expected to include a wide range of housing types along with local shops and services and business park type use.

In 2016, the District undertook a new study to develop an Implementation Plan for the Maplewood Area and Village Centre. This plan is intended to implement the direction set out in the OCP and include design guidelines for the area. The intent of the Maplewood Implementation Plan and Design Guidelines (Implementation Plan) is to create a community with diverse employment opportunities and community amenities, a walkable core, and access to the natural environment, which remains connected to the urban streetscape. The community engagement process undertaken by the District envisions a vibrant Village Heart with a commercial High Street, high quality public spaces, an
artisan industrial area, and a range of residential types and densities, including flexible live-work space. The transportation network must respond to this vision by creating roadways that are vibrant, walkable, public spaces, facilitate cycling for all ages and abilities, accommodate future frequent and rapid transit, and provide access for local goods movement. This Transportation Study Update was developed in conjunction with the Implementation Plan and reflects the policies and guidelines outlined in that document. The Implementation Plan was approved by Council on November 6, 2017.

The Transportation Study Update identifies a recommended transportation network in the Maplewood Area, including within the Maplewood Village Centre and the proposed Innovation District. The recommendations will identify infrastructure to continue to develop a more livable and walkable Village Centre, improved bicycle connections that accommodate all ages and abilities, convenient access to transit, and a balanced transportation system. The overall purpose of this study is to create a planning level outline for a transportation network, supported by strong road network and traffic analysis in order to ensure that the community’s vision for a vibrant and complete Village Centre is upheld. The functionality of the transportation network is central to the success of any livable, vibrant community and is a major factor in achieving the District’s objectives for the Maplewood Area.

11 STUDY SCOPE AND METHOD

This report documents Phase 1 of the Maplewood Village Transportation Study and Functional Plan – the Maplewood Village Centre Transportation Plan Update. The study area included in this analysis is shown in Figure 1-1. The Highway 1 interchanges and a possible future Seymour Boulevard connection are excluded from the study area – this report does not included recommendations for Highway 1, the Lower Lynn interchanges, or Seymour Boulevard; however, the impacts of changes to this infrastructure has been included in the analysis.

The scope includes the following key items:

- Updating the assessment of the existing transportation network, completed in 2013, to include the Innovation District and to updated traffic data and land use and travel assumptions.

- Identification of existing and potential future transportation issues if the transportation network is not improved.

- Assessing the need for new major roadway connections between Mount Seymour Parkway and Dollarton Highway.

- Developing a planning-level multi-modal transportation network, including recommended facility types for walking and cycling, accommodation for planned transit, and identification of traffic and goods movement needs.

- Using traffic engineering tools to identify key network components, including the number of lanes required on roadways, recommended geometric improvements at existing intersections, and the preferred configuration for new intersections, if applicable.
Mapping and documentation of the recommended transportation network.

The assessment documented in this report are based on existing and future land use information provided by the District based on a conservative estimate of the built area that could be accommodated by parcels within the study area. It is not intended to dictate land use or accurately reflect the exact nature of future development, instead, the goal of the analysis is to determine the transportation needs of the Maplewood Area with development within a given envelope.

The Maplewood Transportation Plan is informed by many of the District’s key planning documents that contain several development guidelines and policies, plans, and goals related to transportation.

1.2 RELEVANT PLANS AND POLICIES

The Maplewood Transportation Plan is informed by many of the District’s key planning documents that contain several development guidelines and policies, plans, and goals related to transportation.

- **District of North Vancouver Transportation Plan (2011)** – This transportation plan identified priorities to deliver a sustainable transportation network in the District of North Vancouver in support of the vision outlined in the OCP. Intersection safety improvements along Dollarton Highway and Riverside Drive, bike route connecting to Mount Seymour Parkway, and transit stop improvements were identified as focus areas for Maplewood.

- **Maplewood Area Plan (2002)** - this plan is based on a long-term vision developed by Maplewood community representatives to outline the form and character of future land use
patterns within Maplewood. It addresses local concerns and needs as identified by local representatives. Amongst other priorities, the main transportation objectives identified were to provide accessible and widespread pedestrian/cycling routes, minimize commuter vehicle trips within a sustainable community, and realize the benefits of Maplewood’s location as a transportation axis for transit, rail, water, and road transportation.

- **Maplewood Village Centre Transportation Study (2013)** – this transportation study for the Village Centre was completed in 2013 and that provided a planned network to accommodate the level of development established at the time for Village Centre. The study outlined a multimodal transportation network, identified intersection and corridor improvements within the Village Centre, and included conceptual drawing of the recommended transportation network. The current work is based on the technical foundation of this study.

- **Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines (2017)** – As noted earlier, the Implementation Plan and the Transportation Study Update were prepared in parallel. Because of the close relationship between land-use and transportation planning, this parallel process allowed for the proposed transportation plan to be fully responsive to the planned land use changes and community policies and guidelines and for the Implementation Plan to reflect the findings of the transportation planning work.

As part of the development of the Implementation Plan the District held a design charrette to develop a concept plan for the Maplewood Village and surrounding area. The process included representation from the design and planning team, community stakeholders that represent a variety of interests, and District staff. The planning process for Maplewood included a design charrette, where community stakeholders worked together to build a vision for the future of Maplewood. The concept plan was presented to the public and modified by technical experts and District staff to create a ‘refined concept’ plan for Maplewood. This ‘refined concept’ is shown in Figure 1-2 and was used as a basis for the development of the recommended transportation network.

The plan shows the concentration of commercial / mixed use and live work land use around Old Dollarton Road and Front Street in the Village Heart, an ‘artisan industrial’ area around Old Dollarton Road east of Riverside Drive, and a diverse mix of residential uses through the neighbourhood. It also shows an emerging Innovation District with light industrial & commercial businesses and employee dedicated housing in the east portion of the neighbourhood along with a new District fire facility.
Figure 1-2: Maplewood Concept Plan
2. EXISTING CONDITIONS

Maplewood is an area with existing development and services, including a road network and transit service. This section describes the existing land use, transportation network, walking, cycling, and transit facilities in Maplewood.

2.1 EXISTING LAND USE

The most significant factor affecting how people travel is the proximity of where people live to where they work, shop, and play. The type, scale and mixture of land uses along with the densities of those uses, will largely determine how far, and consequently what mode of transportation, people will use to get to their destinations. The closer people are to their desired destination, the more opportunities there are for them to use sustainable modes of transportation such as walking, cycling, or transit.

Maplewood can be divided into three distinct areas as illustrated in Figure 2-1 and described below.

- **Village Area** – Maplewood village is currently made up of a combination of residential, commercial, and mixed land uses. The existing residential land uses in the village include single family homes, purpose-built rental apartments, and a mix of strata apartments and townhouses. The west village area has seen the most recent redevelopment, with new townhouses along Seymour River Place, Heritage Park Lane, new mixed-use buildings along Old Dollarton Road and Front Street, and new commercial development along Dollarton Highway. Maplewood Farm is a well visited site, with cultural and historic importance for the Maplewood Village and draws local and regional visitors. The iHope Centre and the North Vancouver Arts Council are important established services/group in the area, which are currently leasing space inside the Maplewood Farm site. Kenneth Gordon Maplewood School is located on the east side of Seymour River Place.

- **Undeveloped Lands (Innovation District)** – Located on the east side of the study area, there are largely undeveloped lands that are currently identified as light industrial commercial in the OCP. The Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines (2017) has identified this land as a proposed Innovation District. Current land uses on the developed portion of this area include an international school currently being rented by another educational facility, and recreation facilities, including Canlan Ice Sports Centre, Seymour Youth Center, and Ron Andrews Community Centre.

- **Light Industrial - Business Lands** – South of Dollarton Highway is a concentration of light industrial lands and commercial uses. The business park located on the southeast corner of Dollarton Highway/Forester Street consists of cafes and small restaurants.
Figure 2-1: Maplewood Planning Areas

A detailed table with the current land use and densities are attached in Appendix A. The land uses assigned to the Maplewood area in the District’s OCP are shown in Figure 2-2.

Figure 2-2: Maplewood OCP Land Use Area
2.2 TRANSPORTATION NETWORK SUMMARY

Maplewood is bounded by Mount Seymour Parkway to the north, Dollarton Highway to the south, Seymour River to the west, and Windridge Park to the east. The road network within the study area is generally comprised of local and collector roads which exception of Mount Seymour, Dollarton Highway, and Riverside Drive being major arterial roadways.

2.2.1 TRANSPORTATION NETWORK

The Maplewood Village is located between two major arterial roadways: Mount Seymour Parkway and Dollarton Highway. These roadways are part of the Major Road Network (MRN) that have a regional role connecting the eastern portion of the District to Highway 1, the rest of the North Shore, and all of Metro Vancouver. Dollarton Highway has pathways on both sides of the roadway which also serve both pedestrians and off-road cyclists in the same space. Mount Seymour Parkway has sidewalks and on-street cycle lanes that are suitable for regional travel by confident cyclists. Both roadways are part of the transit network. This area is not currently part of the Frequent Transit Network (FTN).

Riverside Drive is also a major arterial roadway and part of the MRN; it is the only north-south connection between Mount Seymour Parkway and Dollarton Highway within approximately 3 km. There is limited network redundancy in this area and little ability for traffic to redistribute to make the most effective use of the road network. Riverside Drive’s role as a north-south connector results in through traffic that is not destined for the Village Centre. It is also a goods movement connection and an official Dangerous Goods Route (DGR) as outlined in District Bylaw. There are no sidewalks on Riverside Drive between Old Dollarton Road and Mount Seymour Parkway and sidewalks on both sides of the road between Old Dollarton Road and Dollarton Highway. There are no existing cycling facilities on Riverside Drive.

South of Dollarton Highway there are a series of local roadways that act as connections to the industrial area. Riverside Drive south of Dollarton Highway is a minor arterial with no transit and no active transportation infrastructure.

Between Dollarton Highway and Mount Seymour Parkway is a network of local and collector roadways with a mix of pedestrian infrastructure. There is limited on-street cycling infrastructure. On the east and west sides of the study area there are some existing trails; however, there is limited connectivity and the utility of these trails for mobility is limited.

The roadway characteristics in the study area are illustrated in Figure 2-3 and summarized in table form in Appendix B.
2.2.2 EXISTING TRAVEL CHARACTERISTICS

Key facts about the current travel characteristics include the following.

- **Mode Split**: According to the 2011 TransLink Trip Diary survey, 79% of all weekday trips made in the District are made by auto. Walking trips account for 12%, transit trips account for another 8%, while only 1% of all trips is made by cycling. Although the detailed data for Maplewood is not available, mode share for walking and cycling is typically higher in village centres where multiple land uses are co-located and distances for some trips are less than two kilometres.

- **Travel Patterns**: The traffic pattern is directional during the morning and afternoon peak hours - in the morning peak, westbound traffic volumes are significantly higher than the eastbound traffic volumes. Likewise, eastbound volumes are higher in the afternoon peak hour. Shortcutting through Riverside Drive to access the Highway were found to be prevalent in existing conditions. Most of the traffic destined for Maplewood comes from the east on Mount Seymour Parkway and the west on Dollarton Highway.

- **Goods Movement**: Due to the location of industrial uses on the south side of Dollarton Highway, most trucks access these site from Dollarton Highway. Riverside Drive is the existing Dangerous Goods Route (DGR) in the area and the only north-south route for trucks to access Mount Seymour Parkway, which is also designated as DGR.
There is an existing chemical plant south of the Study Area, which has generated discussion at community events regarding egress in case of emergency. The need for, and feasibility of, additional emergency egress locations was not specifically included in this study, but may be considered as recommendations for the future network are considered. Network redundancy positively contributes to emergency egress and the resiliency and completeness of the network is included in the evaluation of network options later in this report.

2.3 DRIVING AND GOODS MOVEMENT

The current conditions for driving and goods movement in Maplewood area are summarized in the sections below.

2.3.1 EXISTING CONDITIONS

Traffic volumes on Mount Seymour Parkway and Dollarton Highway are consistent with their roles as regionally significant roads connecting communities in the east of the District with other neighbourhoods on the North Shore and across the Lower Mainland. Peak hour peak direction volumes on Mount Seymour Parkway are between 1,650 to 1,850 vehicles and peak hour peak direction volumes on Dollarton Highway are between 950 and 1,650. Both of these arterials have two through lanes per direction, medians and left turn lanes, and right turn bays at intersections. Traffic volumes are higher on Mount Seymour Parkway, especially east of Riverside Drive. High turn volumes into Maplewood (e.g. over 400 vehicles turning left from westbound Mount Seymour Parkway to southbound on Riverside Drive) utilize a high percentage of green time and contribute to delay for all vehicles on the roadway network. This is symptomatic of the use of Riverside Drive as a ‘shortcut’ to travel between Mount Seymour Parkway and Old Dollarton Road as drivers find the most efficient travel patterns across the District and to the Ironworks Memorial Bridge. Although data is not available to determine the volume of shortcutting traffic, it is likely that drivers may also be using Plymouth Drive to travel between Mount Seymour Parkway and Dollarton Highway during times of congestion.

In order to understand these conditions, existing mobility for vehicles and goods movement was assessed based on vehicle delay and capacity throughout the existing network. Due to the proximity to the highway interchanges, traffic on Mount Seymour Parkway and Dollarton Highway have higher volumes in the peak direction during peak periods. During the morning peak hour, westbound traffic volumes are around 1,850 vehicles on Mount Seymour Parkway and 1,600 vehicles on Dollarton Highway. Both roadways have four lanes at Riverside Drive; however, Dollarton Highway has two lanes at the east border of the study area. Work done by others indicates that regional traffic westbound on Dollarton Highway has a higher amount of delay than westbound traffic on Mount Seymour Parkway / Highway 1. This may explain the imbalance of traffic on these two arterial roadways. Because of the limited number of north-south connections, there is little opportunity for traffic to balance between the two roadways for efficient use of the network.
The results of the morning and afternoon peak period Synchro assessment are indicated that all intersections are operating at a Level of Service (LOS) ‘E’ or better in the morning and afternoon peak hours.

The existing traffic volumes and the results of the analysis are shown in Figure 2-4. Overall, all intersections in the study area operate with a LOS of ‘E’ or better in both peak periods; however, there are a number of individual movements, that experience longer delays with LOS of ‘F’. The most significant of these delays are at the intersection of Mount Seymour Parkway and Riverside Drive, where the westbound left turn in the morning peak period and the eastbound thru and right turn movements in the afternoon peak hour experience LOS ‘F’. This is related to the volume of traffic travelling through the Maplewood Village to find the most efficient route to the remainder of the District and/or to the Ironworkers Memorial Bridge.

The unsignalized intersection at Mount Seymour Parkway/Browning Place experiences LOS ‘F’ in the peak periods. This is typical of a two-way stop control intersection where the major corridor (Mount Seymour Parkway) experiences over 2,000 vehicles during the peak period. The number of vehicles making this movement is very small (less than ten in both peak periods). Delay at this intersection makes it difficult for residents along this corridor to access Mount Seymour Parkway via...
Browning Place; however, it also discourages shortcutting and reinforces the role of Windridge Drive as a local road. The volumes on Browning Place are not high enough to warrant signalization.

Movements exceeding these desired performance thresholds of LOS ‘D’ and / or volume to capacity (v/c) of 0.90 or greater are summarized below:

**Morning Peak:**

- **Mount Seymour Parkway & Riverside Drive**
  Westbound Left, LOS ‘F’, v/c >1
- **Mount Seymour Parkway & Browning Place**
  Southbound Left/Through/Right, LOS ‘F’, v/c >1

**Afternoon Peak:**

- **Mount Seymour Parkway & Riverside Drive**
  Eastbound Through/Right, LOS ‘F’, v/c >1
- **Mount Seymour Parkway & Browning Place**
  Northbound Left/Through/Right, LOS ‘E’
  Southbound Left/Through/Right, LOS ‘F’

Traffic operations within the study area may be affected by operation at the nearby Main Street / Dollarton & Highway 1 and Mount Seymour Parkway & Highway 1 interchanges. Observations indicate that congestion on Highway 1 south of the study area causes queuing on Mount Seymour Parkway and Dollarton Highway. However, this problem is expected to be alleviated with proposed improvements planned at these interchanges by the Ministry.

Riverside Drive is currently classified as the DGR in the District’s Transportation Master Plan. Currently, this roadway provides a direct connection from the Industrial area south of Dollarton Highway to Mount Seymour Parkway. Goods movement is subject to the same delays as other vehicles in the network.

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**2.3.2 SUMMARY OF EXISTING ISSUES**

The traffic analysis and review of driving and goods movement conditions identified the following key issues:

- Regional travel patterns and challenges, including high peak period peak direction travel on east-west corridors, limited east-west routes across the North Shore, and congestion on the highway interchanges negatively impacts operation on arterial roads.
- Delays at intersections along Mount Seymour Parkway due to high westbound volumes in the morning peak and high eastbound volumes in the afternoon peak
- Lack of north-south road connection between Mount Seymour Parkway and Dollarton Highway does not provide opportunity for drivers to choose the most efficient route and results in traffic diverting to the small number of available north-south connections. This results in:
  - Potential for shortcutting through the residential neighbourhoods along Plymouth Drive.
Non-local traffic using Riverside Drive, which contributes to delay for movements in to, out of, and though Maplewood Village and decreases the livability of Maplewood Village Centre.

No network redundancy in case of incidents and/or emergencies.

2.4 WALKING

The ability to safely and comfortably walk to and between key destinations is essential to community vibrancy and livability. This section explores existing walking conditions in Maplewood.

2.4.1 EXISTING CONDITIONS

The existing walking network in Maplewood is focused in Maplewood Village and is made up of sidewalks and trails. There are some traffic calming measures in place to improve the safety and appeal of walking. The existing walking conditions are explored in more detail below:

- **Sidewalks** – Although most of the area are well connected with sidewalks present on at least one side of the street, there are several streets currently missing sidewalks. The newer developments have contributed to adding sidewalk connections in Maplewood namely along Seymour River Place, Heritage Park Lane, Old Dollarton Road south of Front Street and Front Street between Old Dollarton Road and Riverside Drive. The following locations are currently missing sidewalks:
  - Riverside Drive between Old Dollarton Road and Mount Seymour Parkway (both sides)
  - Seymour River Place between Old Dollarton Road and Maplewood Farm Access (west side)
  - Old Dollarton Road west of Riverside Drive (both sides)
  - Old Dollarton Road between Front Street and Riverside Drive (east/south side)
  - Windridge Drive between Riverside Drive and Browning Place (south side)

- **Trails** – There are several existing trails on the eastern and western limits of the study area. The trails on the west links Maplewood Creek Park north of Mount Seymour Parkway to Maplewood Farm. This trail continues south. The trails on the east links Berkley Road to south of Dollarton Highway into Maplewood Conservations Area. There are also trails connecting to the off-street pathway located at the transition of Windridge Drive to Browning Place. The east-west trail network linking Maplewood Village with the future Innovation District and beyond is not well developed at this time.

- **Traffic Calming** – There are currently speed bumps along Windridge Drive. A 30 km/hr speed limit during school days signage is posted along Seymour River Place near Kenneth Gordon Maplewood School, however, no other traffic calming measures are implemented in the vicinity.
2.4.2 EXISTING ISSUES

The review of walking conditions identified the following key issues:

- Poor walking connections to major destinations and along key desire lines. Sidewalks are not continuous through the commercial area in the Village Core and there are no sidewalks on Riverside Drive north of Old Dollarton Road. This makes it difficult to safely and comfortably access important retail and community destinations.
- The walking network in Maplewood is incomplete. There are several roadways with missing sidewalks, which makes it difficult to safely walk to key destinations. This is especially problematic for people using mobility devices, children, and seniors.
- Poor east-west trail connections.

2.5 CYCLING

Cycling is a growing mode for Metro Vancouver municipalities, with many people interested in cycling more often for more trip types. The type of cycling facility influences cycling choice – confident cyclists may choose routes that are different than cyclists with a broader range of ages and abilities. This section explores the existing cycling infrastructure in Maplewood.

2.5.1 EXISTING CONDITIONS

Maplewood’s bicycle network is made up of variety of both on-street and off-street infrastructure. There are several off-street trails suitable for recreational cycling, however, on-street facilities are more limited. The current conditions for cycling in Maplewood area are summarized in the sections below.

- **Urban Trails** – The bridge over Seymour River was recently widened to provide a multi-use pathway on the south side of Mount Seymour Parkway. This route forms part of the Seymour River Greenway route, which will connect to the future Spirit Trail in Maplewood. The trails on either side of Dollarton Highway serve as urban trails; however, cyclists and pedestrians must share the trails, which are relatively narrow to accommodate both uses.
- **Protected Bicycle Lanes** – There are no existing protected bicycle lanes in Maplewood.
- **Bicycle Lanes** – There are painted bicycle lanes along Mount Seymour Parkway. Within the Village Centre, there is lack of dedicated on-street bicycle infrastructure.
- **Neighbourhood Bikeways** – Due to lower traffic volumes and low vehicle speeds along Seymour River Place, this is currently the most suitable north-south route within Maplewood. However, parking is allowed on both sides of the street, which could make cyclist vulnerable to a door zone or provide a feeling of being squeezed.
2.5.2 EXISTING ISSUES

The review of cycling conditions identified the following key issues:

- Limited All Ages and Abilities (AAA) cycling network to, from, and through the Maplewood Village restricts cycling opportunities to the most confident cyclists. For more people to feel safe and comfortable cycling, more protected cycling facilities and neighbourhood bikeways on low volume roadways would be required.
- Lack of north-south bicycle connections between regional cycling routes. There are no north-south dedicated bike connections between the bicycle lanes on Mount Seymour Parkway and the urban trails on Dollarton Highway. Riverside Drive between Old Dollarton Road and Mount Seymour Parkway is narrow with gravel shoulder making it an unattractive north-south route.
- Limited crossing treatments at intersections.

2.6 TRANSIT

Providing frequent, convenient transit improves travel choice for residents and employees, and encourages people to consider transit instead of driving for some or all trips. This section explores the existing transit service in Maplewood.

2.6.1 EXISTING CONDITIONS

Transit service is currently limited in Maplewood area and it is not part of the Frequent Transit Network (FTN) service area. There are few routes running through this region at low frequencies. TransLink currently provides bus service to Maplewood via four routes: the 214 and 211 on Mount Seymour Parkway and Riverside Drive; the 212 on Dollarton Highway, and the C15 on Old Dollarton Road and Riverside Drive. There is also a school special – the 880 Windsor School Special – on Mount Seymour Parkway. These routes have low frequencies and / or limited service hours, making transit inconvenient for many residents and employees. TransLink typically considers increasing service to communities with a higher density of residents and / or businesses.

The 214, 211, and C15 are subject to delays at some turning movements on their routes due to traffic congestion to, from, and within Maplewood Village. This type of delay can reduce transit reliability and has travel time costs for transit passengers.

Some bus stops within Maplewood do not have sidewalks and are not fully accessible for all passengers.

Phibbs Exchange serves as a transit hub for local and regional connections. It is located on the west side of Highway 1, within one kilometre from the Maplewood Village. The walk or cycling connections to Phibbs Exchange may discourage some residents from accessing transit service at Phibbs and
may result in driving being a more attractive option for regional trips, especially during off-peak hours.

2.6.2 EXISTING ISSUES

The review of transit conditions identified the following key issues:

- Existing service is infrequent and / or has limited service hours, reducing the convenience of transit and increasing transit travel times.
- Delays due to traffic congestion may impact transit reliability and efficiency.
- Missing sidewalk connection to the bus stops reduces accessibility, safety, and comfort for transit passengers.

2.7 EXISTING CONDITIONS SUMMARY

In the existing condition, lack of pedestrian and bicycle infrastructure were found throughout the Village Centre. High traffic volumes on Mount Seymour Parkway were found to cause intersection delays along Mount Seymour Parkway during both morning and afternoon peak. Traffic patterns indicate some non-local traffic in the Village Core, with some drivers using Riverside Drive to travel through Maplewood. This increases delay at some core movements, and reduces the livability of the neighbourhood.

Multimodal north-south connectivity is limited in this area. Vehicles can currently use Riverside Drive to connect between Dollarton Highway and Mount Seymour Parkway, however, there are missing sidewalk connections along Seymour River Place, Old Dollarton Road, and Riverside Drive. Although separated bicycle facilities exist on both sides of Dollarton Highway, there are generally poor connections in the study area to connect cyclists to major destinations around Maplewood.

Existing issues are illustrated in Figure 2-5.
Figure 2-5: Existing Condition Issues Map

- Intersection delays due to high westbound volumes in the AM peak and high eastbound volumes in the PM Peak.
- Lack of north-south connection for all modes.
- Intersection delays due to high westbound volumes in the AM Peak.
- More than 2 km between north-south connection linking Mount Seymour Parkway to Dollarton Highway.
  - Reduced network resiliency.
  - Limited potential efficiency for traffic redistribution.
  - Shortcutting impacts on Plymouth Dr.
- Missing sidewalk connections.
- Poor east-west pedestrian and bicycle connections. Lack of bicycle facilities in Village Centre.
- Infrequent Transit Service.
- Commuter traffic shortcutting through Village Centre.
- Access and connectivity challenges in existing industrial area.
3. FUTURE BASE CONDITIONS

This section of the report describes future conditions without any improvements to the existing transportation network. The scope of this transportation study includes one future time horizon (2031) which reflects a full buildout of the planned OCP land use, however, the full build out of Maplewood could occur past that horizon.

As noted earlier, the land use assumptions for Maplewood in the future are based on a conservative approach, considering the likely highest possible use of each parcel of land. This land use scenario was prepared by the District for use by Urban Systems in the development of the traffic forecast that support this work.

3.1 EXTERNAL TRANSPORTATION NETWORK CHANGES

Other agencies have planned and approved significant network changes to major infrastructure located west of Maplewood. The Ministry of Transportation and Infrastructure (MoTI) is planning improvements to the system of three interchanges on Highway 1 immediately north of the Ironworkers Memorial Bridge. These interchanges, which are located at Mountain Highway, Keith Road/Seymour Parkway and Main Street/Dollarton Highway are collectively referred to as the “Lower Lynn Interchanges”. The planned improvements are being delivered as part of the Ministry of Transportation’s “BC on the Move” plan and will address safety, queuing and delays. The proposed improvements are intended to increase east-west capacity on the municipal road network and reduce delay at the highway ramps.

Within Maplewood, these network changes are expected to result in reduced queuing and improved traffic flow along Mount Seymour Parkway and Dollarton Highway. Mount Seymour Parkway is expected to become more attractive for east-west traffic destined for the North Shore, while Dollarton Highway is expected to become more attractive for traffic to and from the Ironworkers Memorial Bridge. The analysis carried out in this section of the report assumes that these improvements are in place by 2031.

The long-term plan for the Lower Lynn Interchanges also includes the completion of Seymour Boulevard to connect Mount Seymour Parkway to Dollarton Highway near Highway 1. The impact of this proposed connection has been assessed separately and is documented later in the report. This link is not part of the study area. The analysis did not include the development of recommended geometry for this link; rather, it assessed the impacts of the Seymour Boulevard connection on the Maplewood transportation network.
3.2 FUTURE LAND USE

The Village Centre is expected to include a wide range of housing types, along with local shops and services and business park type uses. The District completed the *Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines* in 2017 and this work, along with the preliminary findings on the employment and environmental studies, informed the development of potential land use types and densities to be used for the transportation analysis. These are listed in Table 3-1.

**Table 3-1: Summary of Land Use Assumptions**

<table>
<thead>
<tr>
<th></th>
<th>Detached Residential (Dwelling Units)</th>
<th>Medium Density Residential (Dwelling Units)</th>
<th>Transitional Multifamily (Dwelling Units)</th>
<th>Commercial (sq. ft.)</th>
<th>Institutional (sq. ft.)</th>
<th>Light Industrial (sq. ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village Centre (West)</td>
<td>-35</td>
<td>+135</td>
<td>+1,290</td>
<td>0</td>
<td>+5,000</td>
<td>0</td>
</tr>
<tr>
<td>Village Centre (East)</td>
<td>-40</td>
<td>+510</td>
<td>+580</td>
<td>+40,000</td>
<td>+10,000</td>
<td>+40,000</td>
</tr>
<tr>
<td>Dollarton Highway Light Industrial</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>+50,000</td>
</tr>
<tr>
<td>Innovation District</td>
<td>0</td>
<td>0</td>
<td>+500 to +1000</td>
<td>0</td>
<td>0</td>
<td>+650,000</td>
</tr>
<tr>
<td>Total</td>
<td>-75</td>
<td>+645</td>
<td>+2,370 to +2,870</td>
<td>+40,000</td>
<td>+15,000</td>
<td>+740,000</td>
</tr>
</tbody>
</table>

The detailed table of land use is included in Appendix A. It is to be noted that the analysis included sensitivity analyses of two land use scenarios for the Innovation District in order to determine the road network requirements based on a low to high range of residential density. The results of these sensitivity analyses are discussed in further sections and documented in Appendix D.

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1 The Innovation District sensitive analysis considered two scenarios for residential development: 500 multifamily units and 1,000 multifamily units.
3.3 FUTURE TRAVEL PATTERNS

A review of the District’s EMME transportation demand forecasting model resulted in a recommended a growth rate of 1%. This is a conservative\(^2\) assumption that accounts for all potential growth east of Maplewood (both within the District and in other jurisdictions) and mode choice that is consistent with existing conditions. This growth rate was applied to the existing traffic in order to determine background traffic volumes in 2031.

Because Maplewood has existing development that will be transformed and replaced over time, some existing trips were removed from the network and replaced with the trips generated by the future development. The details of the existing and future trip generation are summarized in Appendix C.

Trip generation was estimated using the revised land use summary provided by the District. No internal trip reduction factor was applied, however a non-auto mode share of 20% was applied to the total person trips generated by Maplewood Village and the Innovation District. This reflects the District’s current share of non-auto modes and is a conservative approach, since town and village centres are expected to have the lowest auto mode shares within the District. This provided the number of new trips based on the densification strategy and the number of existing trips to be removed based on the deconstruction of existing developments. Future trip distribution was estimated using the District’s EMME model and engineering judgement. Trips were assigned based on most likely route during the peak hours. Appendix C provide more detail about the development of the traffic forecast.

The results of the forecast were applied to the future base road network for an analysis of traffic operations; the results of this analysis are provided in a later section.

3.4 FUTURE BASE TRANSPORTATION NETWORK

In order to determine the opportunities and issues associated with different network options and to develop recommended improvements, it is important to first assess the ‘do nothing’ conditions. The assessment of the future base transportation network reflects a future where the projected land use has been achieved, but where minimal improvements have been made to the transportation network.

The future base scenario assumes the existing transportation network is in place with no intersection and/or corridor improvements. New corridors are limited to those required to provide access to

\(^2\) For the traffic analysis, conservative indicates developing traffic volumes that are likely a ‘high’ estimate. This allows for investigation of potential network improvements in a higher volume scenario. Traffic volumes in the study area are not expected to reach these levels if investment in walking, cycling, and transit, as well as new mobility (e.g. carshare, rideshare, etc.) reduce single occupancy vehicle trips.
developing parcels. This scenario assumes that the Lower Lynn Interchange improvements are in place, but that the Seymour Boulevard connection is not complete. The future base network is shown in Figure 3-1.

Figure 3-1: Future Base Transportation Network

The North Shore Area Transit Plan was completed in 2012 after extensive consultation with the North Shore Communities. Through this process, a network vision was identified to serve projected land use on the North Shore and achieve a 50 percent increase in transit mode share from 10 to 15 percent for the entire North Shore by 2040. The plan included improved frequent transit service to Maplewood. The vision for transit is shown in Figure 3-2.

Although improvements in service are subject to funding and planning by TransLink, the Maplewood Village Centre Transportation Plan included accommodation for improved transit. Frequent transit proposed in the North Shore Area Transit Plan would require a route to ‘turn around’ since frequent service is expected to terminate in or near Maplewood. Potential transit routes along Forester Street, Old Dollarton Road, and Riverside Drive would provide direct connections within the Village and support this proposed service. Because these improvements have been identified through the North Shore Area Transit Plan, the Future Base Transportation network includes some improvements to transit service to Maplewood.
Two potential alignments through Maplewood have been identified for the North Shore Spirit Trail. There is an opportunity to provide regional walking and cycling connectivity through the inclusion of this east-west trail in the plan for the future Maplewood; however, because there is no committed alignment, it has not been included within the future base network.

Key features of the base network include:

- Two new accesses to the proposed Innovation District from Dollarton Highway - The western access is connected to Dollarton Highway near the current International School access and would also provide egress from the District’s fire facility. The second access would be located further east and form a ‘T’ intersection with the roadway forming the first access. This eastern access would also allow for connections to the industrial uses within Innovation District via smaller local roads.

- More frequent transit service along Dollarton Highway with potential for service on Riverside Drive / Old Dollarton Road and / or Forester Street. In this condition, Maplewood becomes part of the FTN.

- No road network geometry improvements to existing intersections or corridors.

- No new trails, sidewalks, or cycling connections.
This section summarizes the results of the assessment of future conditions on the future base network, as described above. The assessment is presented by mode, followed by an overall summary of issues and opportunities.

3.5 FUTURE BASE TRANSPORTATION NETWORK ASSESSMENT

With growth in both the background traffic and traffic generated by the Maplewood Village and Innovation District, the volume of traffic along all major arterials in the study area is expected to increase beyond the typical capacity per lane for urban arterials. If no improvements are made to the network, either as new links, increased capacity, or intersection improvements, traffic delays, queues, and volume / capacity ratios are expected to increase beyond acceptable levels. The assessment of the future base indicated a number of areas where improvements are required to support efficiency, reliability, and livability.

Traffic volumes along Mount Seymour Parkway and Riverside Drive are expected to exceed 1,000 vehicles per lane per hour; traffic operations on signalized urban arterials typically start to degrade between 900 and 1,200 vehicles per lane per hour, depending on the other characteristics of the roadway. Due to lack of network redundancy and high westbound movements at Mount Seymour Parkway, Riverside Drive is still expected to be used by commuter traffic to access Dollarton Highway to the south. Slow traffic in urban centre is acceptable, however, there are no alternate routes for traffic to access Dollarton Highway (or on to Ironworkers Memorial Bridge) when Mount Seymour Parkway is congested. Intersection improvements at locations with delays or v/c ratios that exceed the accepted level can be expected to reduce delay, but may not be sufficient to address growing volumes. These volumes indicate that some improvement measure is needed – this could be the addition of a new north-south link to better distribute traffic between Mount Seymour Parkway and Dollarton Highway east of Riverside Drive, or additional east-west capacity along Mount Seymour Parkway.

The lack of network redundancy in the future base is expected to result in other issues and challenges. Any incident that disrupts traffic along Riverside, Mount Seymour Parkway, or Dollarton Highway could be expected to have significant network implications due to the lack of alternative routes and the high level of recurring congestion. During times of congestion, it is likely that drivers would continue to use Plymouth Drive to travel between Mount Seymour Parkway and Dollarton Highway, worsening conditions for residents along this collector road.

The future base traffic volumes and results of the traffic analysis are shown in Figure 3-3. There are a number of intersections that are expected to operate with LOS of ‘E’ or ‘F’ in the morning or
afternoon peak periods. These are largely focused on intersections along Mount Seymour Parkway and Dollarton Highway.

Delays along Mount Seymour Parkway are expected to increase with increasing traffic volumes on through movements and turning movements. The intersection LOS is expected to be ‘F’ in the morning peak hour at Mount Seymour Parkway intersections with Berkley Road, Riverside Drive, and Browning Place. The intersection of Mount Seymour Parkway and Riverside Drive is also expected to experience an LOS ‘F’ in the afternoon peak hour. High peak period, peak direction volumes and high left turn volumes result in a number of movements with LOS ‘F’ and v/c greater than 0.9 and queues in this condition can be expected to exceed the available storage in some locations.

Traffic volumes are expected to increase along Dollarton Highway, with more traffic using this route following changes to the Highway 1 interchanges. Some major intersections with Dollarton Highway are expected to operate at LOS ‘F’ during morning and afternoon peak hours and several minor movements along Dollarton Highway are expected to experience increasing delays with LOS ‘E’ or ‘F’. At Old Dollarton Road & Dollarton Highway, the LOS ‘F’ in the morning peak hour is linked to high the southbound right turn volume, which conflicts with the high westbound through movement.

Figure 3-3: Future Base Traffic Volumes and Operations
A District fire station and training facility is expected in the Innovation District. This facility would have access to Dollarton Highway via the proposed new roadway; however, there would be no access to Mount Seymour Parkway from the fire hall in case of an incident on Dollarton Highway.

3.5.2 FUTURE BASE WALKING ASSESSMENT

The future base case assumes limited improvements to the walking network with an increase in land use density. This means that the issues identified in the existing condition will continue to exist under this scenario; however, the walking environment can be expected to be worsened by the expected increase in traffic volumes through the Village Centre. Not providing improvements to the pedestrian realm can also be expected to reduce the attractiveness of walking as a mode of transportation and limit the potential for mode shift to walking from driving.

3.5.3 FUTURE BASE CYCLING ASSESSMENT

The future base case assumes no improvements to cycling facilities with an increase in land use density. Similar to walking, the issues identified in the existing condition will continue to exist under this scenario and cycling comfort and safety can be expected to decrease as traffic volumes increase. Not providing improved cycling facilities, and especially AAA facilities, can be expected to reduce the attractiveness of cycling as a mode of transportation.

3.5.4 FUTURE BASE TRANSIT ASSESSMENT

Based on the North Shore Area Transit Plan, the frequency of service to Maplewood can be expected to increase. This should lead to increased transit mode share as trips destined within the North Shore and over the Ironworkers’ Memorial Bridge shift to transit. The potential for transit mode share may be limited by incomplete or poor walking connections, which are essential for transit accessibility.

Increased traffic volumes and delay on Riverside Drive, Mount Seymour Parkway, and Dollarton Highway are expected to negatively impact transit in the future base. Without transit priority measures, delays to vehicles also delay transit. This can result in reduced transit efficiency and reliability.

To maximize the effectiveness of the investment in transit service, it should be supported by strong walking and cycling infrastructure and transit supportive infrastructure, such as improved stops and local services, which is not provided in the future base network.
3.6 FUTURE BASE CONDITIONS SUMMARY - ISSUES AND OPPORTUNITIES

The key issues and opportunities for future base scenario are illustrated in Figure 3-4. In the absence of road network and intersection improvements, delays to traffic, goods movement, and transit are expected to increase at major intersections within the study area. These delays will be especially significant along Mount Seymour Parkway and Dollarton Highway, and can be expected to impact both local and regional traffic. Infrastructure and services for non-auto modes of transportation are poor, with missing connections for cycling and walking. The only connection between the Innovation District and Village Centre is via Dollarton Highway, which can be expected to add additional traffic through the Village Area and on intersections along Dollarton Highway.

**Figure 3-4: Future Base Issues and Opportunities Map**
4. OPTIONS ANALYSIS

The transportation network as a whole must be planned and designed to address existing issues, achieve the vision and objectives of the community, and to respond to proposed changes in land use. This means identifying desire lines for different modes of transportation and identifying corridors to accommodate the anticipated demand. The Innovation District in the east part of the study area is currently undeveloped – i.e. with limited existing transportation infrastructure. Before finalizing the overall transportation network needs and recommended improvements to existing infrastructure, it is important to identify, at a high level, the recommended connections to be made by new corridors and to determine the shape of the overall network at a high level.

This study evaluated three high level options to determine which overall transportation network provided the greatest benefit to the Maplewood Area. The three options were chosen as a way to determine the impact of different network configurations, focusing on the number of north-south roadway connection between Mount Seymour Parkway and Dollarton Highway. These connections have been identified by the District and other agencies through previous work, including in the 2011 Transportation Plan and 2011 Road Network Study. The summary of the options are as follows:

- **Option 1** is an ‘improved status quo’ condition with some local improvements for all modes of transportation, but no new north-south connections.
- **Option 2** provides a new connection along the Berkley Road alignment, which had been identified through previous work as required to support development in the undeveloped lands east of Maplewood Village. This option also includes all the local multimodal improvements included in Option 1.
- **Option 3** includes the Berkley Road connection, as well as a second north-south connection at Seymour Boulevard, which had been identified by the District, as well as by MoTI in previous work. This option also includes all the local multimodal improvements included in Option 1.

This section presents a description of each network option, evaluation of the impact of each option on different modes of transportation, and presentation of a recommended option. The options were evaluated based on the 2031 horizon with full build-out of the proposed land uses in the study area.

4.1 OPTION 1 - LIMITED NEW NETWORK

Option 1 includes improvements to the existing intersection geometries, sidewalks, cycling network, and transit facilities. This option represents the improvements recommended as part of the *Maplewood Village Transportation Plan* (Urban Systems, 2013).

Key features of this network include:

- **Improvements at Mount Seymour Parkway & Riverside Drive**: Additional northbound and southbound left turn storage lanes with protected/permitted phasing, along with longer
northbound and southbound right turn lanes. Dual westbound left turn lanes with dual
southbound receiving lanes. Additional eastbound merge lane on east approach to improve
northbound right turn operation.

- **Spicer Road Connection**: Spicer Road connected between Amherst Avenue and Riverside
  Drive as a 2-lane local road with sidewalks on the north side.
- **Windridge Drive Extension**: Building on the recommendation from the previous *Maplewood
  Transportation Plan* (Urban Systems, 2013), Windridge Drive was assumed to be extended to
  Riverside Drive as one-way local road with sidewalks and bicycle lane.
- **Munster Avenue Extension**: Two-way local road with right-in/right-out operation at Riverside
  Drive with sidewalk on one side of the road.
- East-west off-street pathway between Riverside Drive and the Innovation District
- Continued off-street pathway along Dollarton Highway from the west access to Berkley Road.

### 4.1.1 OPTION 1 GOODS MOVEMENT AND DRIVING ASSESSMENT

Mount Seymour Parkway, Dollarton Road, and Riverside Drive continue to serve both regional and
local traffic in this option. Riverside Drive remains the only north-south arterial and accommodates
both regional traffic seeking the most efficient route for east-west travel or to the Ironworkers
Memorial Bridge, as well as trips destined for Maplewood. This ‘shortcutting’ through the village
centre can be expected to result in traffic volumes on Mount Seymour Parkway and Riverside Drive
that exceed the typical capacity per lane for arterial roads. Some of these volumes can be
accommodated with the intersection improvements identified above; however, proposed road
widений and intersection improvements have property impacts and some may not be consistent
with other goals of a walkable community.

In Option 1, traffic volumes on both Mount Seymour Parkway and Riverside Drive exceed 1,000
vehicles / lane / hour; traffic operations on signalized urban arterials typically start to degrade
between 900 and 1,200 vehicles per lane per hour, depending on the other characteristics of the
roadway. On Riverside Drive, this would translate to a near-continuous stream of traffic during peak
periods, with queues entering, leaving, and within the community. Due to lack of network redundancy
and high westbound movements at Mount Seymour Parkway, Riverside Drive is still expected to be
used by commuter traffic to access Dollarton Highway to the south. Slow traffic in urban centre is
acceptable, however, there are no alternate routes for traffic to access Dollarton Highway (or on to
Ironworkers Memorial Bridge) when Mount Seymour Parkway is congested. In this condition, it is
likely that drivers would continue to use Plymouth Drive to travel between Mount Seymour Parkway
and Dollarton Highway during times of congestion, worsening conditions for residents along this
Collector Road.

The results of the traffic operations analysis in 2031 for morning and afternoon peak periods are
illustrated in **Figure 4-1**. Overall, with the proposed improvements in place, most of the intersections
in the study area operate at LOS ‘E’ or better in both peak periods. The proposed improvements
have addressed may of the issues identified in the Future Base condition, although some delays
remain.
These include:

- **Mount Seymour Parkway & Browning Place** – LOS ‘F’ during the morning peak period, where increasing east-west traffic volumes leave few gaps for northbound and southbound stop-controlled movements.

- **Riverside Drive & Windridge Drive** – LOS ‘F’ during the afternoon peak period, when high northbound and southbound volumes on Riverside Drive leave few gaps for eastbound and westbound stop-controlled movements.

- **Old Dollarton Road & Dollarton Highway** – LOS ‘F’ during the morning peak period when high southbound right turn volumes conflict with high westbound through volumes. The high southbound right turn volumes are related to regional traffic using Riverside Drive and Old Dollarton to travel between Mount Seymour Parkway and Dollarton Road.

![Figure 4-1: Option 1 Traffic Volumes and Operations](image)

As in Existing Conditions and Future Base, many of the delays in Option 1 are associated with traffic travelling through the Maplewood Village instead of to the Maplewood Village; this traffic is not contributing to the economic health local businesses, but is expected to detract from the overall livability, vibrancy, and walkability within heart of the community.
Within the community, some key improvements are expected to reduce unnecessary traffic circulation and, which in turn is expected to reduce conflicts and improve safety and efficiency. The addition of a one-way egress from Seymour River Place to Riverside Drive along the Windridge Drive alignment and the Munster Avenue Extension will improve circulation in this part of the community. The current network does not provide an effective egress, which requires vehicles to make a ‘u-turn’ at Seymour River Place and Heritage Park Lane. This creates potential conflict with other vehicles, bicycles, and pedestrians.

A sensitivity analysis that investigated the effects of higher residential density in the Innovation District indicated that higher residential density resulted in additional delay along Old Dollarton Road. The increased delay did not result in more intersections or movements with LOS ‘E’ or ‘F’. Details of the analysis are included in Appendix D.

4.12 OPTION 1 WALKING ASSESSMENT

Option 1 assumes major improvements to the walking network at Village Centre as well as the Innovation District. All missing sidewalk connections are expected to be completed with new sidewalks at locations such as Old Dollarton Road, Seymour River Place, Riverside Drive and Front Street.

The assessment of the walking network in the future base condition resulted in the following key findings:

- New pedestrian connections from Seymour River Place and Munster Avenue to Riverside Drive allows residents shorter and more direct routes to the bus stops along Riverside Drive.
- The off-street pathway east of Riverside Drive connects the Village Centre directly to the Innovation District and provides a better connection to the community and recreational facilities east of Berkley Road. This route can further develop into the proposed Spirit Trail connection and serve as a major east-west regional walking and cycling connection for the North Shore.
- Old Dollarton Road between Riverside Drive and Dollarton Highway is still expected to have shortcutting traffic. Without reduction in traffic volumes along this route or further traffic calming, pedestrian-vehicle conflicts are expected at the intersections.

4.13 OPTION 1 CYCLING ASSESSMENT

Option 1 provides cycling connection within Village Centre as well as improved east-west connections. These include bicycle lanes, protected bicycle facilities, and off-street pathways. As a result, residents have more options to travel to surrounding neighbourhoods as well as recreational trails.

The assessment of the cycling network in the future base condition resulted in the following key findings:
Maplewood Village Transportation Study Update

- New east-west connection along Windridge Drive and Muster Avenue from Seymour River Place towards east of Riverside Drive provides continuous route. This allows cyclists that aren’t comfortable riding on Mount Seymour Parkway to travel on either a local road with much lower volumes or an off-street facility without having to travel south and continue at Dollarton Highway.
- The off-street pathway west of Seymour River Place connecting Seymour Greenway Trail provides resident direct connection to recreational trail.
- The direct north-south connection on Riverside Drive allows cyclists to travel without having to navigate through neighbourhood streets.
- New east-west connections also result in potential crossing locations along Riverside Drive. A pedestrian half-signal should be considered at these crossing locations to improve connectivity.

4.14 OPTION 1 TRANSIT ASSESSMENT

Similar to the future base, traffic delays on Riverside Drive, Mount Seymour Parkway, and Dollarton Highway are still expected to negatively impact transit in Option 1. Without transit priority measures, delays to vehicles also delay transit. This can result in reduced transit reliability.

Improved walking infrastructure will improve access to transit and may enhance the mode-shift effects of increased transit frequency.

4.15 OPTION 1 CONDITIONS SUMMARY – ISSUES AND OPPORTUNITES

Under Option 1, capacity expansions at key intersections mitigate some of the traffic performance challenges noted in the Future Base conditions; however, traffic congestion and increasing delay is still expected at major intersections along Mount Seymour Parkway. Further, without a north-south connection parallel to Riverside Drive, commuter traffic is still expected to shortcut through Riverside Drive. This results in traffic volumes along Riverside Drive that exceed the expected capacity and may result in high delays, queuing, and reduced quality of life. The walking and cycling environment is expected to improve throughout the Village Centre due to the new pedestrian and cycling facilities; however, the environment for pedestrians and cyclists will be negatively impacted by traffic volumes, especially on Riverside Drive. East-west off-street pathways would encourage more residents of Maplewood to walk and cycle. Transit is susceptible to delays at the intersection operations along Old Dollarton Road. The issues and opportunities for Option 1 are summarized in Figure 4-2.
4.2 **OPTION 2 - NEW BERKLEY ROAD CONNECTION**

Option 2 builds on the improvements identified in Option 1 with a north-south connection along Berkley Street connecting Mount Seymour Parkway and Dollarton Highway.

Key features of this network in addition to the improvements identified in Option 1 include:

- **Berkley Road Connection**: Berkley Road to be extended south of Mount Seymour Parkway as a two-lane roadway connecting Mount Seymour with Dollarton Highway. The intention is to create a new multi-modal connection that will improve network connectivity and redundancy, reduce short-cutting, and improve operations, while providing access to the new development in the Innovation District. For the purposes of this analysis, no changes to the existing intersection geometry were assumed. Accesses along Berkley Road are expected to be limited to one or two public roadways, with most of the accesses to the industrial development assumed to be provided from the east-west collector road. Sidewalks on both sides of Berkley Road with protected bicycle facilities. There is potential for future transit along Berkley Road.
and it is expected to serve as a goods movement access for local businesses and to accommodate the regional movement of goods and services.

- **Road A**: A new two-lane road with protected cycling and sidewalks that will provide access between Berkley Road and development within the Innovation District.

### 4.2.1 OPTION 2 GOODS MOVEMENT AND DRIVING ASSESSMENT

The addition of Berkley Road to the Maplewood network provides a second north-south connection between Mount Seymour Parkway and Dollarton Highway, which has a number of positive outcomes for mobility. The new connection provides better connectivity to the Innovation District and District Fire Hall, with a direct connection to both Mount Seymour Parkway and Dollarton Highway; this is expected to improve the reliability of the network during times of congestion or where there is an incident on the arterial road network. It is also expected to reduce congestion and delay, and to improve the livability of the Maplewood Village.

Berkley Road also increases the north-south capacity of the network and diverts regional traffic from Riverside Drive. This results in traffic volumes on Riverside Drive that are less than 750 vehicles per direction in the peak hour, which is well within the capacity of the roadway. As a result, traffic delay throughout the Maplewood Village is significantly lower than in other options. At the same time, diverting traffic to Berkley Road allows for the more effective usage of overall network capacity, with forecast traffic volumes on Mount Seymour Parkway less than 1,800 vehicle per direction in the peak hour. Traffic volumes on Dollarton Highway are expected to increase west of Berkley Road, where there is sufficient capacity. The traffic reassignment also reduces the volume of traffic turning into and out of the Maplewood Village from Dollarton Highway, which reduces conflicting movements and resulting delay.

The results of the traffic operations analysis in 2031 for morning and afternoon peak periods are illustrated in Figure 4-3. Overall, all intersections in the option operate with LOS ‘D’ or better in the morning and afternoon peak hours, with the exception of Mount Seymour Parkway and Browning Place during the morning peak period, where increasing east-west traffic volumes leave few gaps for northbound and southbound stop-controlled movements. It should be noted that because of the effects of Berkley Road in diverting westbound traffic to Dollarton Highway, the delay to southbound vehicles at Browning Place should be similar to existing conditions. Northbound traffic at this intersection can be expected to increase due to development; however, these vehicles can choose to use Riverside Drive to avoid the potential delay at Browning Place.
A sensitivity analysis that investigated the effects of higher residential density in the Innovation District indicated found that higher residential density resulted in additional delay along Old Dollarton Road. The increased delay did not result in more intersections with LOS ‘E’ or ‘F’. Details of the analysis are included in Appendix D.

4.2.2 OPTION 2 WALKING ASSESSMENT

Option 2 provides additional north-south walking connection along Berkley Road. As a result, residents and employees in the Innovation District as well the communities north of Mount Seymour Parkway have more options for walking connections.

The assessment of the walking network in the future base condition resulted in the following key findings:

- Reduced traffic volumes within Village Centre due to less shortcutting traffic reduces pedestrian conflicts with vehicles.
- Cycling facilities along Berkley Road provides additional north-south connection and potential alternate route to connect to Spirit Trail.
4.2.3 OPTION 2 CYCLING ASSESSMENT

Option 2 provides additional north-south cycling connection along Berkley Road. As a result, residents and employees in the Innovation District as well the communities north of Mount Seymour Parkway have more options for cycling connections.

The assessment of the cycling network in the future base condition resulted in the following key findings:

- Reduced traffic volumes within Village Centre due to less shortcutting traffic reduces cyclist conflicts with vehicles.
- Cycling facilities along Berkley Road provides additional north-south connection and potential alternate route to connect to Spirit Trail.

4.2.4 OPTION 2 TRANSIT ASSESSMENT

Traffic volumes and delays on Riverside Drive, Mount Seymour Parkway, and Old Dollarton Road are expected to reduce due to a shift of traffic onto Berkley Road. The reduced delays along the intersections on all these roadways benefit the transit buses on these routes.

The assessment of the transit network in the future base condition resulted in the following key findings:

- Operation within the Maplewood Village Centre is expected to be less impacted by traffic than in the future base condition and Option 1.
- Providing a new north-south connection between Dollarton Highway and Mount Seymour Parkway improves the suitability of the network for future transit expansion and reduces the potential cost of providing a higher level of transit coverage to Innovation District residents and businesses.

4.2.5 OPTION 2 CONDITIONS SUMMARY – ISSUES AND OPPORTUNITES

Under Option 2, traffic volumes are balanced between the intersections along Mount Seymour Parkway and Dollarton Highway. The shortcutting traffic through Village Centre is expected to travel along Berkley Road connection. However, this causes increase in volumes on Dollarton Highway west of Berkley Road and therefore this section of Dollarton Highway must be considered for widening. Due to Berkley Road providing north-south connection, regional travellers as well as traffic destined to the Innovation District have more connectivity options. The new walking and cycling facilities along Berkley Road also provides options to the residents in the Innovation District as well the communities north of Mount Seymour Parkway. Transit routes along Old Dollarton Road and
Riverside Drive benefit from the reduced delays due to the shift in traffic volumes away from Village Centre. The issues and opportunities for Option 2 are summarized in Figure 4-4.

![Figure 4-4: Option 2 Issues and Opportunities Map](image)

### 4.3 OPTION 3 – NEW BERKLEY ROAD CONNECTION PLUS NEW SEYMOUR BOULEVARD CONNECTION

Option 3 builds on the improvements identified in Option 2 with a new north-south connection along connecting Mount Seymour Parkway and Dollarton Highway at Seymour Boulevard. This connection is part of the long-term network associated with the Highway 1 Lower Lynn Interchange improvements and would also provide service to future potential development on the Squamish Nation land east of highway 1. The connection itself is outside of the scope of this study; the assessment presented here considers the potential impacts of a new connection at this location on transportation within Maplewood.

Key features of this network in addition to the improvements identified in Option 2 include:

- **Seymour Boulevard Connector**: Seymour Boulevard was assumed to be a new four lane connection extending south from its current alignment at Mount Seymour Parkway to connect to the Highway 1 interchange at Main Street / Dollarton Highway. Evaluation using the regional
Maplewood Village Transportation Study Update

The travel demand model indicated that the introduction of the Seymour Boulevard Connector is not expected to influence traffic patterns in the Maplewood Village Centre.

4.3.1 OPTION 3 BASE GOODS MOVEMENT AND DRIVING ASSESSMENT

The new connection between Mount Seymour Parkway and Dollarton Highway west of Maplewood is expected to have minimal effect on the traffic assignment within Maplewood Village or between Mount Seymour Parkway and Dollarton Highway within the study area. Because of this, the results of the traffic were unchanged from what was presented as part of Option 2 and can be referenced in that section.

Changes resulting from this third connection are expected to be localized in the area around the Highway 1 Lower Lynn Interchanges.

4.3.2 OPTION 3 WALKING ASSESSMENT

Option 3 does not include changes to the walking environment within the study area beyond what is included in Option 2. As such, the findings for the walking assessment are consistent to those summarized under Option 2.

4.3.3 OPTION 3 CYCLING ASSESSMENT

Option 3 does not include changes to the transit environment within the study area beyond what is included in Option 2. As such, the findings for the cycling assessment are consistent to those summarized under Option 2.

4.3.4 OPTION 3 TRANSIT ASSESSMENT

Option 3 does not include changes to the transit environment within the study area beyond what is included in Option 2. As such, the findings for the cycling assessment are consistent to those summarized under Option 2.

4.3.5 OPTION 3 CONDITIONS SUMMARY – ISSUES AND OPPORTUNITES

Since the benefit of the improvements due to Option 3 is expected outside of the Maplewood area, no additional issues or opportunities are expected to arise within the study area.
4.4 OPTION EVALUATION

4.4.1 GUIDING PRINCIPLES FOR EVALUATION

A number of guiding principles were established to help inform the assessment of the improvement option for each mode as summarized below.

Connectivity and Network Resilience

- Provide a transportation network that allows for effective and efficient local and regional multi-modal movements and allows for the efficient distribution of traffic.
- Reduce the impacts of incidents and non-recurrent congestion on the road network.
- Allow for effective emergency egress and access to emergency services.

Driving and Goods Movement

- Where possible, provide satisfactory level of service for all vehicle movements at all Village Centre intersections. Maintain LOS ‘D’ or better for all signalized intersections with v/c ratios for all individual movements less than or equal to 0.90. Where providing these movements would negatively impact liability, pedestrian scale, or walkability, carefully consider the balance of urban intersection design and reduction in vehicle delay. Minimize delays at unsignalized intersections.
- Divert regional traffic from shortcutting through local roadways and improve the efficiency of the overall network.
- Keep dangerous good route away from densifying Village Centre. Consider reassigning dangerous route away from Riverside Drive.
- Reduce impacts of traffic delays on goods movement vehicles and liability impacts of goods movement (noise, air quality, etc.) on the Village Centre.

Pedestrians

- Improve permeability and redundancy with respect to connections. Greater connectivity though safe and appealing pedestrian facilities and crossings along the appropriate desire lines to connect pedestrians within Village Centre as well as from surrounding neighbourhoods to the Village Centre.

Cyclists

- Provide a robust bicycle network connection for local and regional travel. Implement bicycle connection within the Village Centre to get people moving between major destinations which also connects to regional bicycle network and/or recreational trails.
- Provide bicycle facilities that will attract new riders of all ages and abilities (AAA). These routes are generally separate from traffic in order to increase rider comfort and safety. One of the key intents of providing AAA facilities is to attract the ‘interested but concerned’ target market.
to start cycling; this is typically the largest potential cycling demographic in a community. As this interested but concerned demographic contains a wide variety of individuals— including more vulnerable user groups such as seniors, children etc., - providing safe and comfortable cycling facilities for them means promoting cycling for all ages and abilities.

Transit

- Improve the reliability and efficiency of transit service.
- Facilitate intermodal travel. Provide convenient, multiple, and direct pedestrian access points to and from the bus stops.
- Create an exceptional customer service experience for transit passengers. This includes developing liveable communities and supportive cycling and pedestrian infrastructure around transit centres.

4.4.2 OPTION COMPARISON

Based on the guiding principle above, the evaluation of all options was carried out by finding merits and demerits in each criterion as discussed in the previous sections. Each option was compared with the base scenario to determine the qualitative improvements provided for each criterion. Table 4-1 summarizes the results of the evaluation.
### Table 4-1: Option Comparison

<table>
<thead>
<tr>
<th></th>
<th>Future Base</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Connectivity / Network Resilience</strong></td>
<td>Lack of network connectivity and resilience is a significant issue.</td>
<td>Lack of network connectivity and resilience is a significant issue.</td>
<td>Additional north-south connection improves network connectivity and resilience for all modes.</td>
<td>Third north-south connection provides benefits to regional traffic.</td>
</tr>
<tr>
<td></td>
<td>Limited ability to efficiently distribute traffic to reduce delays.</td>
<td>Limited ability to efficiently distribute traffic to reduce delays.</td>
<td>Additional connectivity to emergency services provides secondary routes in case of incident or emergency.</td>
<td>Additional north-south connection improves network connectivity and resilience for all modes.</td>
</tr>
<tr>
<td></td>
<td>Limited connectivity and capacity to reroute traffic and emergency services during road network incidents</td>
<td>Limited connectivity and capacity to reroute traffic and emergency services during road network incidents</td>
<td>Traffic able to redistribute to make most effective use of network.</td>
<td>Additional connectivity to file hall provides secondary routes in case of incident or emergency.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improved east-west connectivity.</td>
<td>Traffic able to redistribute to make most effective use of network.</td>
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<td></td>
<td></td>
<td></td>
<td>Improved east-west connectivity.</td>
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<tr>
<td><strong>Driving and Goods Movement</strong></td>
<td>Substantial delay at key intersections and movements.</td>
<td>Intersection improvements and local connections address some delay and circulation issues.</td>
<td>Delays reduced significantly and most fall within acceptable thresholds.</td>
<td>Similar to Option 2.</td>
</tr>
<tr>
<td></td>
<td>Imbalanced traffic volumes between arterial roads.</td>
<td>Significant traffic imbalances remain.</td>
<td>Traffic volumes are more balanced on major arterials.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Significant delays remain.</td>
<td>Improved goods movement options &amp; efficiency.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Reduced traffic volume on Riverside Dr.</td>
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</tr>
<tr>
<td><strong>Walking</strong></td>
<td>Lack of local connectivity.</td>
<td>Good local connectivity.</td>
<td>Good local connectivity.</td>
<td>Similar to Option 2.</td>
</tr>
<tr>
<td></td>
<td>Limited regional connectivity.</td>
<td>Good regional connectivity.</td>
<td>Good regional connectivity.</td>
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<td>Limited regional connectivity.</td>
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<td>Delays to transit resulting from congestion.</td>
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<td>Reduced delays to transit.</td>
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<td>Improved transit supportive infrastructure.</td>
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- ○ Less Favourable
- ◐ Somewhat Less Favourable
- ● Neutral
- ◕ Somewhat Favourable
- ● ● More Favourable

**Recommended**
Maplewood Village Transportation Study Update

As seen in Table 4-1, Option 2 is recommended as preferred option. Although Option 3 provides the same benefit as Option 2, the north-south connection doesn’t provide any additional benefits to Maplewood area. Some of the key benefits of Option 2 compared to other options are:

- Provides network redundancy in case of incidents.

- Enhanced regional traffic operation through the provision of a new connection at Berkley Road. This new connection will provide choices to regional traffic. Along with the improvements at the Lower Lynn Interchanges, a north-south connection provides a choice to regional travellers to connect to the Ironworkers Memorial Bridge, to Highway 1 westbound, or to other destinations on the North Shore.

- The Berkley Road connection, will also deter commuter traffic from travelling through the Maplewood Village or through other areas to shortcut during times of congestion. This reduces the total traffic volumes in the village core and removes any requirement for wider roadways and intersections within Maplewood Village. This, in turn, benefits other modes by reducing pedestrian and cyclist conflicts. Transit buses will also benefit from reduced delays at these locations.

- The reduced delays at major access intersections and increased network redundancy also improves the ability to egress in emergency situations and ensures access to emergency services.
The Maplewood neighbourhood will be served by a multimodal transportation network, which will be constructed over time in conjunction with changes in land development. Safe and efficient connections for walking and cycling will contribute to neighbourhood livability and vibrancy and encourage residents, employees, and visitors of all ages to choose active modes of transportation for short trips. Convenient, accessible, and frequent transit service to connect destinations within Maplewood and between Maplewood and other communities will support mode choice, reduce vehicle trips, and improve the accessibility of the neighbourhood for all people.

The recommended network was developed following the results of the option evaluation and with input from the development of the Implementation Plan, as well as parallel work to determine local design opportunities and constraints. As noted in the previous section, Option 2, was brought forward for additional development and analysis. Option 2 included a suite of improvements originally identified in the 2013 Transportation Study, as well as the proposed connection between Mount Seymour Parkway and Dollarton Highway at Berkley Road. The recommended network identifies specific facilities for each mode of transportation. These facilities have been chosen because they work towards achieving the overall goals identified for Maplewood Village and the Innovation District. They provide connections that are appropriate for the planned land use and intent for each roadway corridor, and are consistent with the findings of the technical work. The proposed intersection configurations were analysed based on the expected traffic volumes, neighbourhood design guidelines, and transportation design objectives and constraints. This resulted in renewed recommendations for intersection configurations throughout the study area.

The final recommended multimodal transportation network for Maplewood is shown in Figure 5-1. This recommended network accommodates the expected growth in Maplewood area supporting the planned land uses while providing mobility for all modes. It also supports the District’s broader goals for the Maplewood Area. The proposed network includes a number of new connections, as described below:

- **Berkley Road** – a new north-south roadway connecting Mount Seymour Parkway and Dollarton Highway intended to provide an efficient connection for traffic, as well as AAA cycling facilities, sidewalks, and to be a future transit connection. Because through movement are prioritized on Berkley Road, this report recommends a limited number of intersections and no driveways be permitted onto Berkley Road.

- **Road A** – a new connection between Dollarton Highway and Berkley Road and to provide access to the proposed development. It is intended to have a protected bicycle lane and sidewalks to provide access to developments within the Innovation District.

- **Road B** – a new roadway connecting Road A to the developments in the east part of the Innovation District. This roadway is a neighbourhood bikeway with sidewalks on both sides.
Maplewood Village Transportation Study Update

- **Spicer Road** – this new connection could be added in the long term with redevelopment or following changes to local rail infrastructure. It is planned to have sidewalk on the north side and an urban trail on the south side.

- **Seymour River Place Extension** – the extension of Seymour River Place will connect Front Street to Old Dollarton Road. It is planned to be a shared street with access for all modes. Traffic volumes on this street should be slow moving and yield to pedestrians. Traffic movements at the intersection with Old Dollarton Road will be limited to right-in / right-out to reduce conflicts at the off-set intersection with the existing Seymour River Place.

- **Munster Avenue Connection** – this new roadway will connect the existing Munster Avenue to Riverside Drive at a right-in / right-out intersection.

- **New Laneways** – the recommended plan includes a number of new laneways to provide access to existing and new developments. A new lane connecting Seymour River Place to Riverside Drive along the Windridge Drive alignment will provide a one-way exit to improve local circulation. Laneways north and south of Old Dollarton Road will provide access to loading and parking for new developments in order to improve the function and vibrancy of Old Dollarton Road.
More detailed descriptions of the form and function of the recommended network for each mode of transportation is provided in the sections below. A summary of the purpose and priorities of the recommended transportation network, including recommended pedestrian, cycling, and transit facilities is also summarized in a table format in Appendix E.

5.1 RECOMMENDED WALKING NETWORK

The recommended walking network combined urban trails and sidewalks to connect key destinations, to create a walkable, accessible community, and to support the vibrancy and livability of the neighbourhood. Maplewood will maintain its connection to nature with urban trails that transition from key destinations through both active and natural parks, providing a conduit for both travel and recreational activities. The Spirit Trail will extend along Windridge Drive to complete the connection from east of the Seymour River to Deep Cove. Wide sidewalks in the Village core will allow for an active street and support street-facing retail businesses and the artisan industrial area. Special street treatments for key streets in the Village Centre will create a shared sense of place and support economic activity and walking as a mode of transportation.

Key elements of the recommended walking network include:

- Eliminating gaps in the sidewalk network by providing sidewalks on both sides of most roadways, including along Riverside Drive and Old Dollarton Road.

- New pedestrian connections from Seymour River to Riverside Drive via Windridge Drive and Munster Avenue, Windridge Drive will provide shorter and more direct routes to transit stops and other destinations. A new half-signal crossing of Riverside Drive at Windridge Drive will facilitate safe crossing.

- The extension of Seymour River Place to Front Street is envisioned as a shared space and will provide a lively urban environment that can be closed for festivals and other pedestrian-focused events. This shared street will have designated space for pedestrians in addition to its role as a shared space.

- Changes to Dollarton Highway between Old Dollarton Road (east) and Road A will include sidewalks on both sides of the road that are separate from cycling facilities to improve the functionality of the roadway for both users.

- Old Dollarton Road east of Riverside Drive will be a High Street with dedicated sidewalks, but it will also be at the same grade across the roadway to allow for integration of users across the space.

- The Spirit Trail will extend from the Seymour River Crossing to Seymour River Place and to Windridge Drive to provide a continuous connection to Deep Cove.

- A connection between Riverside Drive north and Riverside Drive south along the Spicer alignment will include an urban trail on the south side and a sidewalk on the north side. This
recommendation is expected to be developed over the long term and may connect to a future crossing of the Seymour River.

- The off-street pathway east of Riverside Drive will connect the Village Centre directly to the Innovation District and provides a better connection to the community and recreational facilities east of Berkley Road.

- Wherever possible, the sidewalk will be separated from the roadway by boulevards and / or parking pockets to improve safety and comfort for pedestrians.

- Midblock connections provided by pedestrian crosswalks to facilitate efficient travel and shorten walking distances, including along lanes and between developments.

5.2 RECOMMENDED CYCLING NETWORK

The recommended cycling network within Maplewood will make travel by bicycle accessible for users of all ages and abilities. The planned network focuses on protected bicycle lanes to link key destinations along busier roads, supported by a network of urban trails and neighbourhood bikeways along lower volume roadways. This will support shorter distance trips within Maplewood, and especially between the Innovation District and the Village Centre. Old Dollarton Road is proposed as a strong east-west connection and will connect with improved regional cycling facilities along Dollarton Highway at Berkley Road. The Spirit Trail and other urban trails will provide parallel routes to facilitate cycling off-road in the natural environment.

Key elements of the recommended cycling network include:

- Multiple east-west connections of different types to suit cyclists of all ages and abilities through different trip types connecting to a range of destinations. This will include:
  - existing bicycle lanes on Mount Seymour Parkway.
  - existing shared pedestrian / cycling trails on Dollarton Highway. East of the new Berkley Road, separate walking and cycling facilities are expected.
  - new protected bicycle lanes on Old Dollarton Road.
  - extension of the Spirit Trail along Windridge Drive, including a half signal to facilitate safe crossing of Riverside Drive.
  - new urban trail from the Village Centre at Riverside Drive and Old Dollarton Road to the Innovation District.
  - long-term urban trail connection along the Spicer Road alignment, including a potential future crossing of the Seymour River.
New north-south connections, including protected bicycle lanes from Mount Seymour Parkway to the Village Centre along Riverside Drive and protected bicycle lanes from Mount Seymour Parkway to Dollarton Highway along Berkley Road.

The Spirit Trail will extend from the Seymour River Crossing to Seymour River Place and to Windridge Drive to provide a continuous connection to Deep Cove. A new half-signal crossing of Riverside Drive at Windridge Drive will facilitate safe crossing.

5.3 RECOMMENDED TRANSIT NETWORK

The District is working with TransLink to provide frequent, and eventually, rapid transit service to Maplewood. The transportation network and public realm must be designed to accommodate high quality, high frequency transit. The recommended pedestrian and road infrastructure in the Maplewood Area supports transit by facilitating frequent and future rapid transit in the village core. Old Dollarton Road and Berkley Road will accommodate TransLink’s requirements for transit service and plan for a high-quality stop that can accommodate an articulated bus with near-by services.

5.4 RECOMMENDED ROAD NETWORK

The vehicle network in and through Maplewood prioritizes efficient east-west through movements, discourages short-cutting, and provides appropriate local access for private vehicles and the movement of goods and services. Recommended improvements balance mobility needs with the goals of a walkable, livable community, as well as design opportunities and constraints, including property limitations. The recommended network is illustrated in Figure 5-2.

The recommended network supports improved efficiency and greater balance of traffic between Mount Seymour Parkway and Dollarton Highway and greater overall network resiliency. The addition of the Berkley Road extension allows regional traffic to find the most efficient route through this area and also provides network redundancy in case of incidents or emergencies. This new link also reduces the traffic demand on Riverside Drive, focusing regional trips on Berkley Road and reducing congestion through Maplewood Village.

The peak hour, peak direction volume on Mount Seymour Parkway is expected to be approximately 1,800 vehicles per hour in 2031. This is within capacity of a four-lane road where urban intersections have sufficient accommodation for turning movements. Proposed improvements along Mount Seymour Parkway include longer left turn storage lanes to allow for longer queues to enter Maplewood, reducing conflict with through movements, and dual westbound left turn lanes from Mount Seymour Parkway to Berkley Road, which will support the efficient redistribution of traffic and provide access to the Innovation District. Dollarton Highway is expected to accommodate 2,000 vehicles per hour in the peak hour, peak direction, which is within the expected capacity of this four-
lane road. The recommended network includes expansion of Dollarton Highway to four lanes to the intersection with Road A, which will facilitate efficient regional travel.

As noted above, one of the key features of the recommended network is its approach to prioritizing east-west through movements, while providing appropriate local access and achieving a walkable, livable community. As part of this approach, the recommended network does not include dual westbound left turn lanes at the intersection of Riverside Drive and Mount Seymour Parkway, which had been recommended in the 2013 Transportation Study and carried into the options analysis as part of this study. Instead, dual westbound left turn lanes are provided at Berkley Road and Mount Seymour Parkway and dual southbound right turn lanes are provided at Berkley Road and Dollarton Highway. This provides for efficient regional movement of people and goods and deters regional traffic from Maplewood Village. This approach also reduces crossing distances and property impacts along Riverside Drive and allows for the prioritization of east-west traffic on the Mount Seymour Parkway corridor. The dual southbound right turn lanes at Berkley Road and Dollarton Highway will also limit queue lengths in front of the Fire Hall, reducing the risk that the Fire Hall driveway is blocked during times of congestion.

Within the community, a number of proposed changes are expected to increase efficiency, limit queues, and make the most effective use of public space. Riverside Drive will be converted to a three-lane cross-section from Windridge Drive to Front Street, which will allow for left turn lane where appropriate and maintain two continuous through lanes northbound and southbound. The conversion of Old Dollarton Road/Seymour River Place intersection into a four-way stop controlled intersection will provide better access to vehicles on Seymour River Place and reduce conflict and delay, while augmenting the walking and biking friendly environment. Due to the alignment of Seymour River Place through this intersection, the south approach is also proposed to be limited to right-in/right-out operation only. It is noted that the four-way stop configuration could cause some delay to the planned B-line operation along this corridor (up to 21 seconds during the PM peak), however, the two-way stop controlled configuration creates long delays to the southbound movement (79 seconds, LOS F during the PM peak).
The results of the analysis traffic operations on the recommended network in the forecast 2031 traffic condition for the morning and afternoon peak hours are shown in Figure 5-3. Overall, all of the signalized intersections and most of the stop controlled intersections in the study area are expected to operate with LOS of ‘D’ or better in both morning and afternoon peak periods. The results of the analysis show that growth in Maplewood can be accommodated with key improvements to the transportation network, as described above.

The intersection of Browning Place & Mount Seymour Parkway is expected to operate at LOS ‘F’ due to the effect of high east-west through volumes on stop-controlled operation for northbound and southbound traffic. The residents trying to make a left turn from Browning Place onto Mount Seymour Parkway are expected to experience significant delays during both peak periods. These movements experience LOS ‘F’ in existing conditions and are expected to continue to be challenging independent of the development of Maplewood. The recommended network mitigates some potential impacts of background traffic growth at this location because it results in the lowest eastbound and westbound volumes when compared to the other options that do not include the Berkley Road extension.

The northbound left turn movement at Mount Seymour Parkway and Riverside Drive is expected to experience LOS ‘F’ in the morning peak hour. This results from the prioritization of eastbound and westbound through movements within the recommended approach to signal phasing and timing. The three lane cross-section of Riverside Drive is expected to provide sufficient space for queuing for
northbound traffic making this movement and the impacts of this delay are limited to fewer than 170 vehicles in the morning peak hour.

The analysis was based on conservative (high) traffic volume forecasts, which did not allow a substantial decrease of the auto mode share. Investments in walking, cycling, and transit can be expected to reduce the percentage of trips made driving alone and reduce traffic volumes, which, in turn could be expected to further reduce delay at intersections throughout the study area.
The recommended network achieves the mobility goals for Maplewood identified in the Implementation Plan and the Official Community Plan. The analysis summarized in this report shows that the proposed changes in land use can be accommodated while also creating a transportation network that provides a number of key benefits. Some of these benefits are:

- A walkable neighbourhood with improved pedestrian connectivity and urban streetscape that will increase transportation choice, facilitate use of public space, and increase the livability of the neighbourhood. An accessible, pleasant, comfortable, and safe pedestrian environment will support access to transit and reduce reliance on private vehicles for trips within Maplewood Village and to the surrounding area.

- A network of urban trails, including an off-street path between Village Centre and the Innovation District will provide important connections for residents to experience nature and enjoy their community, as well as to use active modes for both local and regional trips. The extension of the Spirit Trail along Windridge Drive will provide more options to connect to major regional walking and cycling facilities. This trail will also encourage the cyclists to travel east-west that aren’t comfortable riding on the on-street bike lanes along Mount Seymour Parkway.

- Improved bicycle facilities make cycling an attractive option for all ages and abilities. Improved east-west as well as north-south connections with encourage people from within and outside of Maplewood to consider cycling.

- A new north-south roadway with efficient connections to Mount Seymour Parkway and Dollarton Highway will make regional travel more efficient and reliable, improve connectivity to the proposed Fire Hall and to the Innovation District, and will reduce traffic volumes and congestion in Maplewood Village.

The development of the proposed Maplewood Area is an opportunity to revisit the transportation infrastructure within and surrounding Maplewood to ensure it supports the overall transportation goals for the District, as well as the local goals and objectives set out for Maplewood. With the recommended network in place, the proposed land use can be accommodated within the study area with an increase in overall multi-modal mobility and reliability.
MAPLEWOOD VILLAGE
FUNCTIONAL DESIGN REPORT

FINAL REPORT
April 27, 2018
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Maplewood Village Transportation Functional Design Report
Final Report

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Date issued: April 27, 2018
Project No.: 1333.0040.03

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DEFINITIONS

95th Percentile Queues – Length of vehicle queue that has a 5% chance of being exceeded during the peak hour.

All Ages and Abilities (AAA) – Infrastructure designed to make cycling comfortable and safe for ages ranging from 8-80 and from beginners to advanced.

Computer Aided Design (CAD) – drafting program used to develop road design drawings.

Class D Cost Estimate – Preliminary or Order-of-Magnitude Cost Estimate for proposed project. Typically used for long term capital plans for municipalities. 40% contingency used.

Curb Bulges – Curb extensions at intersections and midblock crossings that reduce crossing distance of roadway for pedestrians.

Design Criteria – Developed criterion used to design each roadway. Typically includes lane uses, widths, design vehicle, alternative uses (bicycles, pedestrians, etc.).

Design Vehicles – Anticipated largest vehicle that will regularly use the infrastructure or roadway.

District of North Vancouver (DNV, District) – District Municipality located on the north shore of the Metro Vancouver region in British Columbia.

Functional Design – Geometric focus designed to accommodate specified users and design vehicles.

Greater Vancouver Regional District (GVRD) – Political body and service provider that oversees the Greater Vancouver region’s 21 municipalities, one Treaty First Nation, and one electoral area including the District of North Vancouver.

Innovation District – The subarea of the Maplewood Area defined in the Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines. This new district is located on the eastern border of the Maplewood Area in the currently undeveloped lands.

Maplewood Area – Area defined in the Official Community Plan and Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines. Located south of Mount Seymour Parkway and east of the Seymour River.

Maplewood Village – Area defined in the Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines (area surrounding Seymour River Place and Old Dollarton Road).


Maplewood Village Transportation Study Update (2017) (Transportation Study Update) - Document summarizing the transportation planning and traffic engineering completed to identify the recommended transportation network for the Maplewood Area.

Medium Single Unit (MSU) – Heavy vehicle without articulation, with dimensions as defined by TAC Geometric Design Guidelines for Canadian Road (2017) Chapter 2.

National Association of Transportation City Officials (NACTO) – North American association that publishes design guidelines related to complete streets and pedestrian, cycling, and transit facilities.
**Official Community Plan (OCP)** – District wide document that sets the direction for future growth and change in the District.

**Protected Bicycle Lane** – A bicycle lane that is physically separated from traffic by a curb or median.

**Road A** – Proposed new road to connect Berkeley Road to Dollarton Highway and provide access to development within the Innovation District.

**Road B** – Proposed new road connected to Road A intended to provide access to development within the Innovation District

**Signal Timing** – The time-based distribution of right-of-way at a signalized intersection.

**Transportation Association of Canada (TAC)** – National association that develops roadway guidelines for Canada.


1.0 INTRODUCTION

The Maplewood Area is located east of Seymour River between Mount Seymour Parkway and Dollarton Highway in the District of North Vancouver (District). This location is illustrated in Figure 1-1. On November 6, 2017, District Council approved the Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines (2017) (Implementation Plan). The Implementation Plan identifies the vision, principles and policies for the Maplewood Area and will guide local development. To achieve the vision requires substantial improvements to the existing transportation network, as well as the development of new multimodal corridors. This report documents the functional design of the transportation network, which outlines the approach to the development of an improved transportation network, confirms feasibility, and identifies property requirements, as well as constraints.

The Maplewood Village Transportation Study Update (2017) (Transportation Study Update) was developed in parallel with the Implementation Plan in order to identify a recommended transportation network in the Maplewood Area, including within the Maplewood Village Centre and the proposed Innovation District. The recommendations identified infrastructure to continue to develop a more livable and walkable Village Centre, improved bicycle connections that accommodate all ages and abilities, convenient access to transit, accommodate goods movement, and a balanced transportation system.

1.1 EXISTING CONTEXT

The Maplewood area is divided into three sub-areas: the Maplewood Village, which is the existing community surrounding Riverside Drive; the Undeveloped Lands (future Innovation District) in the east side of the study area; and Dollarton Highway Light Industrial, south of Dollarton Highway. Approximately 1,000 people live in Maplewood today in a mix of older, more affordable rental townhouses and low-rise apartments, and a blend of old single-family homes. Maplewood is a significant North Shore employment node, with established industrial and commercial uses to the south and with established and recently developed business parks along the new Dollarton Highway. Over 220 businesses are located here and contribute significantly to the District’s job base and economy. The area includes — and is bordered by — significant green spaces and ecological areas including Maplewood Flats Conservation Area.

The Maplewood Area is bounded by two east-west four lane arterial roads: Mount Seymour Parkway to the north and Dollarton Highway to the south. These roads connect the east of the District to the west, to Highway 1, and on to the remainder of the Lower Mainland and beyond. They are important east-west links for many residents in Maplewood and in eastern areas of the District. A north-south arterial, Riverside Drive, bisects the village centre. This is the only north-south arterial between the eastern edge...
of the District (where Mount Seymour Parkway and Dollarton Highway connect) and Highway 1 and carries through traffic travelling between the two east-west arterials, as well as local traffic.

The existing developed area is served by a network of local roads with a mix of sidewalk facilities. Cycling facilities are limited throughout the area. The undeveloped lands are largely unconnected, with Berkley Road terminating around 100 m south of Mount Seymour Parkway. The roadway characteristics in the study area are illustrated in Figure 1-2. A more detailed description of the existing road network, including characteristics and anticipated performance in a future base condition are summarized in the Transportation Study Update.

Figure 1-2: Existing Transportation Network

1.2 STUDY SCOPE & METHOD

This functional design included the design of transportation corridors within the Maplewood Area, including both roadways and trails. Design decisions were made collaboratively with the District based on the intent of the roadway, modes to be accommodated, and property constraints. The project included the following parts:

A. Develop Design Criteria – the project team proposed design criteria and typical cross-sections for each roadway based on the findings of the Transportation Study Update. These were presented to the District and refined based on feedback.

B. Develop Options and Determine Impacts – this phase included the development of proposed alignments for the transportation network in the future Innovation District. It also included the
development and assessment of options at key intersections and the identification of constraints and trade-offs.

C. Preliminary Functional Work – this phase included finalization of cross-sections, alignments, and right-of-way widths, as well as preliminary design work for intersections.

D. Cost Estimates – the study team prepared cost estimates for roadway and trail segments.

E. Final Functional Design and Functional Design Report – in this phase, the functional design for roadways and key trails were finalized. The work confirmed the feasibility of the proposed infrastructure, including confirming vertical profiles where changes were planned, and identifying property constraints. In this phase, other infrastructure, such as lanes and other trails were added at a conceptual level.

This report is the culmination of this work. It is organized into the following sections:

1. Introduction – outlines the study context and scope.
2. Planned Transportation Network – provides information about the principles that guided the development of the functional design, including key decision making about lane configuration, the cycling network, transit facilities, cross-section requirements, intersection control and configuration, and other elements that were developed through the Implementation Plan and Transportation Study Update.
3. Design Approach and Criteria – summarizes the sources of overall design criteria, as well as the approach and specific criteria used for Maplewood. This section provides general information about how criteria were applied to different types of roadways, as well as more specific examples of how criteria deviated from the standard or where specific approaches were used to accommodate the District’s needs or address key constraints.
4. Functional Design – presents the plans and cross-sections
5. Issues and Impacts – summarizes issues and impacts uncovered through the functional design. Some of these must be investigated further by others through other processes.
6. Class ‘D’ Cost Estimates- presents the cost estimates associated with the proposed infrastructure.
7. Closing – concludes the report.

This report also includes a number of Appendices that are instrumental to understanding the functional design and are intended to be used as a guide for the development of future work, including detailed design. The Appendices include:

- Appendix A: Summary of Roadway Characteristics
- Appendices B – R: These appendices provide the design criteria, design notes, functional design plans, profiles (where applicable), cross-sections, and cost estimates for each section of roadway.
2.0 PLANNED TRANSPORTATION NETWORK

In 2015, the District undertook a new study to develop an Implementation Plan for the Maplewood Area and Village Centre. This plan is intended to implement the direction set out in the Official Community Plan (OCP) and include design guidelines for the area. The intent of the Implementation Plan is to create a community with diverse employment opportunities and community amenities, a walkable core, and access to the natural environment, which remains connected to the urban streetscape. As part of the development of the Implementation Plan the District held a design charrette to develop a concept plan for the Maplewood Village and surrounding area. The process included representation from the design and planning team, community stakeholders that represent a variety of interests, and District staff. The concept plan was presented to the public and modified by technical experts and District staff to create a ‘refined concept’ plan for Maplewood. This ‘refined concept’ is shown in Figure 2-1 and was used as a basis for the development of the recommended transportation network.

The plan shows the concentration of commercial / mixed use and live work land use around Old Dollarton Road and Front Street in the Village Heart, an ‘artisan industrial’ area around Old Dollarton Road east of Riverside Drive, and a diverse mix of residential uses through the neighbourhood. It also shows an emerging Innovation District with light industrial & commercial businesses and employee dedicated housing in the east portion of the neighbourhood along with a new District fire facility.

Through the work completed and documented in the Transportation Study Update and the functional design, this network proposed as part of the ‘refined concept’ and illustrated in Figure 2-1, the transportation network evolved. This included changes to road alignments in the Innovation District, the conceptual location of trails throughout the study area, and the locations and connectivity of lanes. This work also developed the network in more detail, including identifying intersection configurations, identifying a AAA cycling network, located potential future bus stops and stations, and identifying high priority pedestrian areas where wider sidewalks are required. More detail about the transportation planning and traffic engineering work required to develop the recommended network can be found in the Transportation Study Update. The recommended network is illustrated in Figure 2-2 and a high-level summary of proposed features and improvements is included below. A detailed summary of the planned features of each roadway is included in Appendix A.

The recommended network has been developed to meet the functional transportation needs of the Maplewood Area based on the information available at the time of the analysis. It is provided for guidance. Changes to land use density and / or composition will require additional transportation planning, traffic engineering, and design work to confirm the continued relevance of the original recommendations. As plans and proposals within the neighbourhood evolve and detailed designs are developed for individual blocks and corridors, alternative solutions may be explored. These alternatives may be warranted and / or desirable but should be subject to rigorous consideration of the constraints and objectives outlined in this report.
Figure 2-1: Maplewood Concept Plan

Figure 2-2: Recommended Transportation Network with Improvements
The overall network for driving and goods movement prioritizes east-west through movements past Maplewood in order to decrease overall delay in regional transportation, including delay to trucks and buses. Specific improvements that contribute to this approach include the following:

- Developing Berkley Road – this roadway was designed as a two-lane roadway with full separation of vehicles from cyclists and pedestrians, no access to private development, a limited number of intersections, and no on-street parking. The median provides sufficient space to develop future left turn lanes and the design accommodates future four-laning of the roadway. This will result in a new connection with limited delay. The roadway adds capacity to the overall network, as well as network redundancy. Drivers travelling east-west will be able to choose the most efficient route without incurring delay on Riverside Drive. To support this, dual westbound left turn lanes are recommended at the intersection of Berkley Road and Mount Seymour Parkway and dual southbound right-turns are recommended at the intersection of Berkley Road and Dollarton Highway.

- Widening Dollarton Highway. The recommended network includes widening Dollarton Highway to four lanes from the east end of the Study Area to the existing four lane section. This will increase the capacity of Dollarton Highway and allow traffic to be more effectively distributed between Dollarton Highway and Mount Seymour Parkway, reducing overall delays.

- Updating signal timings and configurations to prioritize east-west movements on Dollarton Highway and Mount Seymour Parkway. The *Transportation Study Update* recommended that signals on Dollarton Highway and Mount Seymour Parkway prioritize east-west travel and accept increasing delay on north-south roadways and for left turn movements. In conjunction with the prioritization of east-west movements, the study found that some changes to the intersection configuration at Mount Seymour Parkway and Riverside Drive were required to avoid undesirable impacts throughout the network. As a result, the recommended improvements at this intersection include separate northbound left, northbound through, and northbound right lanes, with a merge lane on Mount Seymour Parkway for the northbound right turn movement.
  - The northbound right turn movement is anticipated to be around 500 vehicles per hour in the afternoon peak in the future horizon (2031); without an exclusive lane, this volume is expected to result in 95th percentile queues that exceed 200 m, which would result in a queue that regularly extends past Windridge Drive.
  - A short northbound left turn lane separates northbound left and northbound through vehicles. This reduces the likelihood that northbound through vehicles queue behind northbound left vehicles, which have a permissive movement and must yield to southbound traffic. This further limits delays and minimizes the total anticipated northbound queue. In the recommended configuration, northbound queues are not expected to block the intersection with Windridge Drive.

The recommended improvements discourage through movements in the Maplewood Village through the following mechanisms:

- Metering traffic entering Maplewood from westbound Mount Seymour Parkway. The recommended network includes a single westbound left turn lane from Mount Seymour Parkway to Riverside Drive. The recommended signal timings de-prioritize this movement, resulting in a delay that exceed a LOS ‘F’. In combination with the dual westbound left turn lanes from Mount Seymour Parkway, this results in an overall delay of approximately 600 vehicles per hour, which is expected to be blocked at Windridge Drive.
Seymour Parkway to Berkley Road, little to no through traffic is expected to use Riverside Drive. The Transportation Study Update found that the existing left turn lane was a sufficient length to accommodate the anticipated 95th percentile queues for the recommended network in future horizon (2031).

- Providing a planted boulevard along Riverside Drive and limit the number of lanes – the recommend cross-section on Riverside Drive includes two through lanes, a painted median, and planted boulevards. The small cross-section combined with the planted boulevards is expected to encourage slower traffic movements and reduced through traffic.

- Developing a pedestrian-oriented environment in the Village Core – the recommended design includes curb bulges and frequent pedestrian crossings of Dollarton Highway. On-street parking is expected to protect pedestrians and increase the activity on the street, discouraging through traffic.

The recommended transportation network included a new network to serve the Innovation District and proposed District Fire Hall. This network was developed based on the following principles:

- Providing excellent connectivity to the proposed Fire Hall and Fire Training Site. The District is planning a Fire Hall and Fire Training Site north of Dollarton Highway and west of the existing school site. General access to the proposed site is planned to be taken from the terminus of Old Dollarton Road. Egress for fire trucks is proposed to be directly to Berkley Road. This requires signal pre-emption at the egress and at the intersection with Dollarton Highway and Berkley Road. It also indicates a no stopping zone at the egress. The recommended configuration of the intersection of Dollarton Highway and Berkley Road includes a southbound right turn lane and a southbound shared right / left turn lane. This increases the capacity of the southbound movement and decreases the likelihood that the Fire Hall egress will be blocked during times of congestion.

- Providing two connections to Dollarton Highway in order to improve circulation for all modes.

- Restricting direct access to Berkley Road in order to reduce delay and conflict. All access to development parcels in the Innovation District is expected to be taken from Road A or Road B.

- Locating the intersection of Road A and Dollarton Highway at a new signalized intersection at the existing access to the Pacific Environment Science Centre to reduce the number of accesses to

\[\text{Note that the proposed approach is contingent on the development of Berkley Road, including the provision of dual westbound left turn lanes from Mount Seymour Parkway to Berkley Road. This approach will not operate as recommended without the new capacity and network redundancy provided by Berkley Road. If Berkley Road is not constructed as proposed, dual westbound left turn lanes will be required at the intersection of Mount Seymour Parkway and Riverside Drive. This will require additional property. Also note that there is a possibility of increased high-risk maneuvers at permitted left-turns that are subjected to increased delay. The Transportation Study Update did not find westbound left turn collisions to be problematic at this intersection historically. If collisions and / or near-misses increase at this intersection, the District may consider eliminating the permitted phase and operating this intersection with a protected-only westbound left phase.}\]
Dollarton Highway. This will allow for a single signal controlled intersection and is expected to reduce conflict and the risk of collisions along Dollarton Highway.

- Maintaining the desired design criteria, as discussed later in the report.

Transit accommodation in the recommended network include ensuring both conventional and articulated buses can complete turning movements along potential routes, as well as planning for potential future stops and stations. These improvements include:

- Ensuring that the following intersections can accommodate both conventional and articulated buses:
  - Old Dollarton Road and Dollarton Highway
  - Old Dollarton Road and Seymour River Place (east-west movements only)
  - Old Dollarton Road and Riverside Drive
  - Riverside Drive and Dollarton Highway
  - Berkley Road and Dollarton Highway
  - Berkley Road and Road A
  - Dollarton Highway and Road A.

- Ensuring that both conventional and articulated buses can navigate Road A, which has multiple adjacent curved sections.

- Identifying locations that can accommodate a future bus stop or station with storage for up to three articulated buses on Old Dollarton Road west of Riverside Drive and on Berkley Road west of Road A.

Note that further improvements may be warranted to accommodate rapid transit. This may include transit priority lanes, changes to proposed signal timings, or changes to intersection control. In particular, a four-way stop is currently recommended at the intersection of Old Dollarton Road and Seymour River Place. The District may consider maintaining this intersection as two-way stop control for north-south traffic in order to reduce the delay to east-west transit.

The recommended trail network builds on the existing trail network to connect key destinations. The recommended network includes the following improvements:

- Extension of the Spirit Trail along Windridge Drive
- A new wide multi-use pathway along Spicer Road.
- A new wide multi-use pathway connecting the Village Centre to the Innovation District.
- Trails connecting the existing upper level trails and Windridge Drive to the core of the Innovation District.

The cycling network includes a strong local network suitable for cyclists of all ages and abilities with good connections to the surrounding regional cycling network. The trail network proposed above is one part of this network, which also includes a number of cycle tracks. Cycle tracks are recommended along
Riverside Drive, Old Dollarton Road, Berkley Road, and Road A, as well as the portion of Dollarton Highway where widening is recommended.

A system of lanes is recommended to provide direct access to parcels in order to limit parking and loading / unloading activities on the roadway network. These lanes are also intended to improve circulation.

The transportation planning and traffic engineering work resulted in a recommended network, which includes both new facilities and improvements to existing roadways. The next section explores the design criteria and design approach used to develop these facilities.
3.0 DESIGN APPROACH & CRITERIA

This section provides an overview of the approach taken to the design of the transportation network in the Maplewood Area, as well as the general design criteria. This section also identifies corridors or locations that required an alternative approach or deviation from the common criteria. More specific information for each corridor can be found in Appendices B through R, as follows:

- Appendix C - Amherst Avenue
- Appendix D - Berkley Road
- Appendix E - Bridge Street
- Appendix F - Dollarton Highway
- Appendix G - Forester Street
- Appendix H - Front Street
- Appendix I - Mount Seymour Parkway
- Appendix J - Munster Avenue
- Appendix K - Old Dollarton Road
- Appendix L - Riverside Drive
- Appendix M - Road A and Road B
- Appendix N - Seymour River Place
- Appendix O - Spicer Road
- Appendix P - Windridge Drive
- Appendix Q - Trails
- Appendix R - Laneways

3.1 BASE PLANS

To facilitate a review of the road network, including long-term needs and potential phasing options, base plans were generated for the neighbourhood using information provided by the District. Information provided included cadastral mapping, such as property lines, approximate street light and utility pole locations, and orthophotos for background images. The orthophotos were used to determine the approximate locations of existing curbs, sidewalks, and other obstructions. It is noted that the information provided cannot be guaranteed for accuracy but is generally suitable at this level of functional design and cost estimating. A detailed survey is recommended to be completed during the detailed design phase of these projects and that the information and assumptions provided in this report be confirmed with the District prior to finalizing the design.

3.2 ASSUMPTIONS AND EXCLUSIONS

This exercise was done to provide the District with a geometric design that incorporates the District’s vision for the Maplewood Area and will guide future redevelopment projects in the area and determine potential property acquisitions. As such, many aspects that are reviewed during the design phase of developments or are typically included in detailed design were excluded from this exercise. These assumptions and exclusions are:
• Focused exclusively on roadworks design and property impacts. Impacts to utilities due to redevelopment or due to roadway reconstruction were not included. It is understood that the District is considering those impacts internally;
• Did not include detailed drainage design information. While vertical alignments were reviewed for a few key roads, they were examined primarily from a sight distance and design grade perspective. Drainage was considered only at a high-level;
• Grading impacts on adjacent properties were assumed to be considered during the redevelopment stage and therefore was not assessed during this exercise. Impacts were assumed to stop at the property line, with any slopes are retaining walls required to meet original ground assumed to be accommodated on private property or outside of the road right-of-way;
• Existing landscaping was not accounted for in this exercise. It was assumed that impacts on existing landscaping will be determined during the redevelopment stage. Proposed landscaping costs were included in the cost estimate for budgeting purposes;
• A GVRD trunk sanitary sewer crosses the new Berkley Road alignment south of the Road A intersection. The design of Berkley Road will add approximately 0.5m of fill onto the GVRD trunk sanitary sewer. The District and GVRD should review the impacts of this additional fill on the trunk sanitary sewer prior to the roadway being built; and
• No street lighting analysis was conducted for the roadways. Allowances for street lighting were included in the cost estimates.
3.3 REFERENCE DESIGN GUIDELINES

The following design guidelines were consulted to develop the design criteria for the functional design:

- District of North Vancouver Development Services Bylaw (2017)

3.4 ROADWAY CHARACTERISTICS

Horizontal and vertical alignments, lane widths and other cross-sectional elements, and intersection designs were developed using the above guidelines. Specific roadway classifications and intents for each roadway were developed through Transportation Study Update and are explored in the previous section and documented in more detail in Appendix A. The majority of roadways were designed to accommodate 50km/h posted speeds, as indicated for by the British Columbia Motor Vehicle Act for roadways within a municipality where the municipality has not designated another speed via bylaw. Reduced design speeds were used in commercial areas and on local roads or where topography posed challenges (Road A). These design speeds should be adopted by municipal bylaw to be used as posted speeds throughout the neighbourhood.

Turning movements were evaluated for key intersections during the development of these functionals designs. Major arterials such as Dollarton Highway, Mount Seymour Parkway, Riverside Drive and Berkley Road and roadways in industrial areas, including Road A, were developed using semi-trucks (WB-20) as the design vehicle. Proposed transit routes such as Old Dollarton Road and Road A were confirmed to accommodate both conventional and articulated buses. Local roads and pedestrian focused areas were designed using a standard medium delivery truck (MSU). In all cases, it was assumed that the design vehicle can use multiple lanes without crossing the centreline, including straddling the through lane when making a right turn. It was assumed that MSU vehicles may cross the centreline when turning between local roads and lanes.

The following subsections present a discussion of the general characteristics that informed the design. Additional notes are included where specific roadways differ from the standards.

3.4.1 Alignments

For most of the roadways in the Maplewood Area, the horizontal and vertical alignments were maintained as per existing. Horizontal and vertical alignments were conceptually developed for the new roadways, Berkley Road, Road A, and Road B on the east end of the neighbourhood. The overarching design criteria for horizontal and vertical alignments are summarized in Table 3-1 and Table 3-2.

Berkley Road was developed using a 50km/h design speed while Road A and Road B were developed using a 40km/h design speed. The horizontal alignments worked in conjunction with the vertical alignments to provide appropriate grades and sightlines. The Berkley Road alignment was developed to connect Mount Seymour Parkway and Dollarton Highway. The horizontal alignment was created with the two large curves to maximum the length of the roadway due to the grade differences between the two roadways. Several horizontal alignments options were developed and reviewed during the process but
the preferred option provided the best solution for sight distances and proposed grading. Road A intersects Berkley Road and Dollarton Highway in a location that provides intersection spacing that is greater than 200 m, per TAC guidelines for minor arterial roadways. Curves were designed to a 40km/h design speed to help slow down traffic and keep the main through traffic on Berkley Road. Road B was development to bisect the proposed development but has flexibility to be revised as necessary to suit the proposed development desires. Windridge Drive was also designed to a 40km/h design speed as the curves were tightened up to provide a slower roadway. The recommended posted speed for Windridge is 30km/h because of its nature as a residential roadway and potential for shortcutting traffic.

**Table 3-1: Minimum Horizontal Curves by Design Speed**

<table>
<thead>
<tr>
<th>Design Speed (km/h)</th>
<th>Minimum Horizontal Radii (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DNV/ MMCD (2014)</td>
</tr>
<tr>
<td>50</td>
<td>85</td>
</tr>
<tr>
<td>40</td>
<td>N/A</td>
</tr>
<tr>
<td>30</td>
<td>25</td>
</tr>
</tbody>
</table>

Most vertical alignments were maintained for existing roadways. During the development of the Berkley horizontal alignment, the vertical alignment was reviewed to confirm that the max grade attained was 8%. The proposed alignment was determined because it provided adequate horizontal sight distances and curves and achieved grades lower than the maximum desired of 8%. Further, grades were reduced to less than 4% through intersections. The vertical alignment was developed to follow existing ground as closely as possible to minimize the amount of earthworks needed during construction.

Similarly, with the Road A alignment was developed in order to meet horizontal sight distance requirements and achieved grades lower than the maximum desired. A slope of less than 5% was achieved for Road A with this proposed alignment.

The existing vertical alignment along Riverside Drive at Windridge Drive was reviewed and decreased to help increase sight distances due to the crest on the roadway. The vertical alignment was reduced at Windridge Drive by approximately 1m in elevation. This resulted in the vertical alignment on Windridge Drive to increase to 8% which ended up being the determining factor for the Riverside Drive vertical alignment.
Table 3-2: Maximum Vertical Profile Grade by Roadway Classification

<table>
<thead>
<tr>
<th>Road Classification</th>
<th>Maximum Vertical Profile Grade (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DNV/ MMCD (2014)</td>
</tr>
<tr>
<td>Arterial (Major and Minor)</td>
<td>8</td>
</tr>
<tr>
<td>Collector</td>
<td>10</td>
</tr>
<tr>
<td>Local</td>
<td>12</td>
</tr>
<tr>
<td>Laneways</td>
<td>12</td>
</tr>
</tbody>
</table>

Note that all work completed in this memo assumes that Dollarton Highway has been raised to a design minimum elevation of 4.7m from the planned future berm alignment at the Old Dollarton Road east end termination until it meets existing grade along Dollarton Highway east of the conservation area. The roadway was developed a minimum 0.5% grade to provide adequate drainage therefore the maximum elevation of Dollarton Highway at the crest is approximately 5.8m.

3.4.2 Intersection Design

Intersection locations have been maintained where they currently exist wherever possible. Intersection configurations were determined through the Transportation Study Update and integrated into this project. Where possible, small changes to the intersection design or the approach alignment were made to improve turning movements or operations while minimizing property impacts.

Curb returns radii were developed based on the design vehicle chosen for each of the roadways. Standard radii and project specific design vehicles are included in Table 3-3. These were used as a basis for the design; however, the new TAC Geometric Design Guide does not specify minimum radii at intersections. Instead, it indicates that radii are to be developed using the preferred design vehicle. Key intersections were reviewed using the design vehicle to confirm that crossing distances were minimized while providing safe access for the design vehicle.
Table 3-3: Curb Return Radii and Design Vehicle by Road Classification

<table>
<thead>
<tr>
<th>Road Classification</th>
<th>Minimum Curb Return Radii (m)</th>
<th>Design Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DNV (2017)</td>
<td>Project</td>
</tr>
<tr>
<td>Arterial</td>
<td>7.5</td>
<td>WB-20</td>
</tr>
<tr>
<td>Arterial (transit)</td>
<td>7.5</td>
<td>WB-20/Articulated Bus</td>
</tr>
<tr>
<td>Collector</td>
<td>6</td>
<td>WB-20/DNV Fire Truck</td>
</tr>
<tr>
<td>Collector (transit)</td>
<td>6</td>
<td>DNV Fire Truck/Articulated Bus</td>
</tr>
<tr>
<td>Local (Residential)</td>
<td>6</td>
<td>DNV Fire Truck</td>
</tr>
<tr>
<td>Local (Commercial)</td>
<td>6</td>
<td>DNV Fire Truck</td>
</tr>
<tr>
<td>Lane</td>
<td>6</td>
<td>MSU</td>
</tr>
</tbody>
</table>

Pedestrian and cyclist safety was prioritized at each of the intersections. Crossings were provided on all legs of each intersection unless there was specific rational to eliminate one or more crossings. For pedestrian crossings, standard crossings were used at controlled intersections and zebra crossings were used at uncontrolled intersections. A standard protected treatment for cyclists and curb extensions were provided wherever possible in order to make the crossings safer. In general, crossing distances were minimized as possible for safety.

New intersections on Dollarton Highway for Berkley Road and Road A were spaced a minimum 200m from each other. The location of the intersection of Dollarton Highway and Road A was selected to align with the existing access to the Pacific Environmental Science Centre, while the intersection with Berkley Road was aligned to straddle the existing property line between the District’s future Fire Hall site and the existing International school, with approximately 12.5 m of Berkley road accommodated on the District’s property. This design minimizes impacts to the environmentally sensitive area that identified through other work. The Road A intersection was also placed on the straight portion of Berkley to provide the required sight distances to the intersection.

The access to the Canlan Ice Sports Complex was shifted south to produce a greater offset intersection with Burr Place. This allowed a left turn lane to be included in the design to the sports complex.

### 3.4.3 Turn Lanes and Storage Lengths

Left turn lanes have been included where recommended in the *Transportation Study Update*, with storage lengths for all turn lanes designed based on the 95th percentile queue. Storage lengths are shown on the functional design drawings in Appendices B through R.

### 3.4.4 Traffic Control & Crossings

Generally, locations of existing traffic signals were maintained during the development of the functional design. New traffic signals were added at the following locations:

- Dollarton Highway and Road A
- Dollarton Highway and Berkley Road (full replacement of existing signals)
• Windridge Drive and Riverside Drive (new pedestrian and cyclist half signal)
• Berkley Road at Fire Hall Access (new signal with pre-emption, possible pedestrian half signal depending on location of pedestrian destinations)

All signalized intersections will include pedestrian phases and it is recommended that bicycle signals are installed included where bicycle lanes are present. The District is to determine the exact requirements for each signal.

3.4.5 Access Requirements

Accesses to private properties have been restricted, consolidated, or removed from arterial roads wherever possible. The District requires new developments to provide accesses from laneways.

3.5 CONSTRAINTS

There were a number of constraints that limited the overall design. These must be considered in any future development of detailed designs or proposed changes to the functional design identified here:

• Property constraints – throughout the area, it was assumed that where properties that have recently been developed, additional land is not easily available. In these locations property lines were held constant, resulting in some locations with constrained cross-sections and others with slight adjustments to the horizontal alignment. In some cases, road realignment would have been desirable to improve intersection off-sets; however, property requirements made changes infeasible.
• Environmentally sensitive areas – two environmentally sensitive areas influenced the design:
  o It was determined that no widening would be permissible at the northeast corner of the intersection of Mount Seymour Parkway and Riverside Drive for social and environmental reasons.
  o The District identified environmentally sensitive areas that are undevelopable within the undeveloped lands. The roadway network in that area was designed to minimize impacts to these areas.
• BC Hydro transmission line poles – there is an existing east-west transmission line along Old Dollarton Road. It was assumed that moving these transmission lines is not feasible at this time due to cost. The design worked to reduce or eliminate the need to relocate these poles. Should the transmission lines be removed, the design should be revisited to remove curved sections from the protected bicycle path and ensure parking locations are optimized.
4.0 FUNCTIONAL DESIGN

This section provides the functional design resulting from the criteria and approach summarized above. It is presented in two sections: first is an introduction to the typical sections and second is the plan drawings.

4.1 TYPICAL SECTIONS

The typical sections for each roadway are included in Appendices B through R. Most standard roadway elements are included for each roadway cross section including travel lanes, parking (where required or able), cycle tracks, landscaped boulevards and sidewalks. Travel lanes vary from 3.0m to 3.7m as per guidelines set out by the District and TAC and the intended use of the roadway, as outlined in Table 4-1. Guiding principles that were applied to the development of cross-sections include:

- Narrower lanes are regulated to local, low speed roadways while wider lanes are used on transit routes, industrial roads, and arterials;
- Parking lanes are included on commercial focused streets and local streets but have been removed where property is limited and on arterial roadways to reduce delay;
- Protected cycle tracks have been included as indicated by the transportation network plan discussed earlier. Protected cycle tracks are at sidewalk elevation and offset a minimum 0.8m from parking bays. Special considerations have been included at intersections to prioritize safety;
- Landscaped boulevards have been included where space requirements allow. Urban design hardscape features such as tactile surfaces have been included in high-pedestrian areas such as Old Dollarton Road and Seymour River Place;
- Sidewalks have been included on each roadway (one side only for laneways and Windridge Drive (between Seymour River Place and Riverside Drive) and Munster Avenue) and are designed to a standard minimum width of 1.8m (preferred 2.0m). Wider sidewalk (up to 3.0m) are provided in the pedestrian village centre where pedestrian activity is anticipated to be higher.

![Table 4-1: Lane Widths* by Road Class](image-url)

<table>
<thead>
<tr>
<th>Class</th>
<th>DNV/ MMCD (2014)</th>
<th>TAC (2017)</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial</td>
<td>3.7m</td>
<td>3.0m-3.7m</td>
<td>3.5m-3.7m</td>
</tr>
<tr>
<td>Arterial (transit)</td>
<td>3.7m</td>
<td>3.0m-3.7m</td>
<td>3.5m-3.7m</td>
</tr>
<tr>
<td>Collector</td>
<td>3.7m</td>
<td>3.0m-3.7m</td>
<td>3.5m</td>
</tr>
<tr>
<td>Collector (transit)</td>
<td>3.5m</td>
<td>3.0m-3.7m</td>
<td>3.5m</td>
</tr>
<tr>
<td>Local (Residential)</td>
<td>3.0m-3.35m</td>
<td>3.0m-3.7m</td>
<td>3.0m – 3.3m</td>
</tr>
<tr>
<td>Local (Commercial)</td>
<td>3.6m</td>
<td>3.0m-3.7m</td>
<td>3.5m</td>
</tr>
</tbody>
</table>
4.2 ROAD NETWORK PLAN

The plan drawings of the functional design were developed based on the planned transportation network, design criteria and approach, and typical cross-sections described above. The overview of this plan is shown in Figure 4-1 and Appendix B.

As discussed, the network generally follows the existing network within the Maplewood Village. The intention was to create a village node around the network of Front Street, Seymour River Place, Old Dollarton Road, and Riverside Drive. These roadways have been developed to be more pedestrian, bicycle, and transit focused. Currently Riverside Drive is used as the main connection between Mount Seymour Parkway and Dollarton Highway. After the redevelopment of this neighbourhood, the goal is to reduce speeds and volumes on Riverside Drive as it passes through the village centre and shift the majority of the through traffic to Berkley Road.

A new network was developed in the Innovation District. Berkley Road provides a new connection between Mount Seymour Parkway and Dollarton Highway. Road A was developed as a secondary access to the new network and connects to Berkley Road.

Functional roadway designs for each roadway within Maplewood are included in Appendices C through R.
Figure 4-1: Maplewood Neighbourhood Road Network
5.0 ISSUES AND IMPACTS

5.1 PROPERTY REQUIREMENTS

Property acquisition will be required during the development of the Maplewood Area. The functional design drawings show the minimum amount of property acquisition required for each roadway. Actual property rights-of-way dimensions will be confirmed during the detailed design phase. More statutory right-of-way may be required from adjacent properties.

It is expected that grading considerations are to be accommodated on private property. This may include retaining structures, fills, or cuts.

5.2 UTILITIES

No considerations were given to the utility design or upgrades in the Maplewood Area. The District is developing utility designs that will be supplemental to this report.

No consideration has been given to the management of roadway drainage or development of specific catchment areas. Any future drainage works shall incorporate best practices for sustainable rainwater management principals and developed in coordination with the District.

5.2.1 Existing GVRD Sewer

There is an existing GVRD trunk sanitary sewer in the east of the neighbourhood that will cross the proposed Berkley Road alignment below the Road A intersection. The proposed vertical alignment of Berkley Road will add approximately 0.5m of fill onto this trunk sanitary sewer. The District will need to review the potential impacts on this trunk sanitary sewer of this additional fill with the GVRD. The approximate location of the GVRD trunk sanitary sewer is shown on the appropriate drawings.

5.3 GRADING IMPLICATIONS

The functional design does not account for grading implications on private property. It is understood that the developments will be designed in a way to accommodate any elevations differences between the roadway and the property. No side slopes or retaining structure were included in the cost estimates; if these are required, it is assumed that they will be accommodated outside of the road right-of-way.

5.4 PAVEMENT STRUCTURE

Pavement structure for all roadways to follow District standards. Geotechnical analysis to be considered as directed by the District.
5.5 DRAINAGE SWALE

The District has expressed interest in developing a drainage swale along Berkley Road which will cross from the west side of the street to the west side. A potential alignment of the drainage swale and culverts was shown on the drawings for conceptual purposes. However, no design thought has been given to the drainage swale or corresponding culverts. The developer will need to accommodate the slope consideration due to the drainage swale and culverts into their developments. The District is to provide direction on the design of the drainage swale and culverts.

5.6 LAND RASING FOR COASTAL FLOOD PROTECTION

The District plans to raise the elevation of Dollarton Highway east of Forester Street in order to install a berm to provide coastal flood protection for the adjacent lands. The District provided Urban Systems with a desired elevation for the coastal flood protection and a corresponding conceptual profile was developed for raising Dollarton Highway to meet this elevation. The proposed profiles for Berkley Road and Road A were tied into this raised profile for Dollarton as it is anticipated that this work to coincide with the development of the Innovation District.
6.0 ‘CLASS D’ COST ESTIMATES

Class ‘D’ cost estimates were prepared for each block (including intersections and signals). The limits of each block were developed in coordination with the District. A summary of the cost estimates for each segment including engineering (15%) and contingency (40%) allowances is provided in Table 1. More detail about each block is included in the Appendix for the relevant roadway.

Table 1: Cost Estimate

<table>
<thead>
<tr>
<th>Street Name/Block Extents</th>
<th>Cost Estimate (incl Contingency and Engineering)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amherst Avenue: Spicer Road to Dollarton Highway</td>
<td>$593,000</td>
</tr>
<tr>
<td>Spicer Road: Amherst Avenue to Riverside Drive</td>
<td>$1,525,000</td>
</tr>
<tr>
<td>Spicer Road: Riverside Drive to Amherst Avenue</td>
<td>$267,000</td>
</tr>
<tr>
<td>Dollarton Highway: Old Dollarton Road Intersection</td>
<td>$168,000</td>
</tr>
<tr>
<td>Old Dollarton Road: Dollarton Highway to Front Street</td>
<td>$579,000</td>
</tr>
<tr>
<td>Old Dollarton Road: Front Road to Seymour River Place</td>
<td>$899,000</td>
</tr>
<tr>
<td>Old Dollarton Road: Seymour River Place to Riverside Drive</td>
<td>$2,037,000</td>
</tr>
<tr>
<td>Old Dollarton Road: Riverside Drive to Forester Street</td>
<td>$1,935,000</td>
</tr>
<tr>
<td>Old Dollarton Road: Forester Street to End of Roadway</td>
<td>$1,302,000</td>
</tr>
<tr>
<td>Front Street: Old Dollarton Road to Seymour River Place</td>
<td>$494,000</td>
</tr>
<tr>
<td>Front Street: Seymour River Place to Riverside Drive</td>
<td>$394,000</td>
</tr>
<tr>
<td>Seymour River Place: Front Street to Old Dollarton Road</td>
<td>$414,000</td>
</tr>
<tr>
<td>Seymour River Place: Old Dollarton Road to Munster Avenue</td>
<td>$561,000</td>
</tr>
<tr>
<td>Seymour River Place: Munster Avenue to Heritage Park Lane</td>
<td>$1,054,000</td>
</tr>
<tr>
<td>Riverside Drive: Spicer Road to Dollarton Highway</td>
<td>$382,000</td>
</tr>
<tr>
<td>Riverside Drive: Front Street to Old Dollarton Road</td>
<td>$959,000</td>
</tr>
<tr>
<td>Riverside Drive: Old Dollarton Road to Windridge Drive</td>
<td>$1,669,000</td>
</tr>
<tr>
<td>Riverside Drive: Windridge Drive to Mount Seymour Parkway</td>
<td>$3,090,000</td>
</tr>
<tr>
<td>Munster Avenue: Seymour River Place to Riverside Drive</td>
<td>$531,000</td>
</tr>
<tr>
<td>Windridge Drive: Seymour River Place to Riverside Drive</td>
<td>$635,000</td>
</tr>
<tr>
<td>Windridge Drive: Riverside Drive to End of Roadway</td>
<td>$2,193,000</td>
</tr>
<tr>
<td>Multiuse Path Trail: Old Dollarton Road to Berkley Road</td>
<td>$1,135,000</td>
</tr>
<tr>
<td>Dollarton Highway: Old Dollarton Road to East Extent</td>
<td>$9,626,000</td>
</tr>
</tbody>
</table>
The following assumptions and limitations are noted as part of the design and cost estimating:

- All costs included in this cost estimate are in 2017 dollars. Proper escalation due to inflation, market conditions, economies of scale will need to be calculated into the costs at a later date;
- Estimates do not include property acquisition;
- A generic per metre lane cost has been developed as per DNV’s request. The standard District commercial lane was used for costing purposes. Lane cost approximate $1,500/m including contingency and engineering fees;
- Designs were prepared using available cadastral and contour information provided by the District. No topographic survey information was available as part of this assignment.
- No geotechnical or environmental investigations or assessments were completed as part of this assignment. Effort to minimize potential environmental impacts was used in functional design, however this will need to be assessed further to confirm actual impacts and costs.
- It is assumed that the existing roadway asphalt, curbs, and sidewalks (including gravels) will be removed prior to construction of the new roadway except when the adjacent properties have recently been redeveloped. Where properties have been recently redeveloped the goal is to maintain the roadway from the centreline to the property where possible.
- Site preparation is assumed to include localized compaction and minor grading. Where profiles of roadways are changing significantly due to the functional design, cut and fill volumes have been calculated and costed separately. A geotechnical investigation will be required to confirm these assumptions;
- Bulk tree removal was included in the cost estimate for Berkley Road, Road A, Road B, and the multiuse trail. Isolated tree clearing, including existing trees in the boulevards or road rights-of-way, was not included in the cost estimate;
- The cost of the berm construction was not included for Dollarton Highway. Cost estimate for Dollarton Highway included raising the profile to the new elevation, but not additional geotechnical works suitable to use as a berm for coastal flood protection.
- No costs have been included regarding utility upgrades, replacements, or relocations. This includes watermains, storm sewers, sanitary sewers and their appurtenances, including catch basins, as well as 3rd party utilities such as BC Hydro lines and poles, TELUS conduit, etc. Based on information communicated by the District during preparation of the functional design, it is assumed that existing BC Hydro distribution lines will be removed. It is assumed that the District will determine these costs separately from the roadworks costs. Effort to accommodate existing BC Hydro distribution lines was included in the functional design; however, precise impacts will be confirmed during detailed design and may impact final costs.
• Grading calculations are assumed to end at the property line. No side slopes, retaining structures, or grading beyond the property line were taken into consideration during the preparation of these cost estimates. These works are expected to be determined by the adjacent developments;

• Boulevard landscaping varies throughout the project between sodding and hardscape pavers. A premium hardscape cost was included for cost estimating purposes only as the type of hardscape has yet to be determined. Street trees have been included in the cost estimate where boulevard dimensions and landscaping allow. Street trees have also been assumed at a standard 10m spacing along the corridors and have been included on roadways where shown in the typical section;

• Traffic signals (including pedestrian half signals) were included in the estimate as per the functional design and existing conditions. An allowance was included for a complete upgrade to the traffic signals where current signals exist;

• New streetlighting was assumed along the corridor. Streetlighting was assumed to be standard style lights and was assumed to match existing spacing along the corridor. No lighting analysis was conducted as part of the analysis. No lighting was included along the next multi-use trail from Old Dollarton Road to Berkley Road. Upgrading standard street lights to ornamental street lights would cost approximately $2,000 per street light. Total cost for project (all roadways) to upgrade to ornamental street lights would cost approximately $700,000;

• Allowances for pavement markings and signage are included in the estimates;

• Municipal and utility type charges, legal and topographic surveys, property acquisition, permit charges, sub-consultant design and reporting, inspection, and certification fees (electrical, geotechnical, environmental, landscape architect) as well as any legal fees are not included in this cost estimate;

• Cost estimates include a 10% allowance for Mobilization, Survey Layout, Traffic Management, and Quality Management.

• Cost estimates include a 40% contingency, and 15% for Engineering and Supervision.

It is understood that District staff will use this information to prepare their submission to Council and for future developments in the neighbourhood. These materials should be used with developments as a way to determine approximate costs of new roadways in the neighbourhood.
7.0 CLOSING

Achieving the long-term vision and developing a multi-modal community is achievable for the Maplewood neighbourhood, and can be phased with possible interim strategies in the near to mid-term scenarios. This study and report builds off previously completed works by Urban Systems and others and provides a basic framework to help implement the vision for this neighbourhood. This functional design report develops the general roadway geometrics and considerations that should be implemented during the development of the Maplewood neighbourhood. Further stages of detailed design and traffic analysis, whether by the District or through development applications, will continually help guide and focus the implementation and requirements to achieve the vision.
LIST OF APPENDICES

Appendix A - Proposed Roadway Characteristics and Priorities
Appendix B - Overall Network
Appendix C - Amherst Avenue
Appendix D - Berkley Road
Appendix E - Bridge Street
Appendix F - Dollarton Highway
Appendix G - Forester Street
Appendix H - Front Street
Appendix I - Mount Seymour Parkway
Appendix J - Munster Avenue
Appendix K - Old Dollarton Road
Appendix L - Riverside Drive
Appendix M - Road A and Road B
Appendix N - Seymour River Place
Appendix O - Spicer Road
Appendix P - Windridge Drive
Appendix Q - Trails
Appendix R - Laneways
Bunt & Associates Engineering Ltd. (Bunt) has been retained by Trillion Realty Corp. to provide transportation planning services for the proposed redevelopment of the project site located on south side of Old Dollarton Road between Front Street and Seymour River Place in the District of North Vancouver. The proposed redevelopment will include a mixture of commercial retail and residential condo units.

As a portion of this work, we have completed initial vehicle turning movement paths based on the existing site plan. The types of vehicles that were used for these tests were:

- Emergency Vehicle / Fire Truck – 47’ Peirce Fire Truck
- Loading – 9.1m SU9 Single Unit Truck
- Passenger Vehicle – TAC Passenger Vehicle

The following exhibits show the fire truck and loading vehicles paths, as well as access to the two most constrained commercial parking stalls. We trust this information will be of value. If you have any questions or concerns, please don’t hesitate to contact us.

Sincerely,

Bunt & Associates

Lynn Machacek, EIT
Transportation Analyst
Exhibit 1
Fire Truck Circulation Around Site
Exhibit 4

Commercial Parking Access

Design Vehicle: TAC Passenger Car

Maplewood Plaza Rezoning

6084.01 February 2016 Scale NTS
This technical memo forms the basis of support for a parking relaxation being sought for the proposed Maplewood Plaza mixed-use development. It will be included in the Rezoning Application as an appendix to the Transportation Assessment Report.

1. INTRODUCTION

The following memo briefly summarizes the findings from our parking supply review for the proposed Maplewood Plaza mixed-use development. The basis of the parking review was to develop an understanding of the actual parking demands for similar multi-family developments in the Maplewood, Seymour, and Lynn Valley neighbourhoods nearby (using ICBC vehicle registration data) to support a lower parking provision for the development than required by the District of North Vancouver’s (DNV) Zoning Bylaw (Bylaw 1965, Part 10).

Additionally, it is important to know the difference in expected parking demands (if any) between purpose built rental apartments and market condominiums as this would have bearing on the future parking supply for the development with its mix of housing types proposed. Currently, the site consists of 28 rental apartment units (and a 7,500 sq ft commercial plaza) and it is proposing to provide 38 rental apartments, along with 165 market condominiums (including some townhomes) as well as around 10,600 sq ft of small format retail space with the new development.

Bunt has also reviewed industry resources for information on parking supply/demand rates for apartments, as well as parking demand data for other areas of the North Shore for rental apartment buildings. The findings summarized within form support for a parking relaxation from the DNV Zoning Bylaw requirements for the development which will help guide the design team in developing the parking supply and layout and the number of levels of parking required.
2. **BYLAW PARKING SUPPLY REQUIREMENT**

Table 1 summarizes the development site’s proposed parking supply and bylaw parking requirements based on the District of North Vancouver’s Zoning Bylaw (Bylaw 1965, Part 10).

**Table 1: District of North Vancouver Off-Street Parking Requirement**

<table>
<thead>
<tr>
<th>Use</th>
<th>Units / sq. m</th>
<th>Bylaw Parking Rate</th>
<th>Bylaw Parking Requirement (Spaces)</th>
<th>Current Proposed Parking Supply</th>
<th>Difference (+/-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>203 units / 16,404 (165 Market Condominium units, and 38 rental apartment units)</td>
<td>1 space per unit plus 1 space per 100m$^2$ of gross residential floor area (to a maximum of 2 spaces per unit inclusive of 0.25 per dwelling unit designated for visitor parking.)</td>
<td>368 (incl. 51 visitor spaces)</td>
<td>264 (incl. 41 visitor spaces at 0.20 spaces/unit)</td>
<td>-104</td>
</tr>
<tr>
<td>Commercial</td>
<td>989</td>
<td>1 space per 45m$^2$ GFA</td>
<td>22</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>390</td>
<td>286</td>
<td>-104</td>
</tr>
</tbody>
</table>

As shown, a total of 390 parking spaces are required for the development based on the District's Zoning Bylaw. The development is currently proposing to provide a total of 286 parking spaces, with 264 residential spaces (including 41 visitor parking spaces at 0.20 spaces per unit), and 22 commercial parking spaces. Therefore, the development plan is calling for a relaxation of 104 parking spaces for residential uses, and this will be supported by a parking supply rationale in the next section.

The District also requires that 20% of the parking spaces for multi-family residential developments must have Electric Vehicle (EV) charging infrastructure, and wired for level 1 (110v) charging, and that conduit be in place so that all of the parking spaces can later be wired for level 1 charging, while 10% of the parking spaces for commercial developments must be wired for level 2 (240v) charging. Therefore, there will be 53 parking spaces that are EV-ready (level 1) for the residential parking component, and 3 parking spaces that are EV-ready (level 2) for the commercial component of the development.
Parking for the development will be accessed via Front Street for 66 spaces on the L1 parking level (i.e. ground level) for residential and commercial uses, and via Seymour River Place for 220 spaces over the P1 and P2 levels for the remaining residential parking.

3. RESIDENTIAL PARKING DEMAND REVIEW

3.1 Local Parking Demand Data – Market Condominium Component

Bunt collected vehicle registration data from ICBC for various multi-family residential buildings in the Maplewood and nearby Seymour/Parkgate areas of North Vancouver (and one building near Edgemont Village for comparison). Table 2 summarizes the parking demand rates derived from the ICBC data for the subject sites which includes a factor (10%) for vehicles which may be registered off-site.

Table 2: ICBC Vehicle Registration Data

<table>
<thead>
<tr>
<th>Building / Address</th>
<th># of Units</th>
<th>Registered Vehicles</th>
<th>Off-Site Vehicle Registration (10%)</th>
<th>Total Parking Demand Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maplewood Living – 2138 Old Dollarton Rd</td>
<td>16</td>
<td>21</td>
<td>2</td>
<td>1.44</td>
</tr>
<tr>
<td>Parkway Terrace I + II – 1000/1050 Bowron Crt</td>
<td>88</td>
<td>91</td>
<td>9</td>
<td>1.14</td>
</tr>
<tr>
<td>Roche Point Tower – 995 Roche Point Dr</td>
<td>72</td>
<td>66</td>
<td>7</td>
<td>1.01</td>
</tr>
<tr>
<td>Nature’s Cove – 3732 Mt Seymour Pkwy</td>
<td>23</td>
<td>27</td>
<td>3</td>
<td>1.29</td>
</tr>
<tr>
<td>Parkgate Manor – 3670/3680/3690 Banff Crt</td>
<td>136</td>
<td>153</td>
<td>15</td>
<td>1.24</td>
</tr>
<tr>
<td>The Brook – 650 Evergreen Pl (Delbrook Area for Comparison)</td>
<td>24</td>
<td>29</td>
<td>3</td>
<td>1.33</td>
</tr>
<tr>
<td><strong>Weighted Average</strong></td>
<td></td>
<td></td>
<td></td>
<td>1.20</td>
</tr>
</tbody>
</table>

As shown, the average parking demand rate observed for the surveyed buildings was 1.20 vehicles per unit, which is inclusive of a 10% factor for vehicles which may be registered off-site at another location and which are not captured by ICBC data for these addresses. Therefore, based on this rate it could be expected that the market condominium component of the development would generate a parking demand of around 198 parking spaces (i.e. 165 market condominium units), not including visitor parking demand. Expected visitor parking demands are described in more detail in Section 3.3.
3.2 Local Parking Demand Data – Rental Apartment Component

Bunt previously conducted a study on the parking demands for purpose-built rental apartment buildings on the North Shore (West Vancouver) which would provide a good proxy for comparison on expected rental apartment parking demands for the proposed development site. In that study, Bunt utilized ICBC vehicle registration data from 36 purpose-built rental buildings (nearly 2,100 rental units) in West Vancouver and determined the theoretical average “parking demand” to be 0.77 vehicles per unit.

This finding is in line with the Metro Vancouver Apartment Parking Study (MVAPS – September 2012) findings that indicate parking occupancy in purpose built rental buildings is approximately 60% of that in market/strata buildings.

If that rate were applied to the proposed 38 rental apartment units with the development that would equate to approximately 30 spaces not including visitor parking demands.

3.3 Visitor Parking Demand Review

The District of North Vancouver specifies a visitor parking requirement of 0.25 spaces per unit for multi-family residential developments in the Zoning Bylaw (Bylaw 1965, Part 10) which would amount to approximately 51 visitor parking spaces being required for the development.

The Metro Vancouver Apartment Parking Study (MVAPS – September 2012) reviewed parking supply requirements in municipalities across Metro Vancouver and found the typical minimum visitor parking requirement is 0.20 spaces per unit. This would equate to a supply requirement of 41 spaces for the development which is 10 spaces fewer than the DNV bylaw requirement of 51 spaces.

Bunt has observed on numerous past multi-family projects throughout Metro Vancouver that residential visitor parking demands are typically around 0.06 to 0.10 spaces per unit at peak times. If a demand rate of 0.10 spaces per unit were applied to the development plan (203 residential units) it would equate to approximately 20 spaces.

Given that peak visitor parking demands for similar multi-family residential buildings is typically less than half of the typical visitor parking supply requirement, it would be conservative to consider a visitor parking rate of 0.20 spaces per unit, in line with other Metro municipalities, for the development.

Note there has not been a distinction made between market versus rental visitor parking supply in the work reviewed by Bunt. Further, while there are typically opportunities for shared parking between residential visitor parking and commercial parking uses given the typical offsets of their peak demand, this has not been considered at this time.
3.4 Residential Parking Demand Summary

Given the above information, it is expected that the proposed Maplewood Plaza mixed-use development would generate a residential parking demand of around 248 spaces including:

- 198 parking spaces for market condominium uses;
- 30 parking spaces for rental apartment uses; and,
- 20 parking spaces for residential visitor uses

With 264 parking spaces proposed for residential uses on the site this would indicate a parking surplus of about 16 spaces, and therefore is expected to be sufficient to meet the needs of the development.

These numbers are exclusive to the residential component of the development as the commercial parking is proposed to be provided in accordance with the Zoning Bylaw requirements.

4. SUMMARY & RECOMMENDATIONS

In summary when considering local examples of market condominium and rental apartment parking demands along with expectations for residential visitor parking demand, the development’s proposed parking supply of 264 residential parking spaces (including 41 spaces for visitor parking) is sufficient to meet the expected demands of around 248 parking spaces.

It is recommended that the development provide parking for residential uses at the following supply rates to meet the needs of the development:

- Market Condominium – 1.25 parking spaces per unit = 206 spaces;
- Rental Apartment – 0.80 parking spaces per unit = 30 spaces; and,
- Residential Visitor Parking – 0.10 parking spaces per unit (for all residential uses) = 20 spaces

This would result in a parking supply of 256 spaces for residential uses, and with 22 parking spaces for the commercial uses this would result in a total parking supply for the site of 278 parking spaces.

C.C. Ben Wong, Trillion Realty Corp.
Roger Tse, Trillion Realty Corp.
Peter Joyce, Bunt & Associates
Lynn Machacek, Bunt & Associates
MEMO

DATE: May 8th, 2018
PROJECT NO: 04-18-0082
PROJECT: 229 Seymour River Place
SUBJECT: Intersection Functional Design Review – Design Rationale V4

TO: Norm Huey
Rositch Hemphill Architects

PREPARED BY: Tyler Thomson, RPP, PTP - Transportation Planner
REVIEWED BY: Simon Button, P.Eng - Transportation Engineer

As requested by District of North Vancouver planning staff, the following memo provides a brief rationale for the proposed intersection design at the planned new intersection of Seymour River Place and Front Street adjacent to the 229 Seymour River Place development in Maplewood Village. A preliminary functional design was prepared on March 26th, 2018 and submitted to District staff for review, and subsequently the District requested the drawing be modified to include more context to the east of the Northwoods site driveway (i.e. 25m to the east), as well as a design rationale for the proposed design which was provided April 10th, 2018.

Since that time, further design changes have been made in consultation between the District and Creus Engineering. In particular, the District has requested the west edge of the proposed raised intersection be shifted slightly east to avoid the existing Northwoods parkade/loading access on Front Street, and extend the east edge beyond the existing vehicle access to Northwoods east of the intersection with Seymour River Place along with locating the east crosswalk to the east of the Northwoods Village driveway to provide direct pedestrian access to that site (refer to Figure 1).

A geometric review of this design is summarized below following discussion on context and the design rationale for the proposed functional plan.

1. CONTEXT
As part of the Development Permit application process for 229 Seymour River Place, the project team were tasked by the District with providing a functional design for Front Street (the development’s south frontage road), and in particular with a focus on the design of the intersection with the planned extension of Seymour River Place from Old Dollarton Road to Front Street as the District is concerned with the offset of this intersection from the Northwoods access on the south side of Front Street, and pedestrian safety at
this location. The proposed functional design described in Section 2 includes a raised intersection to slow vehicle traffic, control vehicle movements and foster a more pedestrian-friendly environment consistent with a Village Centre.

The base civil plan (Dated April 24, 2018) with input from District Engineering staff is highlighted in Figure 1, and includes the following inputs from transportation staff regarding Seymour River Place, and Front Street:

- Incorporate street trees in groupings alternating with on-street parking to create a chicane effect (by using staggered blocks of trees/parking pockets).
- Provide tactile warning strips at the entrance to the shared space to alert drivers and pedestrians.
- Use street furniture (e.g. bollards, benches, planters, bicycle parking) to help define a shared space, subtly delineating the travelled way from the pedestrian-only space.
- Provide seating opportunities.
- Reduce the width of the driveway to the parkade to max. 6m.

The street cross section from the south property line includes:
  o 2m unobstructed concrete sidewalk
  o 2.4m boulevard/parking pocket
  o 0.4m valley gutter
  o Two 3m travel lanes
  o 0.4m valley gutter
  o 2.4m boulevard/parking pocket
  o 2m unobstructed concrete sidewalk

Further, it was requested that for Front Street (according to the updated Maplewood Village Transportation Master Plan), the above criteria also be adhered to with the exception of sidewalks which should be 3.0m, and 1.5m – 2.0m boulevard depending on the location.

Figure 1: Civil Base Plan (from CREUS Engineering - April 24, 2018)
2. DESIGN RATIONALE

2.1 Traffic Flow

Traffic projections for future conditions from previous Bunt studies indicate that Front Street will see around 300 to 400 vehicles (two-way) during the morning and afternoon peak hours, which should allow for sufficient gaps in traffic for vehicles to enter/exit the site. Volume on Seymour River Place would be even lower as a local connection with around 50 to 100 vehicle trips (two-way) during peak hours.

Vehicles travelling to/from the Northwoods driveway on Front Street would have little reason to travel on Seymour River Place as a limited access local road given direct connections to the wider street network (see Figure 2) are provided to the west (Old Dollarton Road) and east (Riverside Drive), while residents/employees on this block of Seymour River Place would walk to Northwoods given it's very close proximity. This would indicate the likelihood of vehicles travelling between Seymour River Place and the Northwoods development to be low.

Figure 2: Maplewood Village Street Network
2.2 Raised Intersection Rationale

The principle feature of the intersection design is the raised intersection. The Transportation Association of Canada (TAC) and Institute of Transportation Engineers Canadian Guide to Neighbourhood Traffic Calming define raised intersections as: an intersection – including crosswalks – constructed at a higher elevation than the adjacent roadways, and its purpose is to:

- Reduce vehicle speeds;
- Better define crosswalk areas, and
- Reduce pedestrian/vehicle conflicts

The guide also states that raised intersections cause:

- The vertical deflection of vehicle wheels [which] produces an uncomfortable sensation for vehicle occupants travelling at higher speeds;
- The raised roadway surface emphasizes pedestrian priority at intersections;
- The raised centre section includes crosswalks; and,
- The roadway approaches to and departures from the raised intersection are appropriately ramped in consideration of vehicle types and desired speed

Further, according to the National Association of City Transportation Officials Urban Street Design Guide:

Raised intersections create a safe, slow-speed crossing and public space at minor intersections. Similar to speed humps and other vertical speed control elements, they reinforce slow speeds and encourage motorists to yield to pedestrians at the crosswalk.

Given the local context with the intersection as a T-Intersection between a lane/local road, and a local/collector road within a village centre, the raised intersection would achieve the desired outcomes of creating a more pedestrian-friendly environment with slow vehicle speeds on a low-volume street.

Maintaining the extents of the proposed raised intersection (as proposed in Figure 1) to begin east of the Northwoods Village parkade ramp will help define the “zone for pedestrians” at the intersection with Seymour River Place, while including the commercial parking access to Northwoods Village will help ensure vehicles are aware that this is a pedestrian-priority zone.

2.3 Intersection Spacing Considerations

The TAC Geometric Design Guide for Canadian Roads outlines the suggested minimum corner clearances to accesses or public lanes at Major Intersections (see Figure 3). While this location would not be considered a “Major Intersection” as Front Street functions somewhere between a local road and a collector road with its limited extents, and the Seymour River Place extension would function somewhere between a laneway and a local road, the figure can be used as a guide to see how the alignment of Seymour River Place stacks up with the offset Northwoods access on the south side of Front Street.
Figure 3: TAC Suggested Minimum Corner Clearance to Accesses or Public Lanes at Major Intersections

As shown, the minimum "suggested" clearance between Seymour River Place and the Northwoods access (item J) would be somewhere between 15-20m depending on the classification of Front Street.

2.4 Proposed Functional Design

The functional design prepared for the intersection of Front Street and Seymour River Place is illustrated in Appendix A along with vehicle turning path diagrams, and highlighted below in Figure 4 based on the civil plan from CREUS Engineering (Figure 1). Key features include:

- Raised intersection as per TAC's design guidelines to cause vertical deflection of vehicles in order to manage speeds;
- Free flow vehicle movements (with yield control to pedestrians) on Front Street to reduce chances of queuing blocking Northwoods driveway;
- Stop control on Seymour River Place, minor approach;
- Coloured and textured pavement to bring awareness to driver's that they are entering a pedestrian focused area;
- Marked pedestrian crossings on all approaches (including east crosswalk located east of the Northwoods Village driveway to align with pedestrian access to that site) to help guide pedestrians through the intersection; and,
- Pedestrian crossing signage on Front Street approaches.
As shown, the corner clearance provided between Seymour River Place and the Northwoods driveway is approximately 14m which is slightly below the suggested minimum clearance range of 15m – 20m. However, with clear sightlines shown and proposed the installation of a raised intersection with pedestrian crossings and supporting signage, the design should allow for efficient traffic movements through the intersection and to/from the Northwoods site while improving the safety and comfort of pedestrian connections in the Maplewood Village Centre.

3. SUMMARY

While the distance between adjacent intersections suggested by TAC is not quite met, it is evident that there are clear sightlines between the Northwoods Village driveway and all approaches to the Seymour River Place/Front Street intersection. Combined with moderate vehicle volumes, and low vehicle speeds with the proposed raised intersection, it is expected that drivers will be able to navigate the intersection with minimal issues.

The recommended raised intersection with accompanying signage and paint markings will help foster a safer, more navigable environment for pedestrians, cyclists, and drivers.
cc: Don Liu, Trillion Realty
    Fred Ciambrelli, CREUS Engineering
Drop down area has been increased to allow passenger vehicle exit without crossing into opposing lane.

3 proposed parking stalls

Existing curbside

Proposed curbline

Proposed 3m wide sidewalk

Parked area has been extended to accommodate 3 vehicles

RA-1 stop sign

8m radius

Standard 3m wide crosswalk marking on raised intersection

Blister tactile paving at crosswalks

RA-4 LR Pedestrian crossing sign

Raised traffic calming table at intersection

Traffic calming pavement markings

Enhanced pedestrian crosswalk markings on raised intersection

[Issued for Discussion, not for Construction]
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1. PROJECT DETAILS

1.1. INTRODUCTION AND BACKGROUND

Maplewood Limited Partnership is proposing to redevelop the Maplewood Plaza in North Vancouver. The existing land includes mixed commercial and residential buildings. The proposed development generally consists of 2 buildings, one residential and one residential-commercial mixed use. The project will involve a major redevelopment of site frontages including extending Mt Seymour Place to Front Street. A small portion of the block (currently commercial space) has been set aside for future development. The total site area is approximately 0.69ha.

Creus Engineering Ltd. has been retained by Maplewood Limited Partnership to prepare a traffic management plan that addresses the offsite civil construction, the onsite civil construction and the building construction. The traffic management plan will cover:

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

The Traffic Management Plan covers the complete onsite and offsite civil / landscape and building construction.

1.2. CONSTRUCTION OVERVIEW

Construction activity at the Maplewood Plaza site comprises many different aspects. The scope of work includes demolition of existing structures and excavation for building parkades, below ground structures, above ground structures (including finishing), onsite civil and landscape works, and offsite civil and landscape works. The construction process will comprise five distinct phases as outlined below.

Phase 1: Site Clearing and Excavation & Shoring (3 months)

Site preparation including removal of existing buildings and hardscapes. Excavation and shoring for below grade works.

Phase 2: Building Construction Below Grade (3 months)

Construction of the below grade portions of the buildings including the foundations and the underground parkade structure.

Phase 3: Building Construction Above Grade (7 months)

Includes building structure and finishes.
Phase 4: Onsite Civil and Landscaping (3 months)

Onsite civil works include service connections, roadworks, and removal of existing sanitary line.

Phase 5: Offsite Civil and Landscaping (3 months)

Includes roadworks along all three fronting streets and installation of a sanitary main along Mt Seymour Place.

2. SCHEDULE

2.1. CONSTRUCTION SCHEDULE

A preliminary construction schedule has been developed in coordination with Vantana Construction. The works are planned to commence August 2016 with building construction ongoing until March 2018. See Appendix A for the complete preliminary construction schedule.

2.2. HOURS OF WORK

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

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

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

Vantana expects their standard working hours to be 07:00 to 17:00 Monday to Friday. Some Saturday work is also expected.

3. MOBILITY IMPACT

This section is intended to describe how the project will impact road users including pedestrians, cyclists, transit service, emergency vehicles, heavy vehicles (trucks) and general road traffic during construction. For each phase of work, we have worked with Vantana Construction to estimate construction truck volumes. For a detailed analysis of future traffic volumes see Urban Systems 2013 "Maplewood Village Center Transportation Plan" prepared for the District of North Vancouver.

Old Dollarton Road is a minor collector road that has low to moderate volumes of traffic. A nearby school results in increased traffic during the morning and early afternoon. There is also a moderate amount of pedestrian and bicycle traffic along this road. Old Dollarton Road is a bus route for the C15 bus servicing Phibbs Exchange and Indian River.
Front Street is a local road with generally low volumes of traffic (including bicycle and pedestrian). There are no bus routes along this street.

Mt Seymour Place currently services an existing residential complex and the existing Maplewood Plaza. The extension of this road will reduce the amount of parking for the complex to the east. This extension is supported by the Maplewood Village transportation study.

3.1. TRUCK ROUTES

The Maplewood Plaza site is located between Old Dollarton Road (collector) and Dollarton Highway (major arterial). The proximity of the site to Dollarton Highway and Highway 1 will minimize the time required on District of North Vancouver roads. There is one route to and from Highway 1 and a possible alternative route.

- The main access route will be via exit 23 from Highway 1 onto Dollarton Highway, a left turn on Old Dollarton Road (signalized, advanced left), a right turn onto Front Street, and a left turn into the site.
  From the site, a left turn onto Front Street, a right turn onto Riverside Drive (stop sign), a right turn onto Dollarton Highway (signalized) and onto Highway 1 via exit 23.
- The alternative access route is via exit 22 from Highway 1, a right turn onto Mt Seymour Parkway (signalized), a right turn onto Riverside Drive (signalized), a right turn onto Front Street, and a right turn into the site.
  From the site, a left turn onto Front Street, a left turn onto Riverside Drive (stop sign), a left turn onto Mt Seymour Parkway (signalized), and onto Highway 1 via exit 22.

The proposed truck routes are shown in Appendix B.

3.2. TRUCK VOLUMES

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

<table>
<thead>
<tr>
<th>Phase of Work</th>
<th>Typical Vehicles per Day</th>
<th>Maximum Vehicles per Hour</th>
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<tbody>
<tr>
<td>Phase 1: Site Clearing, Excavation and Shoring</td>
<td>6 trucks/day</td>
<td>2 trucks/hour</td>
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<tr>
<td>Phase 2: Building Construction Below Grade</td>
<td>10 trucks/day</td>
<td>2 trucks/hour</td>
</tr>
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<td>Phase 3: Building Construction Above Grade</td>
<td>3 trucks/day</td>
<td>1 trucks/hour</td>
</tr>
<tr>
<td>Phase 4: Onsite Civil and Landscaping</td>
<td>3 trucks/day</td>
<td>1 trucks/hour</td>
</tr>
<tr>
<td>Phase 5: Offsite Civil and Landscaping</td>
<td>3 trucks/day</td>
<td>1 trucks/hour</td>
</tr>
</tbody>
</table>

3.3. MITIGATION MEASURES

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

- The general public is to be protected from construction activities at all times by appropriate fencing, hoarding and communication.
- Existing pedestrian routes (sidewalks, trails) to remain clear and open at all times unless specifically noted in the TMP.
- Bike routes, once constructed, to remain clear and open at all times unless specifically noted in the TMP.
- Transit service and access to bus stops to remain available at all times unless specifically noted in the TMP. Temporary relocation of bus stops, as required, to be coordinated with Coast Mountain Bus Company with notification to District of North Vancouver transportation department.
- There is to be no restrictions to emergency vehicles at any time. Emergency vehicles to be given priority access at all times. Emergency services (police, fire, ambulance) to be notified in advance of any construction activities with the potential to cause delays or detours (ie intersection construction, road paving).
- Truck marshaling is only available on site. No marshaling on District of North Vancouver (or City of North Vancouver) roads.
- Copies of the TMP including enter / exit procedures and truck routes are to be sent to the trucking contractors prior to starting construction.
- All heavy vehicle drivers will be given a copy of the site construction traffic procedures and truck routes. The flag person should have additional copies available on the site.
- Heavy vehicles are to be equipped with radios so that trucks can be delayed, diverted or cancelled as required by current site conditions. The general contractor will be responsible for communicating with the heavy vehicles.
- An important part of heavy vehicle management is the mitigation of silt, mud, dust, debris, and litter.
  o All trucks are to be covered while in transit.
  o The trucking contractor will ensure that adjacent streets and truck routes are kept clean and free of dust and debris on a daily basis.
  o The general contractor is also responsible for installing and maintaining a site sediment & erosion control system including mud and dust control and a wheel wash during trucking. See drawing ESC for details of the site sediment control requirements.
- Provide enough on-site queue space to hold at least ½ an hour of truck traffic (for both inbound and outbound trucks).
- Construction traffic exiting the site (left turn) is to be operated by certified flag persons from 07:00 to 18:00
- Large tractor trailer type vehicle should be limited to the hours of 09:00 to 16:00.

Additional specific mitigation measures, per phase, are as follows:

**Phase 1: Site Clearing, Excavation, and Shoring**

This phase consists primarily of dump truck traffic to and from the site. Trucks will arrive empty and leave fully loaded. See TMP-1 for details. Additional specific mobility impact mitigation measures include:

- All truck traffic to be routed per the aforementioned truck routes.
- Construction traffic exiting/entering the site is to be operated by certified flag persons from 07:00 to 18:00
- In order to maintain minimal impacts to Dollarton Highway traffic, deliveries to/from the site are to generally be made outside peak hours and are to be made between 9 a.m. and 4:00 p.m.
- Workers arrive before morning peak hour (about 6 vehicles) therefore no impact on peak hour.
- Workers leave after 5 p.m. (about 5 vehicles). Truck hauling completed at 5pm.

Phase 2: Building Construction Below Grade

This phase consists primarily of concrete truck traffic to and from the site. Trucks will arrive fully loaded and leave empty. See TMP-1 for details. Additional specific mobility impact mitigation measures include:

- All truck traffic to be routed per the aforementioned truck routes.
- Construction traffic exiting/entering the site is to be operated by certified flag persons from 07:00 to 18:00
- In order to maintain minimal impacts to Dollarton Highway traffic, deliveries to/from the site are to generally be made outside peak hours and are to be made between 9 a.m. and 4:00 p.m.
- Workers arrive before morning peak hour (about 30 vehicles) therefore no impact on peak hour.
- Workers leave during afternoon peak hour (about 30 vehicles, assume 10 left and 20 right out of site). Trucking completed before afternoon peak hour.

Phase 3: Building Construction Above Grade

This phase consists primarily of concrete/delivery truck traffic to and from the site. Trucks will arrive fully loaded and leave empty. See TMP-1 for details. Additional specific mobility impact mitigation measures include:

- All truck traffic to be routed per the aforementioned truck routes.
- Construction traffic exiting/entering the site is to be operated by certified flag persons from 07:00 to 18:00
- In order to maintain minimal impacts to Dollarton Highway traffic, deliveries to/from the site are to generally be made outside peak hours and are to be made between 9 a.m. and 4:00 p.m.
- Workers arrive before morning peak hour (about 30 vehicles) therefore no impact on peak hour.
- Workers leave during afternoon peak hour (about 30 vehicles, assume 10 left and 20 right out of site). Trucking completed before afternoon peak hour.

Note that this phase utilizes the same TMP as the Phase 2 and 4 works.

Phase 4: Onsite Civil and Landscaping

This phase consists primarily of large truck traffic to and from the site. Trucks will generally arrive fully loaded and leave empty. See TMP-1 for details. Additional specific mobility impact mitigation measures include:
- All truck traffic to be routed per the aforementioned truck routes.
- Construction traffic exiting/entering the site is to be operated by certified flag persons from 07:00 to 18:00
- In order to maintain minimal impacts to Dollarton Highway traffic, deliveries to/from the site are to generally be made outside peak hours and are to be made between 9 a.m. and 4:00 p.m.
- Workers arrive before morning peak hour (about 30 vehicles) therefore no impact on peak hour.
- Workers leave during afternoon peak hour (about 30 vehicles, assume 10 left and 20 right out of site). Trucking completed before afternoon peak hour.

Note that this phase utilizes the same TMP as the Phase 2 and 3 works. This phase may occur simultaneously with phases 2, 3, or 5.

Phase 5: Offsite Civil and Landscaping

This phase consists primarily of large truck traffic to and from the site. Trucks will generally arrive fully loaded and leave empty. See TMP drawings TMP-A2 to TMP-A4 for additional details. Additional specific mobility impact mitigation measures include:

- All truck traffic to be routed per the aforementioned truck routes.
- Civil contractor staging and storage areas are to be located within the Maplewood Plaza construction area. All site truck traffic to be routed per the aforementioned truck routes.
- Construction traffic exiting/entering any works zone is to be operated by certified flag persons.
- In order to maintain minimal impacts to Dollarton Highway traffic, deliveries to/from the site are to generally be made outside peak hours and are to be made between 9 a.m. and 4:00 p.m.
- Workers arrive before morning peak hour (about 30 vehicles) therefore no impact on peak hour.
- Workers leave during afternoon peak hour (about 30 vehicles). Trucking completed before afternoon peak hour.

For the offsite civil works a schedule will be provided to the district once available. This is to be used for coordination with any neighboring projects. This Phase may occur simultaneously with phases 2, 3, or 4.

4. COMMUNITY IMPACT

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

4.1. EXISTING PARKING
The existing site consists of two commercial buildings and a parking lot that are to be removed. The site is private property and there is no public parking available. The adjacent streets, Old Dollarton Road and Front Street have limited on-street parking availability.

4.2. CONSTRUCTION PARKING

Estimated construction parking requirements have been reviewed with Ventana construction. For this phase of construction there is very limited parking available on-site for the early phases of construction. Any offsite parking is to be procured by the developer/contractor prior to construction.

Construction parking will move into the parkade structure once available. Ventana expects to keep all contractor parking on site.

5. WORK ZONE TRAFFIC CONTROL DEVICES

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

5.1. TRAFFIC CONTROL PLANS

Separate drawings have been prepared for each phase of the work (sometimes multiple drawings per phase). The plans are generally described below and reduced size copies are included in Appendix C. Full size copies of the plans are also included in CREUS Engineering's civil design package.

The traffic management plans have been developed to show the proposed site arrangements and traffic control systems that are to be installed for each phase of the development. For all phases, the site exit/entrance is to be operated by certified flag persons from 7 a.m. to 6 p.m. No staging of trucks on district roads is permitted for each phase.

Phase 1: Site Clearing, Excavation, and Shoring

This plan has provided an arrangement for onsite storage of at least 6 trucks and allows for construction vehicle through access/turnaround. The onsite storage is to be used to ensure there will not be any street staging for trucks coming to the site and will provide a queuing area for trucks leaving the site so that they meet the requirements for exiting the site under the control of the flag person. No on-street staging or queuing will be permitted.

Phase 2: Building Construction Below Grade

This plan has provided an arrangement for onsite storage of at least 6 trucks and allows for construction vehicle through access/turnaround. The onsite storage is to be used to ensure there will not be any street staging for trucks coming to the site and will provide a queuing area.
for trucks leaving the site so that they meet the requirements for exiting the site under the control of the flag person. No on-street staging or queuing will be permitted.

**Phase 3: Building Construction Above Grade**

This plan has provided an arrangement for onsite storage of at least 6 trucks and allows for construction vehicle through access/turnaround. The onsite storage is to be used to ensure there will not be any street staging for trucks coming to the site and will provide a queuing area for trucks leaving the site so that they meet the requirements for exiting the site under the control of the flag person. No on-street staging or queuing will be permitted.

**Phase 4: Onsite Civil and Landscaping**

This plan has provided an arrangement for onsite storage of at least 6 trucks and allows for construction vehicle through access/turnaround. The onsite storage is to be used to ensure there will not be any street staging for trucks coming to the site and will provide a queuing area for trucks leaving the site so that they meet the requirements for exiting the site under the control of the flag person. No on-street staging or queuing will be permitted.

**Phase 5: Offsite Civil and Landscaping**

Traffic management plans have been developed for all offsite works. See appendix C for details for each portion of work.

There will be no direct impacts to arterial roads due to construction activities. Two lanes of traffic are being maintained in all areas possible and single lane alternating is used where necessary. There are no road closures expected to be required for this development. Any vehicles entering or exiting a works zone must do so under the direction of flagpersons on site.

### 5.2. MONITORING STRATEGY

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

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

### 6. COMMUNICATIONS PLAN

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

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

6.2. COORDINATION WITH NEIGHBOURING DEVELOPMENTS

Creus will make the Maplewood Plaza traffic plans available to all neighbouring developments. The works involving any lane closures on district streets will need to be coordinated with neighbouring developments by the contractor. District of North Vancouver will be required to provide approved plans and schedules for neighbouring developments when requested.

6.3. CONTACT INFORMATION

Project Contacts

Main Contact Number: Ventana Construction Corporation
Mark Yeager, Site Superintendent
604-296-1164

Owner / Developer: Maplewood Plaza Limited Partnership
604-669-6002

General Contractor: Ventana Construction Corporation
Bryan Jones, Chief Estimator
604-291-9000

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

District of North Vancouver:
Christine Gibson, Transportation Engineering
604-990-2356

Daniel Citarelli, Transportation Technologist
604-990-2396

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

Police (RCMP):
147 East 14th St, North Vancouver, BC
604-985-1311
District of North Vancouver Fire Services:
   1110 Lynn Valley Rd, North Vancouver, BC
   604-980-7575

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

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

Emergency Contacts

RCMP: 911

Fire Department: 911

BC Ambulance: 911
7. REPORT SUBMISSION

Yours Sincerely,

CREUS Engineering Ltd

Clayton Bailey, EIT

Reviewed By: Fred Ciambrelli, P.Eng.
APPENDIX A: SCHEDULE
APPENDIX B: TRUCK ROUTES
APPENDIX C: TRAFFIC CONTROL PLANS
APPENDIX D: NOTIFICATIONS
SAMPLE NOTICE TO RESIDENTS AND BUSINESS OPERATORS

Temporary Street Closure/Building Zone
Location
Time and Dates

Date

Dear Residents and Business Operators:

We are writing to notify you that …

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

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

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

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

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

Yours truly,

<Applicant>

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

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<thead>
<tr>
<th>Apartment Unit Type</th>
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<th>Unit Floor Area (SF)</th>
<th>Number of Bathrooms</th>
<th>Number of Bedrooms</th>
<th>Rentable</th>
<th>Total Rentable</th>
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**Total**: 789 11.63% 1000

**Enhanced Adaptive units provided**: 2

**Note**: All APT Units Meet Basic Accessibility Guidelines

### BUILDING B UNIT STATISTICS

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<th>Apartment Unit Type</th>
<th>Remarks</th>
<th>Unit Floor Area (SF)</th>
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<td>Apt F1</td>
<td>2 Bedroom</td>
<td>741</td>
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<td>1</td>
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<td>6</td>
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<tr>
<td>Apt F2</td>
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<td>822</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>92%</td>
</tr>
</tbody>
</table>

**Total**: 789 11.63% 1000

**Enhanced Adaptive units provided**: 2

**Note**: All APT Units Meet Basic Accessibility Guidelines

### PROJECT BUILDING UNIT TOTALS:

#### RENTAL RESIDENTIAL DENSITY

<table>
<thead>
<tr>
<th>Apartment Unit Type</th>
<th>Remarks</th>
<th>Unit Floor Area (SF)</th>
<th>Number of Bathrooms</th>
<th>Number of Bedrooms</th>
<th>Rentable</th>
<th>Total Rentable</th>
<th>Percent Rentable</th>
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<td>1</td>
<td>1</td>
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<td>92%</td>
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</table>

**Enhanced Adaptive units provided**: 2

**Note**: All APT Units Meet Basic Accessibility Guidelines

#### APARTMENTS

- 789 Units
- 11.63% Rentable
- 1000 Total

#### TOWNHOMES

- 21 Units
- 26.46% Rentable

#### BUILD TOTALS

- 810 Units
- 100% Rentable

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**Enhanced Adaptive Apartment Units (DAU) Requirements**

- Required by Zoning: 3%
- Provided: 2
- Total No. of Apartments in Building: 789
ORIGINAL MODEL: VIEW NORTH LEVEL 1 PARKADE ENTRY ALONG FRONT ST.

NEW MODEL: VIEW NORTH LEVEL 1 PARKADE ENTRY ALONG FRONT ST.

ORIGINAL MODEL: VIEW SW TO COURTYARD & P1 PARKADE ENTRY.

NEW MODEL: VIEW SW TO COURTYARD & P1 PARKADE ENTRY.
MINUTES OF THE ADVISORY DESIGN PANEL MEETING HELD ON
JULY 7, 2016 AT THE DISTRICT OF NORTH VANCOUVER

ATTENDING: Mr. Dan Parke (Chair)
Mr. Laurenz Kosichek
Mr. Tieg Martin
Mr. Stefen Elmitt
Mr. Craig Taylor
Sgt. Kevin Bracewell
Ms. Diana Zoe Coop
Mr. Samir Eidnani
Mr. Greg Travers

REGRETS: Ms. Amy Tsang (Vice Chair)
Mr. Steve Wong

STAFF: Mr. Alfonso Tejada
Mr. Michael Hartford
Mr. Scott Sigston
Ms. Natasha Letchford (Item 3.a. and 3.b.)

The meeting came to order at 6:05 pm.

1. ADOPTION OF MINUTES

A motion was made and carried to adopt as circulated the minutes of the Advisory Design Panel meeting of May 12, 2016. Some discussion took place regarding options in how motions might be crafted, including the level of detail in motions regarding items for consideration.

2. ANNOUNCEMENTS

There were no announcements.

3. NEW BUSINESS

a.) 1502 – 1546 Oxford St. – Preliminary application for 180 bed seniors’ care facility

Ms. Natasha Letchford, Community Planner, introduced the project and provided background on the site and surrounding area. The Official Community Plan designation is “Level 5 – Low Density Residential” and the proposal is a preliminary application for OCP amendment to a higher density and rezoning of the site.

The proposal is for a 180 bed residential care facility in a six-storey building. A 5 metre land dedication is proposed at the at east side of the site to allow for the construction of the “green spine” – a linear parkway within the Lynn Creek Town Centre.
The Chair welcomed Ms. Mary McDougal and Mr. Derek Crawford of Derek Crawford Architect, who introduced the project to the Panel. Ms. McDougal and Mr. Crawford noted the following points:

- The residential care project is a partnership with the BC Ministry of Health
- The applicant is looking for feedback from the Panel to help steer the project and help resolve design issues early
- Floor plans are almost identical throughout the 6 storeys with a mix of 30 beds per floor and one private dining area per floor
- Residents will have walking routes throughout the building and courtyards but will not have access to the street
- The building will have a residential character fronting Orwell Street and Mountain Highway
- The external character will be contemporary, with proposed materials being residential in nature with natural wood, large soffits, and an appealing residential form
- The six storeys will be broken up into various elements to accentuate the residential character
- Base of the building is to be almost a podium, with a raised terrace element

Mr. Travis Martin, Landscape Architect, presented the landscape design with reference to the following comments:

- Principles include the creation of a secure courtyard, and seating and social spaces for activities in three shared outdoor spaces
- North shared space is an extension of the dining room with an opportunity to bring the outside into the building (and vice versa)
- A landscape buffer at the north will help to limit impact of future development
- Second courtyard (at south-west) will be intended for residents and staff
- Third courtyard (at south-east) will have seating and garden elements as well as a greenhouse in the corner
- Objective is to create opportunities to bring residents out of the building when they are visiting relatives as well as to provide outdoor areas for staff
- Raised planters will be accessible for persons in wheelchairs
- Fencing is designed to act as a barrier without being opaque
- Water features will create interest and white noise
- All season structural plantings are included as well as a healing garden

The Chair thanked the applicant team for their presentation and asked if there were any questions of clarification from the Panel. Questions were asked and answered on the following topics:

- Where will the kitchen be located? Ideally on the lower level – below grade
- How does the loading dock work – are residents accessing this area? It would primarily be for deliveries and garbage collection. Typically no more than once per day.
- Is there a freight elevator in the locking dock? Yes
• What is the team’s experience? The team has three existing locations - Kamloops, Penticton, and Prince George – and senior management has worked in residential care for 20 years
• Does Vancouver Coastal Health have a say in the functionality? Yes the licensing requirements come from VCH
• Are there many ambulances expected to access the site? Ambulances rarely attend these sites
• Are there any bike racks for visitors? Yes, there are intended to be, most likely in the front drive court area.
• Why is there no underground parking plan or upper floor plans? As this is a preliminary application, the full floor plans have not yet been developed. The intention was to attain early feedback from both the Design Panel, and the District
• Is there any space in the building that would accommodate all of the residents in a group? No; but there are larger spaces with retractable walls to allow for larger events
• How long would residents be expected to reside here? About 2 years
• Can over-height vehicles be accommodated in the underground parking? No, the expectation is that larger vehicles will be accommodated in the front drive court area
• It appears that each floor has a separate dining area – is the kitchen is located in the basement area and food then moved to upper floors? Yes, with prep areas adjacent to each of the dining areas for serving
• What is the green building target? The DNV policy is for LEED “Gold” which the project will fulfill

Mr. Michael Hartford read the comments of Mr. Alfonso Tejada, District Urban Design Planner:

• Careful site planning is necessary to integrate the project with the “green spine” along the east property line
• There is some concern regarding the relationship of the project to Mountain Highway and ensuring a positive street level experience for pedestrians on this elevation
• There may be merit in creating a sense of individual unit entry for units facing the streets on Mountain Hwy and Oxford Street. Related to this, the units facing the green spine should have a residential character and a relationship to the pedestrian area.
• Access to the underground parking and drop-off/pick-up area needs to be carefully considered to ensure a useable and well-designed space that works successfully with the Oxford Street frontage.

The Chair invited comments from Panel members, and the following comments and items for consideration were provided:

• There were general suggestions that precedent images are promising and the proposed building has a handsome with a contemporary feel
• Proposed courtyards appear to be positive elements and will provide a variety of outdoor spaces
• Design and function of the front entrance area should be reviewed to ensure that visitor, resident, and delivery traffic and movements can all be accommodated
• The width of the building at 220 feet does not appear to be overly problematic as the principal façade has been sufficiently broken up

Document: 2956373
• Accessible pedestrian routes around the building should be addressed
• The six storey height of the project may create some challenges for the existing and future residents of the properties to the north, so this should be considered, particularly in the landscape design
• The project as designed is aligned with the rear property line, rather than the angled frontage of Oxford Street – some suggested that there may be a benefit in bringing elements of the building closer to Oxford Street to reflect the angle of the street, while other members commented that having the open spaces in the southern portions of the site is a better use of this area
• Due to the building’s mass, it seems like it would benefit from a podium element
• Eliminating steps into the raised patio garden would be a positive way to address accessibility
• Interior staff areas as well as washroom facilities for visitors should be wheelchair accessible
• Accessible parking may be a challenge in the project, and adequate accessible parking should be provided at grade level
• Given the occupancy of the building, areas of refuge need to be considered carefully
• Longer-term maintenance of cladding materials should be considered, as it may be impractical to refinish natural cedar cladding at upper levels
• Loading area would benefit from review to ensure appropriate function
• The proposed inset courtyard will be in shade for portions of the day so formatting of this courtyard area should reflect environmental influences
• Southwest corner of building seems like it would be an appropriate location to have a patio space for use by residents and our staff – this would also allow a linkage to the street frontage on Mountain Highway
• With the kitchen proposed below grade, consideration should be given to venting of the kitchen in a way that avoids complaints from fan noise

The Chair invited the project team to respond.

The applicant team noted an appreciation for the comments made by the Panel and made the following remarks:

• With regard to raising the building and creating a podium element, it was noted that this could provide a greater street presence, but due to accessibility issues and the desire for the outdoor areas to be easily accessed from the interior, it was felt better to keep the first floor closer to the existing grade level
• In order to help create a greater presence on Oxford Street, the team will explore options for the south courtyard with adjusted fencing and an overhead structure
• The team can explore creating more of a social space at the southwest corner of the site
The Chair invited the Panel to compose a motion:

**MOVED** by Tieg Martin and **SECONDED** by Diana Zoe Coop

**THAT** the ADP has reviewed the proposal, **SUPPORTS** the general concept, and looks forward to a presentation at the detailed application stage that includes a review of the items noted by the Panel in its review of the project.

**CARRIED**

b.) 229 Seymour River Place – Detailed application for a commercial/residential mixed-use project with 201 residential units and approx. 10,000 sq. ft. of commercial space

Ms. Natasha Letchford, Community Planner, introduced the project and provided background for the site. The proposal requires an OCP amendment and rezoning. Surrounding uses include multi-family to the west, the relatively recent Northwoods Village mixed-use development to the south including the new Stongs grocery store, with industrial uses to the east which may be redeveloped for multi-family.

The proposal includes a six-storey building with 10,500 sq. ft. of commercial space at ground level, 201 residential units, and 286 parking stalls.

A key north-south pedestrian and vehicle connection exists adjacent to the site at Seymour River Place.

The Chair welcomed the applicant team and Mr. Keith Hemphill of Rositch Hemphill Architects introduced the project to the Panel. Mr. Hemphill noted the following points:

- The site is fairly complex with a change in grade from north to south
- Existing buildings at the site are due for redevelopment
- The intersection at Old Dollarton and Seymour River Place will become an important focal point for Maplewood, and the through street (Seymour River Place) will allow for a plaza area and open space adjacent
- Parking at ground level will be primarily commercial parking, as well as some residential parking for the proposed townhomes - the remaining residential parking is below ground
- The commercial spaces are located where the District desires commercial activities
- The property to the north-east could not be acquired by the developer, but a future development on this site would have a shared access to the proposed garage via a knock-out panel to allow for shared access in future
- A mix of market housing and 28 replacement rental units is proposed, as well as an additional 10 rental units, for a total of 38 rentals
- Colours and finishes proposed include highlight a natural west coast palette, with two different colour schemes in the various parts of the building
Mr. Daryl Tyacke of ETA Landscape Architecture presented the project to the Panel with reference to the following concepts:

- Townhouse unit entries on Old Dollarton Road are raised somewhat above the street level to assist in creating privacy for outdoor spaces
- Landscape plan highlights use of native plant materials
- A more urban character is proposed at south-east portion of site, with a more natural character at north-west
- Podium level courtyard will be somewhat shady so a variety of shade-loving landscaping is proposed, with the centre of courtyard designed as a family-oriented gathering space
- A children’s play area is positioned to try to reduce noise impacts to residents
- A separate adult-oriented relaxation area is proposed with seating and a fire pit
- Some of the upper units have their large private terraces which are included in the planting plan

The Chair thanked the applicant team for their presentation and asked if there were any questions of clarification from the Panel. Questions were asked and answered on the following topics:

- How will loading access to the CRU’s work? The loading scheme is primarily internalized because of the grade differential - there will be some stairs in the loading corridor
- How is it envisioned that a handicapped person would exit the parking area? They would leave out the front driveway area to the commercial spaces
- Where are the electrical and mechanical closets located on the residential floors? These are not yet defined, but will be resolved at the development permit stage
- Is this project non-combustible? It is a combination, it is non-combustible for the commercial area with frame construction above
- Is the roof drainage internalized? Yes
- Is a firewall required? Yes – the building will require a firewall by the main elevator
- Are waste disposal facilities shared? Yes, shared for commercial and residential
- Are interior amenity spaces proposed? No
- How do loading facilities work for residential moving trucks? Moving trucks will use either of the two loading bays
- What headroom is proposed for the loading bay area? High enough for garbage trucks to access with about 1 ft. clearance. The area will meet the height requirements for trucks as defined in the District’s zoning bylaw
- What green building target is proposed? LEED “Gold”
- Was option explored to make the roof area In between the north and south portions of the west side of the project accessible? Some exploration, but not finalized
- Will the project be phased? No, intended to be built in one phase
- Can residents enter the courtyard from the street? No, entrance to the courtyard is available only from inside the building
Mr. Michael Hartford read Mr. Alfonso Tejada’s, District Urban Design Planner, comments:

- For the key corners in the project (north, southwest, and southeast) more attention is required to:
  - Ensure the corners are welcoming, and where appropriate, residential in character, avoiding the current austere appearance
  - Ensure the corner at the crossroads of Front St. and Seymour River Place is designed to address the future public plaza.
- For the portion of the project on Front Street:
  - Highlighting the parkade entrance should be avoided – the entrance should be downplayed, rather than being accentuated;
  - Insufficient separation is provided between proposed buildings A and B along Front Street and this is contributing to an overly long façade and somewhat oppressive massing along Front Street.
- With regard to architectural character:
  - Project would benefit from more variety in both forms and finishes – some facades are overly long with little variety in treatment, and massing should be reconsidered to assist in addressing this.
  - The exposed north wall should receive a suitable treatment as it may remain exposed for some time

The Chair invited comments from Panel members, and the following comments and items for consideration were provided:

- The elevations along Old Dollarton Road are quite long and unrelieved – these would benefit from techniques to provide more interest
- Corners of the project are a bit weak and would benefit from review – providing greater interest at corners would be a benefit to the design
- It was suggested that the project as designed appears quite bulky
- The acute corner at the south-west portion of the site will create some challenging unit layouts and privacy impacts and would benefit from further attention – this might also be a suitable location for a break in the building
- Townhouse units would benefit from greater expression and differentiation from the units above through massing or materials
- A wider separation for the southern portions of the building could allow for more light into the courtyard
- Courtyard design seems very positive, with a suitable approach to a limited space, but greater access to courtyard from suites fronting on courtyard area would be beneficial
- The location of the CRU’s and the combination of some of the functional facilities, such as loading and waste disposal, may create some challenges for strata administration
- Some attention needs to be paid to the servicing corridor for the commercial units, and it would appear that for some of the CRU’s, loading could be accommodated on the street frontage
- Washroom plumbing for CRUs may be too close to the electrical rooms to meet code
- Residential loading should be resolved to ensure it is usable and does not conflict with commercial loading activities
• The project includes a large number of flat roofs, and more interest could be created with more variety in roof shapes
• Wood, stone, slate and brick are all materials included in the District’s development guidelines, but vinyl siding is not included, and its use should be reconsidered
• The choice of colours and materials fairly is neutral and it would be beneficial to see different portions of the structure looking different and less neutral – colour choices could work to provide more differentiation and interest in the façade.
• The proposed colour schemes were noted as showing show quite a lot of repetition, with a lack of variety or contrast
• In the north-west portion of the site a masonry wall occurs above a wall clad in siding – the heavy element above a light element needs reconsideration
• Fall protection should be examined for roof access hatches
• Options for more greenscape on roof areas would be beneficial – including options for greater resident access to roof areas
• Project would benefit from more accessible visitor parking
• Would like to see swing doors eliminated in the townhouse bathrooms to improve accessibility
• Commercial parking entrance could be improved with some landscaping, trellis, or timber elements

The Chair invited the project team to respond. The team noted that the feedback is useful and valuable and made comments on the following topics:

• Exterior loading for commercial functions was not shown as there was significant pushback from the District on this approach
• Colour schemes can be reviewed for some alternate options
• Roof access hatches and fall protection will be reviewed
• Options for green roofs can be explored with the client

The Chair invited the Panel to compose a motion:

**MOVED** by Stefen Elmitt and **SECONDED** by Laurenz Kosichek

**THAT** the ADP has reviewed the proposal and; **SUPPORTS** the general concept but recommends revisions to the proposal and a further presentation to address the following specific items:

a) Consideration for providing interior amenity space
b) Review of functionality of loading and delivery for commercial and residential uses as well as reconsideration of combining these loading functions
c) Review of facilities for waste and recycling to separate commercial and residential functions
d) Review of massing to address long facades with repetitive elements, and options for breaking-up building massing at south-west corner in particular
e) Review of proposed colour scheme and materials to provide greater vibrancy and contemporary colour gradation
f) Exploration of ways to better express grade level townhomes through alternate material and massing choices
g) Review of opportunities to provide roofline variation through consideration of sloped roofs and elevation differentiation
h) Consideration of direct access from the ground plane to the interior courtyard
i) Consideration of cycling end-of-trip facilities and scooter charging and storage facilities within the building

CARRIED

4. OTHER BUSINESS

None

6. ADJOURNMENT

The meeting was adjourned at 8:30 p.m.

7. NEXT MEETING

August 11, 2016

Chair

Date
The meeting came to order at 6:01 pm.

1. ADOPTION OF MINUTES

A motion was made and carried to adopt as circulated the minutes of the Advisory Design Panel meeting of October 13, 2016.

2. ANNOUNCEMENTS

The voting packages for the Design Excellence Awards are being organized and will be circulated to Panel members. Voting will be summarized at an upcoming meeting.

3. NEW BUSINESS

a.) 229 Seymour River Place – Detailed Planning Application: Rezoning and Development Permit for Mixed-use Redevelopment (Second Review by ADP)

Ms. Natasha Letchford, Community Planner, introduced the project and provided background on the past work supporting the detailed planning application, its context and relevant development guidelines, including those for form and character, commercial and mixed-use buildings, and energy and water conservation. Information was also provided on the work toward an implementation plan for the Maplewood Village Centre. It was noted that the development proposal was previously reviewed by the Panel at the meeting of July 7, 2016.
The project consists of a mixed-use development containing commercial/retail use on the ground level with two separate five-storey residential buildings above. The residential units are a mix of apartments and townhomes with both rental and strata tenure.

The project includes approximately 10,500 square feet of retail commercial space, 193 dwelling units, 275 vehicle parking spaces, and 242 bike parking spaces. Since the Panel’s last review, the number of units has been reduced from 201 to 193 and the applicant has made a number of changes to address the comments of the Panel.

The Chair welcomed the applicant team and Mr. Bryce Rositch of Rositch Hemphill Architects and Mr. Daryl Tyacke of ETA Landscape Architecture. Mr. Rositch and Mr. Tyacke noted the following points in their presentation:

- Significant changes have been made to improve shared space and private space within the inner portion of the site layout
- The original narrow separation of the inner courtyard is now 30 feet to help address the cramped and somewhat shaded layout from the previous design
- The residential portion of the project has been broken into three elements, each with their own character and colour scheme
- Bike storage and workshop areas have been proposed in the areas at the south-west corner of the courtyard that were previously rather cramped unit layouts
- The commercial “back of house” functions have been simplified and improved to allow for better access to the retail space
- Commercial and residential waste disposal and recycling areas have been separated
- Stronger corners with bolder accents and colours have been added to create character in the project
- Vertical metal siding has been added in feature areas of the building for more interest
- The landscaping approach to the courtyard has been revised to take advantage of the additional open space and greater building separation
- The landscape design and planting plans for the courtyard design and the streetscapes were reviewed.

The Chair thanked the applicant team for their presentation and asked if there were any questions of clarification from the Panel. Questions were asked on the following topics:

- Lines are shown on the siding in the elevation drawings – what siding is proposed? Cement siding in a horizontal and vertical pattern (Hardi-panel 2.0) as well as corrugated metal siding
- Is the courtyard flat? Generally, but also meant to have a mounded area as part of the children’s play area
- Is there a concern about mixing rentals and strata in one portion of the building? Not concerned with mix because it is similar to condo developments that have private individual rented condos and client has experience with management of rentals
- Have turning radii and transfers to toilets been reviewed in enhanced accessibility units? Further review is needed to accommodate turning radii and toilet transfers
Mr. Alfonso Tejada, District Urban Design Planner, provided the following comments and questions for consideration:

1. Building corner at Old Dollarton Highway and Front Street would benefit from revisions as the previous version had stronger massing and it seems that in adjusting certain design elements some of this strength has been lost
2. Revised design includes a ledge element beyond the balcony railing which may be too strong and could be reduced in depth or broken up
3. Having flat canopies creates a somewhat reduced geometric appeal for the building and some sloped canopy elements should be considered
4. Design for the driveway entrance to the parkade feels disjointed and could benefit from reflecting the line of the adjacent commercial canopy
5. Walls flanking the service area seem too high and lack human scale so could be improved with greater residential character

The Chair invited comments from Panel members, and the following comments and items for consideration were provided:

- Overall, it was suggested that the site layout and building massing are more successful and the project team was commended for the responses to the Panel’s previous suggestions - the greater openness between the building elements and within the courtyard was seen as positive
- A simpler more elegant approach to elevations was encouraged as some of the clarity in the project has been lost in the use of additional colour schemes – there needs to be a greater logic in the location of the different materials and colours and some of the stronger elements of the project design are being diminished by the changes in colours and materials
- Instead of three colour schemes, perhaps two would be sufficient, and the use of similar stone in the various schemes could help provide some consistency
- It was noted that breaking-up the building elevation along Old Dollarton Road seems quite successful
- The “pop-up” roof elements appear to be more successful on Seymour River Place than on Front St and some further review might help rationalize the use of this element in the overall project design
- Success in the design of “turning the corner” is greater at the south-east corner of the project than at the south-west, and refinements for the south-west corner should be considered
- Materials should be reviewed to incorporate more timber elements at the townhouse entrances along with “grounding” the entire building scheme, and overall the project would benefit from the use of more natural materials
- North elevation of project needs to be handled carefully to give it more interest and avoid a long-term blank wall
- Accessibility should be reviewed for the bathroom areas to allow for convenient access as well as appropriate transfers to toilets
• Consideration should be given to providing some parking spaces with higher head-room for vans
• While the courtyard design was noted as being improved, it was suggested that there is still limited access to courtyard with only one stair from street level – improved connections would be benefit
• Would be a benefit to allow for the patios of the accessible units to have direct barrier free access to the courtyard and to provide for barrier-free access to the centre of the courtyard space rather than just the perimeter
• Plant selections should take into account shadier areas of courtyard while enhancing the increased openness between building elements
• Further review is suggested for the space between the seating area and the play area to ensure less chances of landscape deterioration – a defined pedestrian route through this area could be of value
• The grass mound in the courtyard is only 1 foot high and might benefit from greater height to increase its interest and play value.
• The placement and design of the parkade, utilities and mechanical rooms need to be explored in more detail to ensure the commercial space venting is resolved and appropriate parking access clearances are provided

The Chair invited the project team to respond. Mr. Bryce Rositch acknowledged the Panel’s suggestions, commented that the design team appreciates the input from the Panel, and noted that the team will work with District staff to further refine and improve the design.

The Chair invited the Panel to compose a motion:

MOVED by Tieg Martin and SECONDED by Steve Wong:

THAT the ADP has reviewed the proposal and recommends APPROVAL of the project SUBJECT to addressing to the satisfaction of staff that the items noted by the Panel in its review of the project.

CARRIED

b.) 2046 Curling Road, 1886 – 1956 Belle Isle Place: Detailed Planning Application – rezoning and development permit for 87 unit townhouse development

Mr. Erik Wilhelm, Community Planner, introduced the project and provided background for the application, including the site and surrounding uses, relationship to the Official Community Plan, and the specifics of the Lionsgate Village Centre and the peripheral area housing policies, as well as the guidelines against which the project would be evaluated.

Mr. Wilhelm noted that this site is occupied by eight single-family properties and the surrounding neighbourhood will see an increase in density as envisioned within the peripheral housing policy. The proposal is for 87 townhouse units, within 11 separate buildings, and a total floor space ratio of 1.2. All buildings are 3 storeys in height with rooftop decks, and an underground parkade to accommodate a total of 166 parking stalls.
The Chair welcomed the applicant team and Mr. Duane Siegrist of Integra Architecture and Mr. Daryl Tyacke of ETA Landscape Architecture, introduced the project. Mr. Siegrist and Mr. Tyacke noted the following points in the presentation:

- Mr. Siegrist reviewed the rationale for the site layout including the site influences and relationships to nearby development and the proposed expanded park
- Seating and social areas are proposed at entrances to the site to enhance plaza, park, trail, and river connections
- A variety of approaches to elevations of units has been proposed depending on influences from the site – whether they front on a walkway, a courtyard, or the park
- Units fronting the park were designed with a more vertical expression
- A mix of stacked and conventional townhouse layouts provide diversity to the neighbourhood and a good transition between the existing single family dwellings and the future taller towers to the east and south
- Project looks to achieve Built Green Gold
- Accessibility standards have been prioritized to meet District standards and the inclusion of some single-level townhouse units will help in this regard
- Mr. Tyacke spoke to the park “edge” and the way in which the landscape reflects the rhythm of the buildings along the park
- Outdoor amenity and play area designs have been formatted to allow a positive relationship to the adjacent development and the potential for sharing of these spaces
- Project layout highlights permeability to allow multiple options of getting to and from central nodes such as the adjacent park and the town centre and wayfinding signage will be a key element
- The plant palette will reflect the natural features found on the North Shore and also help to create a unique character for various areas of the project

The Chair thanked the applicant team for their presentation and asked if there were any questions of clarification from the Panel. Questions were asked on the following topics:

- What material are the front entry stairs? Timber stringers with concrete treads
- Is the 35 foot separation wall face to wall face? Yes, but 26 feet is proposed for rear portion of units fronting park – these units do not face each other
- Do enhanced accessible units have steps at front entrances? No, the entrances are on the ends of the units with no steps
- Are windows all vinyl-framed - some looks like storefront, or window-wall? All vinyl-framed and similar approaches have been used in other projects
- Drawings show thin overhangs and a lack of gutters – Project will use Hardi-2.0 which allows for slimmer details with overhangs designed to avoid need for gutters
- Siding detail shows a mix of “Hardi” and cedar materials without overhangs, is this correct? These areas are wood-look “Hardi” material and will be durable without overhangs
- Some roof decks do not have an enclosed stair – what is the logic for this? Some variety in designs was desired as well as a reduction in the bulk of the buildings
• There is some lack of clarity on steps through courtyard areas – are there steps? Some refinements have been made to remove some steps from some areas and drawings will be updated to reflect these changes
• Has heating approach and connection to District energy been considered? Exploring options, but not resolved

Mr. Alfonso Tejada, District Urban Design Planner, provided the following comments and questions for consideration:

1. District guidelines encourage variety in building forms for the edge along the park and the current proposal does provide for much variety
2. Building facing greenway seems long and could benefit from a break in the building
3. End units facing streets should turn corners as per guidelines
4. Driveway ramp needs to be treated carefully to create a successful relationship between the two projects which will share the ramp
5. Seems like shared amenity should be more central rather than at the south-west corner of the site and it may be difficult to achieve a successful approach to sharing of this space
6. Some of the roof deck accesses are creating the impression of 4 storey buildings – these deck accesses should be reconsidered to soften the approach, with the potential use of more exterior spiral stairs.

The Chair invited comments from Panel members, and the following comments and items for consideration were provided:

• Overall, Panel members expressed an appreciation for the work undertaken in site planning for this odd-shaped parcel
• The format of the courtyard areas seems well thought-out and will help to provide appropriate building separations as well as pedestrian connectivity but with a maximized floor space ratio the site seems a bit dense
• The access points into the site were noted as being well-handled, with no “dead ends”, but even with the number of internal walkways, the distances from some units to public streets seem quite long and quality connections to the neighbourhood should be considered
• In general it was felt that the amenity space might be better located in a more central location as the current location can only really work with a successful arrangement with the adjacent property- further, there might be merit in co-locating the amenity space with the elevator from the parking garage
• The material choices for the project were supported, and the use of “Hardi 2.0” was encouraged to allow for quality detailing
• The project was commended for taking a positive approach to accessibility issues in a ground-oriented townhouse form, however further work should be done to ensure that the courtyard areas and amenity space are accessible without steps
• Repetition of units seems more successful than mirroring of building elements because it adds simplicity to the design of the site as a whole, but it was also noted that the elevations of Buildings 1 and 2 seem somewhat monotonous.
• For units facing the park, it was suggested that a low wall with a railing on top might work better as a suitable separation from the public to “semi-private” areas.
• Providing some better buffering for grade level outdoor spaces could be positive for some of the units closer to the park, while some other units seem overly enclosed.
• Some concern was expressed regarding the approach to fencing and buffering along the west side of the project to ensure a comfortable and attractive relationship to the adjacent project.
• Roof access elements on the south building adjacent to the higher density development seem to work as a positive transitional feature but some concerns were expressed with exterior planter elements and spiral staircases above living space that could lead to drainage and noise issues associated with the steel roof access stair.

The Chair invited the project team to respond.

Mr. Siegrist thanked the Panel for the comments and noted a willingness to explore opportunities for an amended common outdoor amenity area. It was indicated that opportunities for a shared space with the neighbouring development would also continue to be explored. Fencing along the west side of the west building will also be addressed and is to be 6 feet in height so buffering between sites should not be an issue.

The Chair invited the Panel to compose a motion:

MOVED by Laurenz Kosichek and SECONDED by Craig Taylor:

THAT the ADP has reviewed the proposal, and recommends APPROVAL of the project SUBJECT to addressing to the satisfaction of staff the items noted by the Panel in its review of the project.

CARRIED
c.) 2049 Heritage Park Lane: Preliminary Planning Application – Rezoning and Development Permit for 42 unit townhouse development

Mr. Kevin Zhang, Community Planner, introduced the project and provided background for the preliminary planning application including the site and surrounding uses, Official Community Plan provisions on density and development permit guidelines, and some background on the status of the Maplewood Village implantation planning work.

The site comprises five existing single-family lots that are bounded by Heritage Park Lane to the north, a newly completed townhouse development to the east, Maplewood Farm to the south, and Maplewood Creek to the west. The northern and western parts of the proposed site will require approximately 10m to 15m setbacks from Maplewood Creek to accommodate riparian protection.

The proposal includes 42 townhouse units in two buildings, each of four storeys. Underground parking is provided in a one level garage and the overall density proposed is consistent with the OCP at 1.2.

A question of clarification was posed regarding the difference in creek setback (15m to 10m) on the west side of the property. In response, it was noted that the creek setbacks are the result of an analysis by a qualified environmental consultant, with review by the District of North Vancouver Environmental Protection Officer – in this case an area of setback to a reduced width of 10m was found to be supportable.

The Chair welcomed the applicant team and Mr. Mark Blackwood of Ekistics Architecture introduced the project. Mr. Blackwood noted the following points in his presentation:

- The project includes 42 townhouse units in two buildings: one building with units in a back to back configuration and the other single-loaded
- Five garden suites are proposed along the east edge of the site to be formatted for enhanced accessibility
- A fire department access pad is located in the north portion of the site, adjacent to the garage entry
- Project is targeting Built Green “Gold” equivalency
- The finish and colour selections were reviewed, with a mix of natural colours inspired by the surroundings
- Project includes significant riparian enhancement and long-term protection for Maplewood Creek

Mr. Gerry Eckford, Landscape Architect, presented the project to the Panel with reference to the following concepts:

- Central courtyard includes a jogged walkway alignment to provide more interest
- A play area is proposed in the north-west portion of the site with an adjacent overlook to the riparian area
- Significant planting is proposed along the street to help provide a sense of arrival, as well as planting along the south property line to provide a buffer to Maplewood Farm.
The Chair thanked the applicant team for their presentation and asked if there were any questions of clarification from the Panel. Questions were asked and answered as follows:

- What access is available to riparian area? Not accessible, as per municipal requirements
- Are electrical rooms accessible without steps? Southerly room has no steps. Northerly room requires three steps
- Are open riser stairs permitted for exterior entries as shown? Yes, as long as opening is limited in height as they are in this project
- Is an elevator proposed from the parkade? No
- Will the swing of doors on storage rooms interfere with parked cars? Yes, currently the door swing will encroach into parking space
- There seems to be a lot of stairs in this development - is the play area accessible? The play area is accessible itself but there are steps to the courtyard so access is not entirely barrier-free. Only the east building walkway access is currently shown as accessible
- Why is no elevator provided from the parkade? Mainly due to economics and lack of space on site – but can be reviewed
- Why are there steps to accessible ground–level units? A reflection of grades, but can be reviewed to eliminate unnecessary steps
- What is the rationale for back to back units? Driven by land available once riparian setbacks were accommodated
- Is there a pedestrian linkage to east or south? None to the east and only Fire Department access to the south - pedestrian access is via Heritage Park Lane.
- What are main pedestrian desire lines? Mainly south on Seymour River Place to Maplewood Village Centre

Mr. Alfonso Tejada, District Urban Design Planner, provided the following comments and questions for consideration:

1. The project has a significant constraint in creek setback and water table level and this is affecting the site layout
2. Proposed materiality seems more successful than existing project to the east which is positive
3. Accessibility between the garage and unit entries is a concern and should be reviewed
4. West building roof shape contributes to an impression of excessive mass and this roof shape should be reconsidered
5. Wrapping of corner units to north elevations of both building could be improved and would help to provide an improved presence on Heritage Park Lane
6. The garage access dominates the front of the project, and could be improved with a quality paving treatment.
The Chair invited comments from Panel members, and the following comments and items for consideration were provided:

- Generally Panel members noted that the site layout and form of development seems reasonable for the site - the built form, layout, and rooflines provide a good foundation for the character of this site
- Significant concern was expressed regarding accessibility in the project, both for the individual unit entries and the common areas in the project
- Revision of steps in the project overall, as well as in front of the accessible units should be considered to improve accessibility and avoid need for stair glide installations
- Improved garage access, with more comfortable stairs and consideration of an elevator, should be explored
- The children’s play area was noted as a positive element in the project, but consideration should be given to enhancing the connection between the site and the riparian area through material choices and opportunities to interact with nature
- An improved overlook from the main entry ramp was noted as a possible solution to enhancing connectivity with the environment as well as providing an educational opportunity for children at play
- Specific consideration should be given to the use colour in the project to provide more interest
- Placement of one white-framed window on the north elevations should be re-considered
- Courtyard elevations would be improved with a continuation of the stone cladding currently shown on the street elevation
- Front entrance and relationship to street needs some work to draw the arrival point closer to the street and create a more welcoming relationship – there needs to be a better defined common pedestrian entry
- Fire Department requirements should be reviewed carefully to ensure that the format of access and proposal for grass-crete paving are acceptable
- A 4 storey building with 3 storey townhouse units may require an innovative approach to sprinkler system integration and code compliance issues
- Given the relationship to the creek, robust waterproofing will be needed for the parkade as well as the various mechanical and utility rooms
- Given that the only outdoor space for the upper units is a balcony, the configuration of the balconies should be reviewed to ensure the greatest comfort and usability
- A different type of access door for the garage storage lockers should be considered to avoid conflicts with parked vehicles

The Chair invited the project team to respond.

Mr. Mark Blackwood thanked the Panel for their comments and noted that stacked townhomes are a challenging housing form. The project team is pleased to look at various options to refine the project and in particular to improve accessibility.
The Chair invited the Panel to compose a motion:

**MOVED by Steve Wong and SECONDED by Amy Tsang:**

**THAT** the ADP has reviewed the proposal, supports the general concept, and looks forward to a presentation at the detailed application stage that includes a review of the items noted by the Panel in its review of the project.

CARRIED

4. **OTHER BUSINESS**

None.

5. **ADJOURNMENT**

The meeting was adjourned at 9:30 p.m.

6. **NEXT MEETING**

December 8, 2016
Diamond Head Consulting Ltd.
Arborist Report

For:
Maplewood Plaza
Front Street & Old Dollarton Road
North Vancouver, BC

February 19, 2016

To be submitted with Tree Protection Plan
Dated: February 19, 2016

Submitted to:
ETA Landscape Architecture
Attn: Daryl Tyacke
1690 West 2nd Avenue
Vancouver, BC
V6J 1H4

Submitted by:

DIAMOND HEAD
CONSULTING LTD.

3551 Commercial Street
Vancouver, BC
V5N 4E8
The following Diamond Head Consulting staff performed the site visit and prepared the report. All general and professional liability insurance and individual accreditations have been provided below for reference.

Supervisor:
Max Rathburn
ISA Certified Arborist (PN0599A)
ISA Certified Tree Risk Assessor (159)
BC Parks Wildlife and Danger Tree Assessor

Project Staff:
Owen Johnston B.Sc. (Forestry)
Arborist in Training

This report summarizes the planned management of trees on the site. If there are any questions or concerns as to the contents of this report, please contact us at any time.

Contact Information
Phone: 604-733-4886
Fax: 604-733-4879
Email: max@diamondheadconsulting.com
Website: www.diamondheadconsulting.com

Insurance Information
WCB: # 657906 AQ (003)
General Liability: Northbridge General Insurance Corporation - Policy #CBC1935506, $5,000,000 (Mar 2015 to Mar 2016)
Errors & Omissions: Lloyds Underwriters – Policy #1010615D, $1,000,000 (June 2015 to June 2017)
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1.0 Introduction

Diamond Head Consulting Ltd. (DHC) was asked to complete an assessment of the trees on and
adjacent to the following proposed development:

<table>
<thead>
<tr>
<th>Civic address:</th>
<th>Maplewood Plaza, District of North Vancouver BC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project No.:</td>
<td>unknown</td>
</tr>
<tr>
<td>Client name:</td>
<td>Eta Landscape Architecture</td>
</tr>
<tr>
<td>Date of site visit:</td>
<td>February 1, 2016</td>
</tr>
<tr>
<td>Weather during visit:</td>
<td>Sunny, cold</td>
</tr>
</tbody>
</table>

The objective of this report is to ensure the proposed development is in compliance with District
of North Vancouver Bylaws that applies to tree retention. These requirements are covered in
the Tree Protection Bylaw (#7671). Protected trees as defined by this bylaw include:

a. Any tree on land owned by or in the possession of the District, including,
   without limitation, a tree in a park or on a boulevard, road or lane allowance;

b. Any tree within a protected area;

c. Any tree on sloping terrain;

d. Any replacement tree;

e. Any retained tree;

f. Any heritage tree;

g. Any wildlife tree;

h. Any tree located on wetland or waterfront;

i. Any tree of the following species:
   i. Arbutus (Arbutus menziesii);
   ii. Garry Oak (Quercus garryana);
   iii. Oregon Ash (Fraxinus spp);
   iv. Pacific Yew (Taxus brevifolia);
   v. Western White Pine (Pinus monticola); or
   vi. Yellow-cedar (Chamaecyparis nootkatensis).

Replacement trees for the removal of large diameter trees (over 75cm) are required if the
subject lot will have less than 20% canopy cover remaining after the removal of the large
diameter tree. If the canopy cover is over 20% after the removal, no replacement tree is
required.

- If the subject lot is less than 420 square meters in area, one replacement tree for every
  large-diameter tree must be planted.
- If the subject lot is over 420 square meters in area, three replacement trees for every
  large-diameter tree must be planted.

All trees (>20cm in diameter) on and immediately adjacent to the site were assessed, including:
species, diameter at breast height (dbh) measured to the nearest 1 cm at 1.4 m above tree base,
estimated height and general health and defects. Critical root zones were calculated for each of
the trees with the potential for development impacts. Tree hazards were assessed according to
International Society of Arboriculture and WCB standards. Suitability for tree retention was evaluated based on the health of the trees and their location in relation to the proposed building envelopes and infrastructure.

1.1 Limits of Assignment

- Our investigation is based solely on our visual inspection of the trees on February 1, 2016. Our inspection was conducted from ground level. We did not conduct soil tests or root examination to assess the condition of the root system of the trees.
- Only the trees specified in the scope of work were assessed and assessments were performed within the limitations specified.
- This report does not provide any estimates to implement the proposed recommendations provided in this report.
- This report is valid for six months from the date of submission. Additional site visits and report revisions are required after this point to ensure accuracy of the report for the District’s development permit application process.

1.2 Purpose and Use of Report

- Provide documentation pertaining to on and off site trees to supplement the proposed development permit application.
2.0 Observations

2.1 Site Overview

The site is currently contains a mix of commercial and residence features. The majority of the subject site is paved for parking, and the parking area contains several planters growing smaller trees. There is also a maintained lawn and garden area with trees that lines the south side of the property. The trees in the planters around the store fronts are Japanese maple (Acer palmatum) or cherry (Prunus sp.). The majority of the others trees on site are Black Pine (Pinus nigra) and Littleleaf linden (Tilia cordata). Note; the majority of the trees were found to be in poor overall health condition from years of growing in a heavily hardscaped environment with many of trees having limited root zone space.

Tree attributes, critical root zones and recommendations for the trees are listed below in Table 1.
2.2 Tree Inventory

The following is an inventory of assessed trees, each of which was marked with a numbered tag as is required by the District Tree Bylaw. Tree species, characteristics, comments, recommendations and required root protection zones have been suggested (Table 1). Their locations are illustrated on the accompanying map.

Overall Health and Structure Rating

**Excellent** = Tree of possible specimen quality, unique species or size with no discernible defects. Or a heritage tree.

**Normal** = These trees are in fair to good condition, considering its growing environment and species.

**Poor** = These trees have low vigour, with noted health and/or structural defects. This tree is starting to decline from its typical species growth habits.

**Very poor** = These trees are in serious decline from its typical growth habits, with multiple very definable health and/or structural defects.

**Dead/Dying** = These trees were found to be dead, and/or have severe defects and are in severe decline.

**High Risk** = These trees have been deemed hazardous by a Certified Tree Risk Assessor utilizing CTRA methods. They have a probability of failure of 3 or higher with a total overall risk rating of 8 (Moderate 3) or above.

Tree Retention Suitability Ratings

**Unsuitable** = Not suitable for retention in context of the proposed project design and land use changes. These trees have pre-existing health and structural defects. There is a significant chance that these trees will not survive or may become a hazard given the proposed future land use.

**Moderate** = These trees have moderate structural defects or health issues. The retention of this class of trees is not always successful or viable due to their pre-existing structural defects or health issues; however these trees may be viable for retention with the use of special measures.

**Suitable** = These trees have no obvious structural defects or health issues, and are worthy of consideration for retention in the proposed development.

**Suitable as group** = These trees have grown up in groups (groves) of other trees, and have not developed the type of trunk and root structure that will allow them to be safely retained on their own. These trees should only be retained in groups.

Tree Risk Assessment

Using the *Tree Risk Assessment in Urban Areas and the Urban/Rural Interface Release 1.4* manual, published by the International Society of Arboriculture, a Risk Rating out of 12 maximum points was given to the tree as shown in Table 2. The formula used was: **Probability of Failure + Size of Part + Target Area = Tree Risk Assessment (Rating)**.

In the Tree Risk Assessment, the tree was rated as follows:
**Probability of Failure** = *(1 low to 5 Extreme)*. This is the likelihood of branch or whole tree failure. One is the lowest possible score; five is the highest likelihood of tree part failure.

**Size of Defective Part** = *(1 small to 3 large)*. This section identifies the largest part, which could fail. A part greater than 50 cm is given a rating of 3, a part between 10 and 50 cm is given a rating of 2 and all parts less than 10 cm are given a rating of 1.

**Target Area** = *(1 low to 4 high)*. The target that the tree could strike is designated a value from 1 to 4 based on the potential to cause personal injury or damage structures and infrastructure.

A value for each of the three categories is assessed and added together in the Risk Rating calculation shown in Table 2. A score of 3-5 indicates a low risk, 6-8 is a moderate risk, 9-11 is a high risk and 12 indicates an extreme risk; this level warrants immediate tree removal. A risk category assigning ranges to the three levels of risk is also provided. Please refer to the table in Appendix 1 for detailed information on interpretation and implications of risk ratings and categories.
2.3 Photographs

Photo A view along a planter of Japanese Maples facing south west.

Photo 2. The south boundary facing east, along a 3 meter berm.

Photo 3. A view across the parking lot facing south east.

Photo 4. Facing west a view of the Giant Sequoia in the south west corner of the property.
## Tree Inventory Table

Table 1. Tree Inventory.

<table>
<thead>
<tr>
<th>Tag #</th>
<th>Common Name</th>
<th>Botanical Name</th>
<th>DBH (cm)</th>
<th>Ht (m)</th>
<th>Overall Condition</th>
<th>Retention Suitability</th>
<th>Comments</th>
<th>Retain/Remove</th>
<th>Tree Retention Comments</th>
<th>Root Protection Zone (m)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Western Redcedar</td>
<td>Thuja Plicata</td>
<td>10</td>
<td>3</td>
<td>Normal</td>
<td>Moderate</td>
<td>Small tree with no major defects</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>0.6</td>
</tr>
<tr>
<td>2</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>15</td>
<td>5</td>
<td>Normal</td>
<td>Moderate</td>
<td>No major defects, growing parking lot.</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>0.9</td>
</tr>
<tr>
<td>3</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>13</td>
<td>6</td>
<td>Normal</td>
<td>Moderate</td>
<td>No major defects, growing parking lot.</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>0.8</td>
</tr>
<tr>
<td>4</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>20</td>
<td>8</td>
<td>Normal</td>
<td>Moderate</td>
<td>No major defects, growing parking lot.</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.2</td>
</tr>
<tr>
<td>5</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>22</td>
<td>9</td>
<td>Normal</td>
<td>Moderate</td>
<td>No major defects, growing parking lot.</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.3</td>
</tr>
<tr>
<td>6</td>
<td>Japanese Maple</td>
<td>Acer palumatum</td>
<td>25</td>
<td>5</td>
<td>Poor</td>
<td>Moderate</td>
<td>In concrete planter, multiple stems from base, minor pruning wounds</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.5</td>
</tr>
<tr>
<td>7</td>
<td>Douglas fir</td>
<td>Pseudotsuga menziesii</td>
<td>12</td>
<td>4</td>
<td>Normal</td>
<td>Moderate</td>
<td>On top of 3 m, growing under and into pine</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>0.7</td>
</tr>
<tr>
<td>8</td>
<td>Western Hemlock</td>
<td>Tsuga heterophylla</td>
<td>9</td>
<td>6</td>
<td>Dying</td>
<td>Unsuitable</td>
<td>Top half of stem is dead, planted between with parking lot and retaining wall</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>0.5</td>
</tr>
<tr>
<td>9</td>
<td>Bigleaf maple</td>
<td>Acer macrophyllum</td>
<td>22</td>
<td>12</td>
<td>Normal</td>
<td>Moderate</td>
<td>Multiple stems from base, planted between parking lot and retaining wall</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>1.3</td>
</tr>
<tr>
<td>31</td>
<td>Giant Redwood</td>
<td>Sequoia giganteum</td>
<td>63</td>
<td>20</td>
<td>Poor</td>
<td>Moderate</td>
<td>Forked top, 1 m from side walk; roots visible against edge of sidewalk</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>3.8</td>
</tr>
<tr>
<td>32</td>
<td>Giant Redwood</td>
<td>Sequoia giganteum</td>
<td>73</td>
<td>22</td>
<td>Normal</td>
<td>Suitable</td>
<td>In raised planter by access ramp; No major defects,</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>4.4</td>
</tr>
<tr>
<td>33</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>20</td>
<td>9</td>
<td>Poor</td>
<td>Moderate</td>
<td>Suppressed by adjacent redwood trees.</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td></td>
</tr>
<tr>
<td>Tag #</td>
<td>Common Name</td>
<td>Botanical Name</td>
<td>DBH (cm)</td>
<td>Ht (m)</td>
<td>Overall Condition</td>
<td>Retention Suitability</td>
<td>Comments</td>
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<td>Tree Retention Comments</td>
<td>Root Protection Zone (m)**</td>
</tr>
<tr>
<td>-------</td>
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<td>--------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>34</td>
<td>Black Pine</td>
<td>Pinus nigra</td>
<td>42</td>
<td>14</td>
<td>Poor</td>
<td>Moderate</td>
<td>On 1.5m berm, forked top at 8m, asymmetrical crown due to neighboring tree</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2.5</td>
</tr>
<tr>
<td>35</td>
<td>Black Pine</td>
<td>Pinus nigra</td>
<td>31</td>
<td>14</td>
<td>Poor</td>
<td>Moderate</td>
<td>On 1.5m berm, thin crown, asymmetrical crown due to, neighboring tree</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.9</td>
</tr>
<tr>
<td>36</td>
<td>Giant Redwood</td>
<td>Sequoia giganteum</td>
<td>68</td>
<td>19</td>
<td>Poor</td>
<td>Moderate</td>
<td>Thin crown, in growing planter by access ramp; roots visible against side walk</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>4.1</td>
</tr>
<tr>
<td>37</td>
<td>Black Pine</td>
<td>Pinus nigra</td>
<td>61</td>
<td>14</td>
<td>Poor</td>
<td>Moderate</td>
<td>On 1.5m berm; 2 stems form 1 m 29/32 cm; asymmetrical crown due to neighboring trees</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>3.7</td>
</tr>
<tr>
<td>38</td>
<td>Black Pine</td>
<td>Pinus nigra</td>
<td>33</td>
<td>14</td>
<td>Poor</td>
<td>Moderate</td>
<td>On 1.5 m berm, lower crown asymmetrical, sapling fir growing in to crown</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2</td>
</tr>
<tr>
<td>39</td>
<td>Black Pine</td>
<td>Pinus nigra</td>
<td>51</td>
<td>14</td>
<td>Poor</td>
<td>Moderate</td>
<td>On 1.5 m berm, pistol butt; second suppressed leader from 2 m</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>3.1</td>
</tr>
<tr>
<td>40</td>
<td>Black Pine</td>
<td>Pinus nigra</td>
<td>31</td>
<td>14</td>
<td>Poor</td>
<td>Moderate</td>
<td>On 1.5 m berm, pistol butt; no other major defects</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.9</td>
</tr>
<tr>
<td>41</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>25</td>
<td>16</td>
<td>Normal</td>
<td>Moderate</td>
<td>Next to green electrical box, in garden with concrete curb</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.5</td>
</tr>
<tr>
<td>42</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>17</td>
<td>12</td>
<td>Normal</td>
<td>Moderate</td>
<td>In garden with concrete curb, no major defects</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1</td>
</tr>
<tr>
<td>43</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>21</td>
<td>13</td>
<td>Poor</td>
<td>Moderate</td>
<td>Two stems past dbh, trimmed for building clearance</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.3</td>
</tr>
<tr>
<td>44</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>33</td>
<td>13</td>
<td>Poor</td>
<td>Moderate</td>
<td>On slope near rock wall; trimmed for building clearance</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2</td>
</tr>
<tr>
<td>45</td>
<td>Douglas fir</td>
<td>Pseudotsuga menziesii</td>
<td>23</td>
<td>14</td>
<td>Normal</td>
<td>Suitable</td>
<td>In garden with large rocks, crown raised to 2 m.</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.4</td>
</tr>
<tr>
<td>46</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>17</td>
<td>10</td>
<td>Normal</td>
<td>Moderate</td>
<td>Trimmed for building clearance, in garden 2m in diameter enclosed by the building or road.</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1</td>
</tr>
<tr>
<td>Tag #</td>
<td>Common Name</td>
<td>Botanical Name</td>
<td>DBH (cm)</td>
<td>Ht (m)</td>
<td>Overall Condition</td>
<td>Retention Suitability</td>
<td>Comments</td>
<td>Retain/Remove</td>
<td>Tree Retention Comments</td>
<td>Root Protection Zone (m)**</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>----------------</td>
<td>----------</td>
<td>--------</td>
<td>-------------------</td>
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<td>----------</td>
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<td>-----------------------------</td>
</tr>
<tr>
<td>47</td>
<td>Littleleaf linden</td>
<td><em>Tilia cordata</em></td>
<td>35</td>
<td>14</td>
<td>Poor</td>
<td>Moderate</td>
<td>2 stems included together with large scar; on top of berm next to 2 m retaining wall; pruned for building clearance</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2.1</td>
</tr>
<tr>
<td>48</td>
<td>Black Pine</td>
<td><em>Pinus nigra</em></td>
<td>39</td>
<td>16</td>
<td>Poor</td>
<td>Moderate</td>
<td>On top of 3m berm next to building; pruned for building clearance</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2.3</td>
</tr>
<tr>
<td>49</td>
<td>Black Pine</td>
<td><em>Pinus nigra</em></td>
<td>37</td>
<td>16</td>
<td>Poor</td>
<td>Moderate</td>
<td>On top of 3m berm next to building; pruned for building clearance</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2.2</td>
</tr>
<tr>
<td>50</td>
<td>Black Pine</td>
<td><em>Pinus nigra</em></td>
<td>31</td>
<td>13</td>
<td>Poor</td>
<td>Moderate</td>
<td>Topped at 4m, kinked leader on top of 3m berm, next to building; pruned for building clearance</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.9</td>
</tr>
<tr>
<td>51</td>
<td>Black Pine</td>
<td><em>Pinus nigra</em></td>
<td>36</td>
<td>16</td>
<td>Poor</td>
<td>Moderate</td>
<td>Kink in top of leader, on top of 3 m berm next to building; pruned for building clearance</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2.2</td>
</tr>
<tr>
<td>52</td>
<td>Black Pine</td>
<td><em>Pinus nigra</em></td>
<td>44</td>
<td>14</td>
<td>Poor</td>
<td>Moderate</td>
<td>Pistol butt, on top of 3 m berm next to building; pruned for building clearance</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2.6</td>
</tr>
<tr>
<td>53</td>
<td>Littleleaf linden</td>
<td><em>Tilia cordata</em></td>
<td>26</td>
<td>12</td>
<td>Poor</td>
<td>Moderate</td>
<td>Long inclusion wounds between stems above dbh, 1.5 m from storm drain, mostly surrounded by parking; lot</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.6</td>
</tr>
<tr>
<td>57</td>
<td>Cherry sp.</td>
<td><em>Prunus sp.</em></td>
<td>34</td>
<td>6</td>
<td>Poor</td>
<td>Moderate</td>
<td>Branches grafted to stem, pruned for branch density, in concrete planter</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2</td>
</tr>
<tr>
<td>58</td>
<td>Cherry sp.</td>
<td><em>Prunus sp.</em></td>
<td>31</td>
<td>6</td>
<td>Poor</td>
<td>Moderate</td>
<td>Branches grafted to stem, pruned for branch density, in concrete planter</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.9</td>
</tr>
<tr>
<td>102</td>
<td>Japanese Maple</td>
<td><em>Acer palmatum</em></td>
<td>10</td>
<td>6</td>
<td>Poor</td>
<td>Moderate</td>
<td>In raised concrete planter, multiple stems from base, minor pruning wounds</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>0.6</td>
</tr>
<tr>
<td>103</td>
<td>Japanese Maple</td>
<td><em>Acer palmatum</em></td>
<td>45</td>
<td>6</td>
<td>Poor</td>
<td>Moderate</td>
<td>Multiple stems from base, in</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2.7</td>
</tr>
<tr>
<td>Tag #</td>
<td>Common Name</td>
<td>Botanical Name</td>
<td>DBH (cm)</td>
<td>Ht (m)</td>
<td>Overall Condition</td>
<td>Retention Suitability</td>
<td>Comments</td>
<td>Retain/Remove</td>
<td>Tree Retention Comments</td>
<td>Root Protection Zone (m)**</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>----------------</td>
<td>----------</td>
<td>--------</td>
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<td>----------</td>
<td>---------------</td>
<td>--------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td></td>
<td>Maple</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>concrete planter; some minor broken branches</td>
<td></td>
<td></td>
<td>development</td>
</tr>
<tr>
<td>104</td>
<td>Japanese Maple kerri</td>
<td>Acer palmatum</td>
<td>32</td>
<td>6</td>
<td>Very Poor</td>
<td>Unsuitable</td>
<td>3 stems from base 10/10/13; poorly pruned and dead branches, expected root vector in concrete planter</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td></td>
</tr>
<tr>
<td>106</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>41</td>
<td>8</td>
<td>Poor</td>
<td>Moderate</td>
<td>Multiple stems past dbh, some minor pruning, between 1 m retaining wall and parking lot, major ivy cover</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>2.5</td>
</tr>
<tr>
<td>107</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>25</td>
<td>7</td>
<td>Normal</td>
<td>Moderate</td>
<td>2m from fire hydrant, asymmetrical crown due to neighboring trees.</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>1.5</td>
</tr>
<tr>
<td>108</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>42</td>
<td>8</td>
<td>Poor</td>
<td>Moderate</td>
<td>Multiple stems past dbh, open grown crown, some minor pruning, between 1m retaining wall and parking lot, major ivy cover</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>2.5</td>
</tr>
<tr>
<td>110</td>
<td>Red Alder</td>
<td>Alnus rubra</td>
<td>20</td>
<td>6</td>
<td>Poor</td>
<td>Moderate</td>
<td>2 stems from base, between 2 m retaining; wall and parking lot</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>1.2</td>
</tr>
<tr>
<td>112</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>30</td>
<td>8</td>
<td>Poor</td>
<td>Moderate</td>
<td>Multiple stems past dbh, 2 of which have been trimmed down to 2 or 1 m, between 2 m retaining wall and parking lot</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>1.8</td>
</tr>
<tr>
<td>113</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>32</td>
<td>8</td>
<td>Poor</td>
<td>Moderate</td>
<td>Multiple stems past dbh, some minor pruning, between 2 m retaining; wall and parking lot</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>1.9</td>
</tr>
<tr>
<td>114</td>
<td>Littleleaf linden</td>
<td>Tilia cordata</td>
<td>22</td>
<td>6</td>
<td>Poor</td>
<td>Moderate</td>
<td>Multiple stems past dbh, some minor pruning, between 2 m retaining; wall and parking lot</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>1.3</td>
</tr>
<tr>
<td>115</td>
<td>Red Alder</td>
<td>Alnus rubra</td>
<td>35</td>
<td>16</td>
<td>Poor</td>
<td>Moderate</td>
<td>Multiple stems past dbh with major inclusion</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>2.1</td>
</tr>
<tr>
<td>Tag #</td>
<td>Common Name</td>
<td>Botanical Name</td>
<td>DBH (cm)</td>
<td>Ht (m)</td>
<td>Overall Condition</td>
<td>Retention Suitability</td>
<td>Comments</td>
<td>Retain/Remove</td>
<td>Tree Retention Comments</td>
<td>Root Protection Zone (m)**</td>
</tr>
<tr>
<td>-------</td>
<td>------------------</td>
<td>----------------</td>
<td>----------</td>
<td>--------</td>
<td>-------------------</td>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>---------------</td>
<td>--------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>116</td>
<td>Littleleaf linden</td>
<td><em>Tilia cordata</em></td>
<td>47</td>
<td>16</td>
<td>Poor</td>
<td>Moderate</td>
<td>3 stems past dbh, smaller stem was being girdled by string</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>2.8</td>
</tr>
<tr>
<td>117</td>
<td>Littleleaf linden</td>
<td><em>Tilia cordata</em></td>
<td>30</td>
<td>17</td>
<td>Poor</td>
<td>Moderate</td>
<td>3 stems past dbh, causing swelling at dbh; slightly suppressed by other trees, phototrophic lean</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>1.8</td>
</tr>
<tr>
<td>118</td>
<td>Littleleaf linden</td>
<td><em>Tilia cordata</em></td>
<td>28</td>
<td>15</td>
<td>Normal</td>
<td>Moderate</td>
<td>Multiple stems at dbh, 2m from fire hydrant, asymmetrical crown due to neighboring trees.</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>1.7</td>
</tr>
<tr>
<td>119</td>
<td>Black Pine</td>
<td><em>Pinus nigra</em></td>
<td>44</td>
<td>18</td>
<td>Poor</td>
<td>Moderate</td>
<td>Secondary leader at 12 m; NW side 1 m from side walk</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>2.6</td>
</tr>
<tr>
<td>120</td>
<td>Littleleaf linden</td>
<td><em>Tilia cordata</em></td>
<td>47</td>
<td>12</td>
<td>Poor</td>
<td>Moderate</td>
<td>3 stems at dbh 10/17/20 cm, creating small bowl with decaying organic matter, phototrophic growth to south</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>2.8</td>
</tr>
<tr>
<td>121</td>
<td>Douglas Fir</td>
<td><em>Pseudotsuga menziesii</em></td>
<td>27</td>
<td>15</td>
<td>Normal</td>
<td>Moderate</td>
<td>1 m to side walk, asymmetrical crown due to neighboring tree</td>
<td>Remove</td>
<td>In conflict with proposed road construction.</td>
<td>1.6</td>
</tr>
<tr>
<td>508</td>
<td>Littleleaf linden</td>
<td><em>Tilia cordata</em></td>
<td>30</td>
<td>12</td>
<td>Poor</td>
<td>Moderate</td>
<td>Long inclusion scars between stems above dbh, parking lot on south side 1.5 m away, 3 m from concrete</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>1.8</td>
</tr>
<tr>
<td>3680</td>
<td>Japanese Maple</td>
<td><em>Acer palmatum</em></td>
<td>33</td>
<td>5</td>
<td>Poor</td>
<td>Moderate</td>
<td>In concrete planter, 3 stems at dbh 16/11/6 cm, minor pruning wounds, tree 60 on plan</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2</td>
</tr>
<tr>
<td>3697</td>
<td>Japanese Maple</td>
<td><em>Acer palmatum</em></td>
<td>38</td>
<td>6</td>
<td>Very Poor</td>
<td>Unsuitable</td>
<td>3 stems from base 14/13/11 cm, one stem has bark flaking off near base, which has already caused a strip 1m long to be missing bark, in raised concrete planter, tree 101 on plan</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>2.3</td>
</tr>
<tr>
<td>3698</td>
<td>Japanese Maple</td>
<td><em>Acer palmatum</em></td>
<td>60</td>
<td>6</td>
<td>Poor</td>
<td>Moderate</td>
<td>Multiple stems from base with average 12 cm stem size, in concrete planter, old pruning</td>
<td>Remove</td>
<td>Conflicts with proposed development</td>
<td>3.6</td>
</tr>
</tbody>
</table>
**Tag #** | **Common Name** | **Botanical Name** | **DBH (cm)** | **Ht (m)** | **Overall Condition** | **Retention Suitability** | **Comments** | **Retain/Remove** | **Tree Retention Comments** | **Root Protection Zone (m)**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
3699 | Cherry sp. | *Prunus sp.* | 38 | 6 | Very Poor | Unsuitable | Wounds; fruiting bodes on stump of pruned branch at 2 m, tree 105 on plan | Remove | Conflicts with proposed development | 2.3

**Tree Risk Assessment Table**

Only trees that had an overall risk rating of 9 (High 1) or above are included in the following table. There are no trees that were inventoried on the subject site that have a high-risk rating in their current land use and condition.
3.0 Summary

The redevelopment of this site utilizes a full site coverage that consumes the majority of the site and includes the construction of a new road. The tree retention opportunity is nil due to project design. The site inventory identified 56 trees on the subject site. All the trees (56) are to be removed for the development. Replacement trees will be detailed by ETA Landscape architecture on their Landscape plans.

3.1 Tree Retention and Removal by Species

Table 2. Tree species on site summary.

<table>
<thead>
<tr>
<th>Tree Species</th>
<th>Total Number of Trees</th>
<th>Total Retained</th>
<th>Total Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Pine</td>
<td>12</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Cherry sp.</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Giant Redwood</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Japanese Maple</td>
<td>7</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Littleleaf linden</td>
<td>23</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>Red Alder</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Douglas-fir</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Western Hemlock</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Western redcedar</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>56</strong></td>
<td><strong>0</strong></td>
<td><strong>56</strong></td>
</tr>
</tbody>
</table>
4.0 Trees on Adjacent Properties

There are not offsite trees found growing on the adjacent properties. Root protection zones for the trees have provided within Table 1. Tree Inventory.

Note: the developer or subject site owner must verify that all off-site trees within or that could be affected by the scope of construction are identified and surveyed for location whether they are identified by DHC or not. Any off site trees that are recommended for removal will require the adjacent property owner’s permission and may require additional permits.

5.0 Construction Guidelines

The following are recommendations for risk mitigation and proper tree protection during the construction phase of the project.

Tree Retention Zones

Six times the diameter was used to determine the optimal root protection zone (RPZ). The optimal root protection zone is to be measured in the field from the outer edge of the stem of the tree. The RPZ is the area around the tree in which no grading or construction activity may occur without project arborist approval, and is required for the tree to retain good health and vigor.

The following are tree preservation guidelines and standards for the RPZs:

- No soil disturbance or stripping;
- The natural grade shall be maintained within the protection zone;
- No storage, dumping of materials, parking, underground utilities or fires;
- Any plan affecting trees should be reviewed by a consultant including demolition, erosion control, improvement, utility, drainage, grading, landscape, and irrigation;
- Special foundations, footings and paving designs are required if within the tree protection zone;
- Utilities should be routed around the RPZ;
- Excavation within the tree protection zone should be supervised by a consulting arborist;
- Surface drainage should not be altered so as to direct water into or out of the RPZ; and
- Site drainage improvements should be designed to maintain the natural water table levels within the RPZ.

Respecting these guidelines will prevent changes to the soil and rooting conditions, wounding of the trees and contamination due to spills and waste. Any plans for work or activities within the RPZ that are contrary to these guidelines should be discussed with the project arborist so that mitigation measures can be implemented.
Tree Protection Fences

Prior to any construction activity on site, tree protection fences must be constructed at the specified distance from the tree trunks. The protection barrier or temporary fencing must be at least 1.2 m in height and constructed of 2 by 4 lumber with orange plastic mesh screening. This must be constructed prior to tree removal, excavation or construction and remain intact throughout the entire period of construction. Further standards for fencing construction can be found at:

http://www.dnv.org/upload/pcdocsdocuments/16kw011.pdf

Unsurveyed Trees

Trees that are identified by DHC on the Tree Retention Plan, and within this report as unsurveyed trees have been hand plotted for approximate location only. Their location and ownership cannot be confirmed without being surveyed. The property owner or project developer must ensure that all relevant on and off site trees are surveyed by a legally registered surveyor, whether they are identified by DHC or not.

Removal of logs from sites

Private timber marks are required for the transporting logs from private-owned land in the province of BC. It is the owner of the properties responsibility to apply for a timber mark prior to the removal of any merchantable timber from the site. Additional information can be found at:

http://www.for.gov.bc.ca/hth/private-timber-marks.htm

Regulation of Soil Moisture and Drainage

The excavation and construction activities adjacent to the RPZs can influence the moisture availability to the subject trees. This is due to a reduction in the total rooting mass, changes in drainage conditions and changes in exposure including reflected heat from adjacent hard surfaces. To mitigate these concerns the following guidelines should be followed:

- Soil moisture conditions within the tree protection zones should be monitored during hot and dry weather. When soil moisture conditions are dry, supplemental irrigation should be provided. Irrigation should wet the soil to the depth of the root system (approximately 30 cm deep).
- Any planned changes to the surface grades within the RPZ, including the placement of mulch, should be designed so that the water will flow away from the tree trunks.
- Excavation adjacent to trees can alter the soils hydrological processes by draining the water faster than it had naturally. It is recommended that when excavating within 6 m of any tree, the site be irrigated more frequently to account for this.

Tree Pruning

All heavy machinery (excavators, cranes, dump trucks, etc.) working within five meters of tree crowns should be made aware of their proximity to the tree. If there is to be a sustained period
of machinery working within five meters of the tree crowns, a line with colored flags should be suspended at the height of the crowns along the length of the protected tree area. If there are concerns regarding the clearance required for machinery and workers within the tree protection zone, or just outside of it, the project arborist should be consulted so that a pruning prescription can be developed or a zone surrounding the crowns can be established. Any wounds incurred to the subject trees during construction should be reported to the project arborist immediately.

Fertilization

Fertilization and root zone enhancements may be recommended by the project arborist in any phase of the project if they deem it necessary to provide the best chance of tree survival.

Paving Within and Adjacent to Tree Protection Zones

If the development plans propose the construction of paved areas and/or retaining walls close to the proposed tree protection zones measures should be taken to minimize impacts. Construction of these features would raise concerns regarding proper aeration, drainage, irrigation and opportunities for adequate root growth. The following design and construction guidelines are recommended be followed to minimize the long-term impacts to trees if any paving or retaining walls are necessary:

- Any excavation activities near the TPZ (tree protection zone) should be monitored by a Certified Arborist. Excavation should remove and disturb as little of the rooting zone as possible and all roots greater than 2 cm in diameter should be hand pruned.
- The natural grade of the rooting zone should be maintained. Any retaining walls should be designed at heights that will maintain the existing grade to within 20 cm of its current level. If the grade is altered, it should be raised not reduced in height.
- The long-term health of the tree is directly dependent on the volume of available, below ground growing space. If the RPZ must be compromised, the planned distance of structures from the trunks of the subject trees should not be closer than 50% of the RPZ on more than two sides of the tree.
- Compaction of sub grade materials can cause the trees to develop shallow rooting systems. This can contribute to long-term damage to pavement surfaces as the roots grow. Minimizing the compaction of sub grade materials using structural soils and increasing the strength of the pavement reduces the reliance on sub grade for strength.
- If it is not possible to minimize the compaction of sub grade materials, subsurface barriers should be considered to help direct roots downward into the soil and prevent them from growing directly under the paved surfaces.

Plantings Within the TPZs

If there are plans to landscape the ground within the TPZ, measures should be taken to minimize impacts. It is not recommended that the existing grass layer be stripped, as this will damage the surface roots. The grass layer should be covered with mulch at the start of the project, which
will gradually kill the grass while moderating soil moisture and temperatures. Topsoil should be mixed with the mulch prior to planting of shrubs; however the depth of this new topsoil layer should not exceed 20 cm. Planting should take place within the newly placed topsoil mixture and should not disturb the original rooting zone of the trees. Two meters around the base of each tree should be left unplanted and covered in mulch.

Monitoring During Construction

Ongoing monitoring should be provided for the duration of the project. Site visits should be more frequent during activities that are higher risk, including the first stages of construction when excavation occurs adjacent to the trees. Site visits will ensure contractors are respecting the recommended tree protection measures and will allow the arborist to identify any new concerns that may arise.

During each site visit the following measures will be assessed and reported on:

- The integrity of the Tree Protection Zone and fencing;
- Changes to TPZ limits including: overall maintenance, parking on roots, and storing or dumping of materials within TPZ. If failure to maintain and respect TPZ is observed, suggestions will be made to ensure tree protection measures are upheld;
- Review and confirmation of recommended tree maintenance including root pruning, irrigation, mulching and branch pruning;
- Health and condition of each tree;
- Damage to trees that may have resulted from construction activities will be noted, as will the health of branches, trunks and roots of protected trees. Recommendations for remediation will follow;
- Changes to soil moisture levels and drainage patterns; and
- Factors that may be detrimentally impact the trees.

All findings and recommendations will be documented in a summary report. All concerns will be highlighted along with recommended mitigation measures.

6.0 Limitations

1. Except as expressly set out in this report and in these Assumptions and Limiting Conditions, Diamond Head Consulting Ltd. (“Diamond Head”) makes no guarantee, representation or warranty (express or implied) with regard to: this report; the findings, conclusions and recommendations contained herein; or the work referred to herein.

2. This report has been prepared, and the work undertaken in connection herewith has been conducted, by Diamond Head for the “Client” as stated in the report above. It is intended for the sole and exclusive use by the Client for the purpose(s) set out in this report. Any use of, reliance on or decisions made based on this report by any
person other than the Client, or by the Client for any purpose other than the purpose(s) set out in this report, is the sole responsibility of, and at the sole risk of, such other person or the Client, as the case may be. Diamond Head accepts no liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm (including without limitation financial or consequential effects on transactions or property values, and economic loss) that may be suffered or incurred by any person as a result of the use of or reliance on this report or the work referred to herein. The copying, distribution or publication of this report (except for the internal use of the Client) without the express written permission of Diamond Head (which consent may be withheld in Diamond Head’s sole discretion) is prohibited. Diamond Head retains ownership of this report and all documents related thereto both generally and as instruments of professional service.

3. The findings, conclusions and recommendations made in this report reflect Diamond Head’s best professional judgment in light of the information available at the time of preparation. This report has been prepared in a manner consistent with the level of care and skill normally exercised by arborists currently practicing under similar conditions in a similar geographic area and for specific application to the trees subject to this report as at the date of this report. Except as expressly stated in this report, the findings, conclusions and recommendations set out in this report are valid for the day on which the assessment leading to such findings, conclusions and recommendations was conducted. If generally accepted assessment techniques or prevailing professional standards and best practices change at a future date, modifications to the findings, conclusions, and recommendations in this report may be necessary. Diamond Head expressly excludes any duty to provide any such modification if generally accepted assessment techniques and prevailing professional standards and best practices change.

4. Conditions affecting the trees subject to this report (the “Conditions”, including without limitation structural defects, scars, decay, fungal fruiting bodies, evidence of insect attack, discoloured foliage, condition of root structures, the degree and direction of lean, the general condition of the tree(s) and the surrounding site, and the proximity of property and people) other than those expressly addressed in this report may exist. Unless otherwise stated: information contained in this report covers only those Conditions and trees at the time of inspection; and the inspection is limited to visual examination of such Conditions and trees without dissection, excavation, probing or coring. While every effort has been made to ensure that the trees recommended for retention are both healthy and safe, no guarantees, representations or warranties are made (express or implied) that those trees will remain standing or will not fail. The Client acknowledges that it is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree, or groups of trees, in all given circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure and this risk can only be eliminated if the risk is removed. If Conditions change or if additional information becomes available at a future date, modifications to the findings, conclusions, and recommendations in this report may
be necessary. Diamond Head expressly excludes any duty to provide any such modification of Conditions change or additional information becomes available.

5. Nothing in this report is intended to constitute or provide a legal opinion, and Diamond Head expressly disclaims any responsibility for matters legal in nature (including, without limitation, matters relating to title and ownership of real or personal property and matters relating to cultural and heritage values). Diamond Head makes no guarantee, representation or warranty (express or implied) as to the requirements of or compliance with applicable laws, rules, regulations, or policies established by federal, provincial, local government or First Nations bodies (collectively, “Government Bodies”) or as to the availability of licenses, permits or authorizations of any Government Body. Revisions to any regulatory standards (including by-laws, policies, guidelines an any similar directions of a Government Bodies in effect from time to time) referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary. Diamond Head expressly excludes any duty to provide any such modification if any such regulatory standard is revised.

6. Diamond Head shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

7. In preparing this report, Diamond Head has relied in good faith on information provided by certain persons, Government Bodies, government registries and agents and representatives of each of the foregoing, and Diamond Head assumes that such information is true, correct and accurate in all material respects. Diamond Head accepts no responsibility for any deficiency, misinterpretations or fraudulent acts of or information provided by such persons, bodies, registries, agents and representatives.

8. Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.

9. Loss or alteration of any part of this report invalidates the entire report.
7.0 Appendix 1 – Overall risk rating and action thresholds

<table>
<thead>
<tr>
<th>Risk Rating</th>
<th>Risk Category</th>
<th>Interpretation and Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Low 1</td>
<td>Insignificant - no concern at all.</td>
</tr>
<tr>
<td>4</td>
<td>Low 2</td>
<td>Insignificant - very minor issues.</td>
</tr>
<tr>
<td>5</td>
<td>Low 3</td>
<td>Insignificant - minor issues not of concern for many years yet.</td>
</tr>
<tr>
<td>6</td>
<td>Moderate 1</td>
<td>Some issues but nothing that is likely to cause any problems for another 10 years or more.</td>
</tr>
<tr>
<td>7</td>
<td>Moderate 2</td>
<td>Well defined issues - retain and monitor. Not expected to be a problem for at least another 5 - 10 years.</td>
</tr>
<tr>
<td>8</td>
<td>Moderate 3</td>
<td>Well defined issues - retain and monitor. Not expected to be a problem for at least another 1 - 5 years.</td>
</tr>
<tr>
<td>9</td>
<td>High 1</td>
<td>The assessed issues have now become very clear. The tree can still reasonably be retained as it is not likely to fail apart right away, but it must now be monitored annually. At this stage it may be reasonable for the risk manager/owner to hold public education sessions to inform people of the issues and prepare them for the reality that part or the entire tree has to be removed.</td>
</tr>
<tr>
<td>10</td>
<td>High 2</td>
<td>The assessed issues have now become very clear. The probability of failure is now getting serious, or the target rating and/or site context have changed such that mitigation measures should now be on a schedule with a clearly defined timeline for action. There may still be time to inform the public of the work being planned, but there is not enough time to protracted discussion about whether or not there are alternative options available.</td>
</tr>
<tr>
<td>11</td>
<td>High 3</td>
<td>The tree, or a part of it has reached a stage where it could fail at any time. Action to mitigate the risk is required within weeks rather than months. By this stage there is not time to hold public meetings to discuss the issue. Risk reduction is a clearly defined issue and although the owner may wish to inform the public of the planned work, he/she should get on with it to avoid clearly foreseeable liabilities.</td>
</tr>
<tr>
<td>12</td>
<td>Extreme</td>
<td>This tree, or a part of it, is in the process of failing. Immediate action is required. All other, less significant tree work should be suspended, and roads or work areas should be closed off, until the risk issues have been mitigated. This might be as simple as removing the critical part, drastically reducing overall tree height, or taking the tree down and cordoning off the area until final clean up, or complete removal can be accomplished. The immediate action required is to ensure that the clearly identified risk of harm is eliminated. For areas hit by severe storms, where many extreme risk trees can occur, drastic pruning and/or partial tree removals, followed by barriers to contain traffic, would be an acceptable first stage of risk reduction. There is no time to inform people or worry about public concerns. Clearly defined safety issues preclude further discussion.</td>
</tr>
</tbody>
</table>

The Table shown above outlines the interpretation and implications of the risk ratings and associated risk categories. This table is provided to inform the reader about these risk categories so that they can better understand any risk abatement recommendations made in the risk assessment report.

8.0 Appendix A - Requirement for Tree Protection Barrier as per Tree-Protection Bylaw 7671

8. A person performing work on lands containing one or more retained trees shall:

a) install a tree protection barrier around any retained tree or group of retained trees at the drip line of the outermost tree, the outside boundary of the critical root zone of the outermost tree, or 5 metres from the stem of the outermost tree, whichever is greatest;

b) ensure that such tree protection barrier is constructed of chain link or plywood fastened to solid wood or equivalent framing with railings along the tops, sides and bottom, or is constructed of materials otherwise satisfactory to the Environmental Protection Officer;
c) display signage indicating that the area within the *tree protection barrier* is a “protection zone,” and stating that no encroachment, storage of materials or *damage* to *trees* is permitted within the “protection zone;”

d) arrange for inspection by the *Environmental Protection Officer* before any work commences, and refrain from commencing work until the *Environmental Protection Officer* has approved the *tree protection barrier*; and

e) ensure that the *tree protection barrier* remains in place until written approval of its removal is received from the *Environmental Protection Officer*.

9. No *work* is permitted within the “protection zone” referred to in section 11(c) except in accordance with plans and procedures authorized by a *tree permit*. 
Maplewood Limited Partnership  
#202 – 261 East Pender Street  
Vancouver, BC  
V6E 1T8  

RE: SUSTAINABILITY STRATEGY FOR 2015 DOLLARTON HIGHWAY, NORTH VANCOUVER, BC

1.0 INTRODUCTION

Based on the preliminary designs for the Maplewood Plaza project at 2015 Dollarton Highway, District of North Vancouver, BC, PGL Environmental Consultants (PGL) have completed a preliminary review of the sustainability aspects of the project. We have used LEED™ 2009, Built Green 2001 MS+RT, Living Building Challenge, and general sustainability principles as evaluation tools, to develop a custom design standard specific to this project.

The Maplewood Plaza site is located north of Front Street and southeast of Old Dollarton Highway. The design for the two buildings is consistent with the District of North Vancouver Official Community Plan, which recommends the property be redeveloped for commercial use at grade with multi-family residential above. The community plan for the Maplewood Village area encourages the retention of rental housing stock, and the provision of affordable housing through redevelopment. This project aims to do both by retaining rental units and providing housing at price points suitable for first-time home-buyers.

The following section details the sustainability goals for the project in a site specific Sustainability Plan. We submit this with the understanding that the final negotiated DP/Rezoning requirements will ultimately determine the exact sustainability approach.

2.0 SUSTAINABILITY PLAN

1. We have identified the following categories of sustainability goals for the project:
2. Energy Efficiency
3. Environmental Protection
4. Air Quality and Health – Indoor Environment
5. Community Context - Site Location and Transportation
6. Water Efficiency (including Water Usage, Sewage and Stormwater)
8. Site Location – Building for Climate Zone
9. Other Sustainability and Innovative Design Features
# 2.1 ENERGY EFFICIENCY

<table>
<thead>
<tr>
<th>Energy Goals</th>
<th>Energy Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design the buildings to reduce their energy consumption.</td>
<td>- Complete energy modelling to identify areas where energy savings can be incorporated into the project design.</td>
</tr>
<tr>
<td></td>
<td>- Energy modelling will confirm that the whole building energy simulation will show at least 5% improvement over baseline building performance rating based on either:</td>
</tr>
<tr>
<td></td>
<td>- the National Energy Code of Canada for Buildings 2011 as modified by the requirements of LEED v4 Canadian Alternate Compliance Path; or</td>
</tr>
<tr>
<td></td>
<td>- ASHRAE 90.1-2010.</td>
</tr>
<tr>
<td></td>
<td>- Use of energy efficient mechanical systems, lighting systems and appliances.</td>
</tr>
<tr>
<td>Educate homeowners about energy efficiency</td>
<td>- Upon moving in, homeowners will be provided with a manual detailing the energy efficient features of their dwellings. This will include instructions on how to use energy efficiently in the units.</td>
</tr>
<tr>
<td>Use energy efficient lighting</td>
<td>- Light fixtures will use compact fluorescent or LED bulbs.</td>
</tr>
<tr>
<td></td>
<td>- Specified common areas (stairwells and parking areas) will have occupancy sensors to limit the duration lighting is operational.</td>
</tr>
<tr>
<td>Use district energy systems</td>
<td>- The development will be hydronic-ready to take advantage of potential future district energy systems (i.e. heated water by-products from neighboring industry).</td>
</tr>
</tbody>
</table>

## 2.2 ENVIRONMENTAL PROTECTION

<table>
<thead>
<tr>
<th>Environmental Protection Goals</th>
<th>Environmental Protection Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop on a previously developed site</td>
<td>- The site has been previously developed, so no environmentally sensitive areas will be disturbed.</td>
</tr>
<tr>
<td>Incorporate features that will blend in with regional ecosystem.</td>
<td>- A portion of the site is to be landscaped as green space. Native and drought-tolerant species will be preferentially planted.</td>
</tr>
<tr>
<td>Reduce air pollution and ozone depletion impacts of energy sources.</td>
<td>- Install base building level HVAC and refrigeration equipment that do not contain HCFC’s or Halon.</td>
</tr>
<tr>
<td>Slow depletion of fossil fuel reserves.</td>
<td>- Efficient mechanical and electrical lighting systems and controls and appliances will be required in the building fit out.</td>
</tr>
<tr>
<td></td>
<td>- Energy efficiency will be a priority of the building design.</td>
</tr>
<tr>
<td>Minimize impacts to wildlife and vegetation.</td>
<td>- Site location within urban setting, with high density housing, yields a smaller ecological footprint.</td>
</tr>
<tr>
<td></td>
<td>- Only native or native adapted plants will be used for landscaping.</td>
</tr>
<tr>
<td>Develop with high-density to minimize urban sprawl</td>
<td>The development will be a high-density project for the area.</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Reduce rate of stormwater flow to local water bodies</td>
<td>The development will include a stormwater detention tank to hold stormwater during high volume events and release it more slowly to the receiving environment.</td>
</tr>
</tbody>
</table>

### 2.3 Air Quality and Health – Indoor Environment

<table>
<thead>
<tr>
<th>Air Quality and Health Goals</th>
<th>Air Quality and Health Strategies</th>
</tr>
</thead>
</table>
| Provide an environment for occupants that is physiologically and psychologically healthy. | Provide common amenity space for community interaction – including an outdoor kitchen and barbeque area, outdoor fire ring, and children’s play area with timber playhouse and natural log and boulder features.  
The buildings and landscaping features will be aesthetically beautiful and encourage time outside. |
| Minimize production and transmission of air pollution. | Where possible, low VOC (volatile organic compounds) products will be used for all paints, adhesives, coatings, and building materials.  
Parking areas will be ventilated and sealed from dwelling and common area spaces. Parking areas will be negatively pressurized with respect to adjacent spaces.  
Each residential unit will be compartmentalized to minimize air leakage between units. All doors in the residential units leading to common hallways will be weather-stripped to minimize air leakage into the hallways. All exterior doors and operable windows will be weather-stripped to minimize leakage from outdoors. |
| Provide the full range of supportive sensory conditions (olfactory, thermal, vibroacoustic, tactual and visual) for occupants. | An average of one operable window and one lighting control zone per 15.5m² of floor area will be provided for all regularly occupied areas within 5m of the perimeter wall.  
Daylight and views will be maintained for majority (90%) of all regularly occupied spaces. |
| Produce environments that enhance human comfort, well-being, performance and productivity. | Ventilation systems for each individual dwelling unit will comply with the requirements of ASHRAE Standard 62.2–2010.  
Increased ventilation effectiveness will be achieved through design of laminar air flow.  
All principal dwelling spaces will have operable windows.  
Strategies in aggregate should accomplish a comfortable, healthy and productive home environment. |
| Prohibit smoking in common areas of buildings. | Smoking will be prohibited in all common areas and within standard radius of common entryways.  
Outdoor smoking areas to be a minimum of 25 feet (7.5 meters) from entries, outdoor air intakes, and operable windows opening to common areas. |
Flush units prior to occupancy

- After construction ends and before occupancy, the units will be cleaned and ventilation systems will be operated to remove any dust and debris and bring in fresh air.

Filter Air intakes

- Install air filters with a minimum efficiency reporting value (MERV) of 8 or higher on all recirculating space conditioning systems, per ASHRAE 62.2–2010.
- Install air filters rated MERV 6 or higher for mechanically supplied outdoor air for systems with 10 feet (3 meters) of ductwork or more, per ASHRAE 62.2–2010, Section 6.7.

Combustion Ventilation

- Do not install any unvented combustion appliances (ovens and ranges excluded).
- For any fireplaces and woodstoves inside the building, provide doors that close or a solid glass enclosure.

2.4 Community Context - Site Location and Transportation

<table>
<thead>
<tr>
<th>Site Goals</th>
<th>Site Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a compact development.</td>
<td>Development designed as part of the Maplewood Village Centre neighborhood within walking distance of commercial and recreation resources.</td>
</tr>
<tr>
<td>Reduce energy use for transportation. Encourage non-motorized transportation within the community for individual and community health benefits.</td>
<td>Building location, layout of paths and amenities include design consideration for walking, cycling, and accessibility to public transportation within the community. The site is located adjacent to bus stops and proposed bike lanes. More than the required bicycle parking spaces will be provided.</td>
</tr>
<tr>
<td>Encourage use of car-sharing and electric vehicles</td>
<td>Car parking spaces will be limited to the minimum required per dwelling. Parking spaces for car-sharing programs will be designated. Electric vehicle charging stations will be included in the parkades.</td>
</tr>
<tr>
<td>Encourage Community development</td>
<td>The development is part of the Maplewood Village Centre area and will be within walking distance of shopping, parks, clinics, grocery stores and other community amenities.</td>
</tr>
<tr>
<td>Reduce demand for fossil fuels for transportation.</td>
<td>Site location and amenities provide onsite and nearby, fosters a less car dependent community, reducing use of fossil fuels.</td>
</tr>
</tbody>
</table>
# 2.5 Water Efficiency

<table>
<thead>
<tr>
<th>Water Goals</th>
<th>Water Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimize indoor water use</td>
<td>- Water fixtures (showerheads, faucet aerators, and toilets) will be 20% more efficient than standard fixtures.</td>
</tr>
<tr>
<td>Minimize outdoor water use</td>
<td>- Native and drought tolerant plants will be used in landscaping.</td>
</tr>
<tr>
<td></td>
<td>- Grass areas will be minimized and native planting will be the preferred landscaping.</td>
</tr>
</tbody>
</table>

## 2.6 Materials – Resource Efficiency and Waste Management

<table>
<thead>
<tr>
<th>Materials and Waste Management Goals</th>
<th>Materials and Waste Management Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimize consumption and depletion of material resources.</td>
<td>- Locally manufactured materials will be sourced wherever possible.</td>
</tr>
<tr>
<td>Minimize the life-cycle impact of materials on the environment.</td>
<td>- Waste management will focus on reuse and recycling and building materials and fit up will focus on quality, durable products.</td>
</tr>
<tr>
<td>Minimize the impact of materials on indoor environmental quality.</td>
<td>- Low VOC-emitting materials will be chosen where possible over conventional materials.</td>
</tr>
<tr>
<td>Minimize use of resources.</td>
<td>- Homes designed for efficient material use and adaptability.</td>
</tr>
<tr>
<td>Minimize waste generated from construction and demolition of buildings.</td>
<td>- Construction and demolition waste will be recycled wherever possible.</td>
</tr>
<tr>
<td>Encourage better management of waste and minimize waste generated during building occupancy.</td>
<td>- Space will be allocated to storage and sorting of recyclables and compost to encourage good housekeeping practices by residents.</td>
</tr>
<tr>
<td>Implement composting program</td>
<td>- If available the project will utilize the DNV composting program pickup services and provide onsite containers for residents to dispose of compostable waste.</td>
</tr>
</tbody>
</table>

## 1.1 Site Location – Building for Climate Zone

<table>
<thead>
<tr>
<th>Climate Zone Goals</th>
<th>Climate Zone Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure a durable and long-lasting building structure and envelope</td>
<td>- Local building techniques from the Pacific Northwest coastal climate zone will be implemented to ensure durable and long-lasting building structure and components.</td>
</tr>
<tr>
<td></td>
<td>- Building envelope consultants will ensure the buildings are designed for rain and moisture proofing.</td>
</tr>
<tr>
<td>Minimize the amount of heating and cooling required in the building spaces</td>
<td>- Energy modelling and building design will be completed with the local climate in mind. This impacts design details such as insulation, type of glazing, and building envelope construction details – such as limiting thermal bridging and heat loss through the building envelope.</td>
</tr>
</tbody>
</table>
3.0 CONCLUSIONS AND RECOMMENDATIONS

If the preceding commitments are implemented, the project is expected to achieve a score within the silver category of most green building, sustainability, and environmental design certification systems.

4.0 STANDARD LIMITATIONS

PGL prepared this report for our client and its agents exclusively. PGL accepts no responsibility for any damages that may be suffered by third parties as a result of decisions or actions based on this report.

The findings and conclusions are site-specific and were developed in a manner consistent with that level of care and skill normally exercised by environmental professionals currently practicing under similar conditions in the area. Changing assessment techniques, regulations, and site conditions means that environmental investigations and their conclusions can quickly become dated, so this report is for use now. The report should not be used after that without PGL review/approval.

The project has been conducted according to our instructions and work program. Additional conditions, and limitations on our liability are set forth in our work program/contract. No warranty, expressed or implied, is made.

We trust that this meets your needs. If you have any questions or require clarification, please contact Dave Bell or Susan Wilkins at 604-895-7635 and 604-895-7621, respectively.

PGL ENVIRONMENTAL CONSULTANTS

Per:

David Bell, P.Ag., LEED® Green Environmental Consultant

Susan P. Wilkins, M.Sc., P.Geo., LEEDAP Principal
Date: October 30, 2015
Project No: M114

Fonnie International Investments Ltd.
202 – 261 East Pender Street,
Vancouver, BC
V6A 1T8

Attn: Don Liu
Re: Geotechnical Report
Proposed Mixed Development
Maplewood Plaza, Old Dollarton Road, North Vancouver, BC

Dear Don:

In response to your request, Davies Geotechnical Inc. has completed a subsurface investigation at the Maplewood Plaza property located at the southwest corner of the intersection of Old Dollarton Road and Front Street in North Vancouver, B.C.

The purpose of our work was to gather site-specific information regarding soil and groundwater conditions to enable Davies Geotechnical Inc. to provide recommendations regarding the geotechnical aspects of the design and construction of the proposed mixed use development.

This geotechnical report provides a summary of the site conditions and the soil stratigraphy encountered during the investigation. This report also presents recommendations regarding site preparation, foundation design, seismic design, basement wall design, perimeter drainage design, and backfill specification.

The following background information was used for the preparation of this geotechnical report.

- Geologic Survey of Canada map 1486A.
- GEOweb GIS Map provided by the District of North Vancouver.
- Seismic Hazard Map provided by National Resource Canada.
- Monitoring Well Records provided by the Ministry of Environment.

Attached to the end of this report are the following:

- Site plan/auger hole location plan
- Auger hole logs (AH01-AH05)
1.0 SITE DESCRIPTION

The subject property is located in North Vancouver, B.C and is bounded to the northwest by Old Dollarton Road, to the east by Seymour River Place and to the south by Front Street.

Currently, the site is developed, and contains two 3-storey residential and commercial mixed building. The surface parking lots can be accessed via Old Dollarton Road, Front Street, and Seymour River Place.

The topographic survey information obtained from the District of North Vancouver’s “GEOweb” indicates that the site is gently sloping down to the northeast, with approximate elevations declining from 8.3 meters to 5.5 meters.

2.0 PROPOSED DEVELOPMENT

Review of the preliminary architectural drawings prepared by Rositch Hemphill Architects indicate that the proposed development will consist of a residential and commercial mixed use building with 6 storeys above grade and one-and-a-half levels of underground parking. The second level of underground parking will occupy approximately 40% of the building footprint and will be located on the north and west sides of the building. The architectural drawings indicated that the elevation of the parking level 1 slab will range from 3.8 meters to 2.4 meters and the parking level 2 slab elevations for the lowest parkade slab is indicated to be 0.0 meters to 0.60 meters.

3.0 SITE INVESTIGATION

Davies Geotechnical Inc. completed a site-specific investigation on September 30, 2015 using a truck mounted auger rig provided by On Track Drilling. This investigation involved the completion of five auger holes (AH01 to AH05), and one dynamic cone penetration tests (DCPT). The auger holes were completed to depths between 0.6 meters to 2.2 meters below grade. The auger holes met refusal at these shallow depths due to the presence of large cobbles and boulders.

The approximate locations of the auger holes and DCPT can be found at the end of this report: Site Plan / Auger Hole Location Plan.

The DCPT involved driving a 0.06 meter diameter blunt tipped cone with a 0.15 meter long sleeve into the soil using a 63 kg automatic trip hammer free falling 0.76 meters. The number of blows required to drive the cone through every 0.3 meter layer of soil was recorded and can be found plotted on the borehole logs attached to this report.

The soils were logged by an engineer from Davies Geotechnical Inc. Soil samples considered representative of the soil horizons encountered at the site were collected at an interval of 1.5 m and returned to our laboratory for further classification. The soil identification work was completed by qualified staff from Davies Geotechnical Inc.

The stratigraphy encountered at the borehole is summarized on the borehole logs attached to this report.
Upon completion, the boreholes were backfilled with the excavated soils. Asphalt finish was completed if boreholes were drilled on asphalt pavement.

Due to the coarse nature of the subsoils, we were unable to complete auger drilling to a depth greater than 2.0 meters. In order to supplement the information gathered during our work, Davies Geotechnical Inc. completed a review of available geotechnical and environmental information from nearby sites and also researched the Ministry of Environment’s data base to obtain water well logs and water levels.

4.0 SUBSURFACE CONDITIONS

4.1 Site Geology

Geologic Survey of Canada map 1486A indicates that the site is located at a geologic zone referred to Salish Sediments. These soils are deposited at lowland and mountain stream marine deltaic areas. They are commonly medium to coarse gravel and minor sand, up to 15 meters or more in thickness.

The results of the site investigation and the lithology information on the monitoring well records confirmed that conditions at the site generally conform to the known geology of the area.

4.2 Soil Conditions

Based on the auger hole information collected during the geotechnical site investigation and the monitoring wells information provided by the Ministry of Environment, the following generalized soil profile has been prepared.

<table>
<thead>
<tr>
<th>Thickness (m.)</th>
<th>Soil Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td>Asphalt pavement or bricks</td>
</tr>
<tr>
<td>0.5 to 1</td>
<td>Fill, brown, coarse to medium SAND, gravelly to some gravel, loose, and dry.</td>
</tr>
<tr>
<td>15</td>
<td>Dark brown, coarse to medium GRAVEL and coarse SAND, silty to some silt, some cobbles, with occasional boulders, compact to very dense, dry to wet. DCPT refusal in the lowland marine deltaic deposits was common due to their density and oversized contents.</td>
</tr>
<tr>
<td>To Depth of Investigation</td>
<td>Dark brown, coarse to medium GRAVEL and coarse SAND, some cobbles, trace silt, with trace to occasional boulders, dense to very dense, wet. In two borehole logs provided by the Ministry of Environment showing depth between 30 and 35 m below grade, similar lowland marine deltaic deposits were found.</td>
</tr>
</tbody>
</table>

4.3 Ground Water

Water seepage was not observed during the course of the site investigation. Review of the available Ministry of Environment well logs indicated that measured ground water levels were generally 4 meters
to 5.0 meters below grade. Perched water may be encountered above this depth, where silty soils act as a barrier to downwards water infiltration.

5.0 SEISMIC CONSIDERATIONS

The site is located in a seismically active area where the effects of a major earthquake must be considered for design. The BC Building Code (BCBC, 2012) specifies the design earthquake as a magnitude 7 earthquake with a 2% chance of exceedance in 50 years or a 2475 year return period. The peak hard ground acceleration associated with the design earthquake is anticipated to be 0.452g.

The subsurface conditions on site generally consist of compact to dense soils which are not susceptible to liquefaction during cyclic loading. Based on the soil conditions, this site should be considered a Class “D” site, as defined by BCBC (2012).

6.0 COMMENTS AND RECOMMENDATIONS

6.1 General

The investigation and research indicated that the soils encountered at the site consist of compact to dense granular soils with are suitable to support the proposed building on conventional foundations.

The District of North Vancouver bylaws prohibit the permanent pumping of groundwater and discharge to the regional storm sewer systems. Based upon the available information regarding groundwater levels in the area we anticipate that parking level P1 will be located above the water table, but, parking level P2 will be partially below the water table. In order to satisfy the District of North Vancouver Bylaws it will be necessary to “tank” the P2 level to avoid groundwater pumping.

6.2 Site Preparation

The first stage of site preparation will involve the demolition and removal of all existing buildings, old foundations, and underground utilities. The topsoil and existing loose fills found at various locations should also be removed.

Bulk excavation to depths ranging from 4 meters to 8 meters below grade will be required to construct the below grade parking. Given the proximity of the proposed underground parking to the property lines we anticipate that shoring will be required on all sides of the excavation. Based on our experience in the area we anticipate that conventional shotcrete facing with spiling tied back with temporary soil anchors will be suitable. Encroachment agreements from the District of North Vancouver and adjacent property owners will be required.

The District of North Vancouver requires that all anchors which encroach onto city property be fully removable to a depth of 1.5 meters below grade. As the majority of the excavation will be against the property line, it is recommended to locate the temporary anchors 1.5 meters below existing grade.

We anticipate that underpinning of the existing building at the northeast corner of the site will be required.
A review of shoring options will be reviewed in details once a final foundation depth below grade is determined.

We anticipate that at portion of the required excavation depth can be sloped at the southeast corner of the building, where the building is set back from the property lines. Temporary slopes should be excavated at 1V:1H in dense gravelly and sandy soils. Slopes should be covered with secured poly to minimize sloughing during rain events.

Once the excavation has been completed, the geotechnical engineer should review the temporary cut slopes to verify that they are safe and suitable to allow manned entry, and inspect the exposed subgrade to verify the suitability of the soils to support the design loads.

Detailed design drawings for the temporary shoring and excavation will be completed by Davies Geotechnical Inc. and submitted in a separate document.

6.3 Temporary Dewatering

The construction of the second level of below grade parking will require excavation approximately 2.0 meters below the measured water table in the area. Consequently temporary dewatering will be required in order to maintain a dry excavation. We expect that water levels within the excavation can be maintained using pumped sumps installed at the base of the excavation.

6.4 Foundation Design

In order to satisfy the District of North Vancouver Bylaw with respect to pumping of groundwater, the P2 level will need to be “tanked” and founded on a raft foundation. This raft will need to be designed to accommodate uplift pressures at the underside of the concrete, estimated to be a maximum of 40 kPa.

Footings at parkade level P1 can be founded directly upon the compact to dense sand and gravel soils expected at this elevation. Discrete footings bearing upon the compact to dense granular soils should be designed with a serviceability limit states bearing pressure of 200 kPa and a factored ultimate limit states bearing pressure of 300 kPa. Footing settlement is expected to be less than 15mm.

Footings should have a minimum width of 600 mm and should be founded a minimum of 450 mm below top of slab elevation.

Prior to placing concrete, the geotechnical engineer should inspect and approve of all bearing surfaces.

6.5 Floor Slabs

We recommend the placement of a 0.15 meter thick drainage layer consisting of 19 mm clear crushed gravel beneath the floor slabs in order to create a capillary break.

Structural fill, should consist of well graded sand and gravel with less than 5% passing the # 200 sieve (silt and clay content of less than 5%) and be compacted to at least 95% of the Modified Proctor Maximum dry density, in accordance with ASTM D 1557.
6.6 Basement Wall Design

The basement walls will have to be designed to resist the applicable lateral pressures associated with earth pressure, hydrostatic pressure (if any), surcharge loadings, compaction loadings and seismic loads.

The basement walls for the proposed buildings will be blind formed or shotcrete against the shored soil face and, consequently, the magnitude of lateral pressure against the basement walls will be dependent upon the strength characteristics of the native soils and structural fills. It is commonly assumed that during basement walls construction adequate strain occurs within the retained soil mass to develop active earth pressure conditions.

The basement walls extending to parking level P1 only (south end of the site) can be designed with the assumption that the soil is fully drained. However, permanent dewatering of the P2 level will not be permitted by the District of North Vancouver, and, therefore the P2 walls extending greater than 5.0 meters below grade will need to be designed to accommodate hydrostatic water pressure in addition to active earth pressure and seismic surcharge loading.

Static lateral soil pressures acting upon the parkade walls extending no deeper than 5.0 meters below grade can be evaluated as a triangular distribution with zero pressure at the top of wall, increasing by 5.5 kPa for each meter of depth below grade. Seismic lateral soil pressures can be estimated as an inverted triangle with the maximum pressure at the top of the wall at 4.0 x H (kPa) where H is the height of the wall from top of the wall to the top of the slab in meters.

Static lateral soil pressures acting upon the basement walls extending below a depth of 5.0 meters can be estimate using a triangular distribution increasing by 5.5 kPa per meter depth a dpeth of 5.0 meters and then increasing by 12.8 kPa per meter depth below a depth of 5.0 meters Seismic pressures can be estimated as an inverted triangular distribution with the maximum pressure acting at the top of the wall, estimated as 4.0 xH (kPa), where H is the height of the wall from adjacent grade to top of slab in meters.

The lateral earth pressures recommended within this report are unfactored pressures.

6.7 Building Perimeter Drainage and Perimeter Backfill

Perimeter drainage should be provided at an elevation corresponding to 300 mm below the P1 slab level to maintain a dry basement at the P1 level and to manage water levels if perched water is encountered. We anticipate that the perimeter drain system will consist of Mira-Drain or an equivalent product, installed between the temporary shoring face and the basement walls. The perimeter drainage system, consisting of a 150 mm diameter perforated pipe surrounded by at least 150 mm of drain gravel, will be placed inside the building. Weep holes should be constructed through the basement wall to direct seepage flow from the Mira-Drain system into the perimeter drain pipes.

Backfill adjacent to the basement walls should consist of clean draining sand and gravel with less that 5% passing the # 200 sieve. This backfill should be placed in 300 mm thick lifts and compacted to at least 95% of Modified Proctor maximum dry density. Backfill must comply with the District of North Vancouver standards and specifications for structural fill within city property.
7.0 CLOSURE

Davies Geotechnical Inc. has prepared a geotechnical report for the proposed light industrial development to be constructed at Maplewood Plaza, Old Dollarton Road in North Vancouver, B.C.

In consideration of the impacts of the water table upon the building design, it may be of value to complete additional drilling using a mud rotary or air rotary drill to allow the installation of piezometers and accurate measurement of water levels on the site.

We recommend that, prior to tender, the geotechnical engineer review all design documents and specifications.

In order to satisfy the requirements of the building schedules, Davies Geotechnical Inc. will be required to complete field reviews during the construction process. These field reviews will include the following:

- Inspection of side slope after basement excavation
- Inspection of subgrade conditions beneath all fills and structures prior to the placement of fill or concrete footings
- Review of the compaction of subgrade fills and structural fills, and
- Inspection of the perimeter drainage.

We trust that the information provided meets your current requirements. If you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

DAVIES GEOTECHNICAL INC.

Reviewed by:
Paul A. Davies, P. Eng., Principal
PD

Ricky Tang, EIT
GEOTECHNICAL SITE INVESTIGATION
SITE PLAN

Project: Old Dollarton Highway, North Vancouver, B.C.
Project No: M114
Investigation Date: September 30, 2015

AUGER HOLE LOCATIONS

Symbol Type: Auger Hole Location (Investigated by Davies Geotechnical Inc.)
Monitor Wells (Records provided by The Ministry of Environment)

Prepared by: RT
Reviewed by: PD
Date: October 2, 2015

DAVIES GEOTECHNICAL INC.
1520 Cliveden Avenue, Unit 2
Delta, B.C. Canada V3M 6J8
**BOREHOLE LOG - AH01**

### SAMPLE DATA

<table>
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<tr>
<th>WEIGHT HAMMER</th>
<th>HEIGHT DROP</th>
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### ELEV. COLLAR
- ELEV. GROUND: ~ 7.0 m

### DCPT

**DESCRIPTION OF MATERIAL**

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<tr>
<th>Depth (ft/m)</th>
<th>Sample Type</th>
<th>Material Description</th>
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<td>5.0 ft / 1.5m</td>
<td>SP-GP</td>
<td>Brown, corse SAND, compact to dense, dry.</td>
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<tr>
<td>10 ft / 3.0m</td>
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<td>- Becoming GRAVEL and SAND, and very dense with depth.</td>
</tr>
<tr>
<td>15 ft / 4.6m</td>
<td></td>
<td>- DCPT refusal @ 4.1'</td>
</tr>
<tr>
<td>20 ft / 6.0m</td>
<td></td>
<td>- Very hard drilling.</td>
</tr>
<tr>
<td>25 ft / 7.6m</td>
<td></td>
<td>Refusal at 5' due to very dense granular soil.</td>
</tr>
<tr>
<td>30 ft / 9.0m</td>
<td></td>
<td>~ 7.0 m 2&quot; Asphalt</td>
</tr>
<tr>
<td>35 ft / 10.6m</td>
<td></td>
<td>- DCPT refusal @ 4.1'</td>
</tr>
<tr>
<td>40 ft</td>
<td></td>
<td>- Becoming GRAVEL and SAND, and very dense with depth.</td>
</tr>
</tbody>
</table>

**2" Asphalt**

Brown, corse SAND, compact to dense, dry.
- Becoming GRAVEL and SAND, and very dense with depth.
- DCPT refusal @ 4.1'
- Very hard drilling.

**Refusal at 5' due to very dense granular soil.**

---

**Davies Geotechnical Inc.**

**#2 - 1520 Cliveden Avenue, Delta, B.C. V3M 6J8**

**Tel 604-395-2300 Fax. 604-395-2301**

**JOB No.: M114**

**PROJECT: MIXED DEVELOPMENT**

**LOCATION: OLD DOLLARTON ROAD, NORTH VANCOUVER, B.C.**

**HOLE No.: AH01**

**DATE: SEPTEMBER 30, 2015**

**PLATE: 1 of 5**
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<tr>
<td>1.5 m / 5.0 ft</td>
<td>Dark brown, coarse to medium SAND, rounded to subangular gravelly, very dense, dry.</td>
</tr>
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<td>3.0 m / 10 ft</td>
<td>Dark brown, coarse to medium SAND, rounded to subangular gravelly to some gravel, very dense, moist. - Very hard drilling.</td>
</tr>
<tr>
<td>4.6 m / 15 ft</td>
<td>Refusal at 7.5' due to very dense granular soil.</td>
</tr>
<tr>
<td>DEPTH (ft/m)</td>
<td>SAMPLE</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>5.0 ft/1.5m</td>
<td>OL SP</td>
</tr>
<tr>
<td>10 ft/3.0m</td>
<td>SP-GP</td>
</tr>
<tr>
<td>15 ft/4.6m</td>
<td>OL SP</td>
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<tr>
<td>20 ft/6.0m</td>
<td>OL SP</td>
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<td>25 ft/7.6m</td>
<td>OL SP</td>
</tr>
<tr>
<td>30 ft/9.0m</td>
<td>OL SP</td>
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<td>OL SP</td>
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<td>OL SP</td>
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**ELEV. GROUND:** ~ 7.0 m
**BOREHOLE LOG - AH04**

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<td>(ft)/(m)</td>
<td>5.0 ft/1.5 m</td>
<td>SP - GP</td>
</tr>
<tr>
<td></td>
<td>10 ft/3.0 m</td>
<td>Dark brown, SAND and GRAVEL, very dense, dry.</td>
</tr>
<tr>
<td></td>
<td>15 ft/4.6 m</td>
<td>2&quot; Brick</td>
</tr>
<tr>
<td></td>
<td>20 ft/6.0 m</td>
<td>Refusal at 2.5' due to very dense granular soil.</td>
</tr>
<tr>
<td></td>
<td>25 ft/7.6 m</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30 ft/9.0 m</td>
<td></td>
</tr>
<tr>
<td></td>
<td>35 ft/10.6 m</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40 ft</td>
<td></td>
</tr>
</tbody>
</table>

**ELEV. COLLAR:** ~ 7.0 m  
**ELEV. GROUND:** ~ 7.0 m  

---

**Davies Geotechnical Inc.**  
#2 - 1520 Cliveden Avenue, Delta, B.C. V3M 6J8  
Tel 604-395-2300  
Fax. 604-395-2301  

**JOB No.: M114**  
**PROJECT: MIXED DEVELOPMENT**  
**LOCATION: OLD DOLLARTON ROAD, NORTH VANCOUVER, B.C.**  
**HOLE No.: AH04**  
**DATE: SEPTEMBER 30, 2015**  
**PLATE: 4 of 5**
## BOREHOLE LOG - AH05

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<td>5.0 ft</td>
<td>SP</td>
<td>2&quot; Asphalt</td>
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<tr>
<td></td>
<td>GP</td>
<td>Brown, coarse SAND, angular to subangular gravelly, very dense, dry.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Refusal at 2.5' due to very dense granular soil.</td>
</tr>
<tr>
<td>10 ft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 ft</td>
<td></td>
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<tr>
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<tr>
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</tr>
<tr>
<td>40 ft</td>
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</table>

**WEIGHT HAMMER**

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<th>WEIGHT HAMMER</th>
<th>SOIL SYMBOL</th>
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<tbody>
<tr>
<td>ELEV. COLLAR :</td>
<td></td>
</tr>
<tr>
<td>ELEV. GROUND :</td>
<td>~ 8.0 m</td>
</tr>
</tbody>
</table>

**PROJECT:** MIXED DEVELOPMENT

**LOCATION:** OLD DOLLARTON ROAD, NORTH VANCOUVER, B.C.

**DATE:** SEPTEMBER 30, 2015

**PLATE:** 5 of 5
INTRODUCTION

This report summarizes the flood hazard assessment study conducted for 2015 Old Dollarton Road in the District of North Vancouver (Lot G and Lot H, Block 18, DL 193, New Westminster District Plan 20080). The property is located to the east of Old Dollarton Road, with Front Street to the south and Seymour River Place to the east (Figure 1). The proposed development features 179 residential units with underground parking access on Front Street to the south, and on the proposed continuation of Seymour River Place to the east. The proposed development elevations range between El. 5.31 m and 8.42 m (geodetic datum, above mean sea level).

Burrard Inlet is located 700 m south of the property and Seymour River is located 100 m to the west, both of which are potential hydrotechnical hazards. Hydrotechnical hazards are defined as flooding, erosion, deposition, scour and avulsion typically due to channelized flow or coastal water levels.

The objective of the study is to first identify any hazards that would suggest the property is not safe for development or require mitigation for safe development, and to expand on the hydrotechnical hazard assessment and document findings in a manner to satisfy the District of North Vancouver’s (DNV’s) SPE 106 and 107 Master Requirements; a Flood Hazard Report and a Creek Hazard Report. The property is located within DNV’s Creek Hazard Development Permit Area (DPA) and hence requires such reporting prior to obtaining building permits.
2 SITE DESCRIPTION

A site inspection was conducted by Nigel Lindsey, EIT (NHC) on May 10th, 2016 to evaluate the current condition and flood hazard context of the site. In addition a digital surface of the area was constructed using 2014 ‘bare-earth’ LiDAR data at 1 m resolution obtained from DNV ‘s Open Data GIS. Figure 2 shows a topographic map of the study area based on the digital surface. No site survey was conducted as part of this study.

Although the region generally slopes from north to south, a relatively flat bench exists along the north shore of Burrard Inlet with undulations of slightly lower and higher ground. The study property is located on this bench with a low point at roughly El. 4.5 m GD (Geodetic Datum) near the middle of the east end of the property and a high point at roughly El. 8.4 m at the southwest corner of the property.
The study property currently consists of an asphalt-paved parking lot south of the buildings, along Front Street, and a larger asphalt-paved parking lot north of the buildings, exiting onto Old Dollarton Road (Photo 1). The site gains approximately 2.5 m elevation from north to south.

Figure 2. Topographic map of project study area, compiled using 2014 DNV LiDAR data, north at top of page

2.1 North of Property

The northern tip of the property is bounded by the intersection of Old Dollarton Road and Seymour River Place. This intersection is at El. 6.0 m, and Seymour River Place (Photo 2) gains elevation to the north, reaching El. 9.6 m at Seymour Parkway approximately 375 m to the north. Areas to the west of Seymour River Place are densely treed and slope gradually toward the Seymour River. Within this densely tree area west of the project site is Maplewood Creek, a small creek that runs from Seymour River Parkway west of Seymour River place and flows southwest joining the Seymour River directly west of the study property.
Near the intersection of Old Dollarton Road and Seymour River Place is an east-west trough of low-lying ground that extends from the bank of Seymour River to Old Dollarton Road (Photo 3).

### 2.2 West of Property

Directly west of the property is Old Dollarton Road, and townhouses west of Old Dollarton Road (Photo 4 and Photo 5). Old Dollarton Road gains elevation north to south. Surrounding the townhouses is a heavily vegetated area, sloped toward the Seymour River. Toward the northern end of the project site, the ground west of Old Dollarton Road is slightly higher than the road grade.

The Seymour River is located 100 m to the west of the project site. Banks are heavily protected from erosion with riprap.

### 2.3 South of Property

Immediately south of the property is Front Street, and a recent-constructed mixed-use residential/commercial development. The adjacent development is flush with Front Street’s approximate El. 9.0 m grade directly south of the study property (Photo 6). Front Street slopes downward to the east, and the adjacent development is approximately 1.5 m above grade east of the project site (Photo 7). Dollarton Highway and an industrial area lie south of the adjacent development.

### 2.4 East of Property

The eastern edge of the property is bounded by a paved driveway beginning from the intersection of Seymour River Place and Old Dollarton Road at El. 6.0 m and running along the property line (Photo 8). The existing driveway reaches a low point of approximately El. 4.5 m, rising again as it approaches Front Street. To the east of this driveway is an asphalt-paved parking lot, also at El. 4.5 m (Photo 9). The elevations of the land to the east, west and south of the parking lot are all higher than the elevation of the existing parking lot (Photo 10).

Beyond the adjacent properties, there are other developments, and densely treed areas.

### 3 BACKGROUND REVIEW

The following set of information has been reviewed as part of our investigation of the possible hydraulic hazards located near the property site:

- *Design Brief on the Floodplain Mapping Study: Seymour River, North Vancouver* (BC MoE, 1995b)
- *Dollarton Highway Bridge Replacement, North Vancouver* (NHC, 2004)
- *Flood Assessment Study, North Vancouver* (NHC, 2010)
- *Mt. Seymour Parkway Bridge Widening Hydraulic Assessment* (NHC, 2012)
- *Maplewoods Development – North Site Flood Hazard Assessment* (NHC, 2012b)
Applicable background review findings are discussed later in the report.

4 FLOOD HAZARD ASSESSMENT

The property is located a minimum of 100 m east of the Seymour River, and 700 m north of the Burrard Inlet, of which either could pose hydrotechnical hazards and are separately assessed in the sub-sections that follow. Based on scale of the proposed development, the risk of exposure of vulnerable populations appears to be moderate to high and warrants design to a return flood period of 200-years and Class 3 flood hazard assessment as defined by the provincial flood assessment guidelines produced by the Association of Professional Engineers and Geoscientists of BC (APEGBC, 2012).

4.1 Seymour River Flood Hazard Assessment

The Seymour River can impose hazard on adjacent properties though:

- High water level inundating property with flood water and debris,
- Erosion of river banks,
- Scouring of the river bed potentially undermining and failing adjacent banks,
- Deposition or blockage within the river directing flow towards or over bank and possibly leading to erosion (gradual lateral migration of the river) or avulsion (sudden relocation of the river)

Such hazards have been assessed based on site conditions, river hydrology (flood flow), and hydraulic modelling of scenarios of potential flood flow, deposition, and partial blockage as presented in the following subsections.

4.1.1 Seymour Watershed and Reach Description

The Seymour River has a watershed area of 176 km² and drains the southern slopes of the Pacific Ranges from an elevation of 1,727 m (Cathedral Mountain) to sea level at Burrard Inlet. The river is regulated by Seymour Falls Dam at the south end of Seymour Lake, approximately 16 km upstream from the river mouth at Burrard Inlet.
From the Seymour Lake, the Seymour River flows within a relatively confined bedrock canyon surrounded by undeveloped forest. Development along the shores begins roughly 3.5 to 3.8 km upstream from the river mouth. 2014 December 7 a rock slide occurred within the canyon, temporary blocking the river less than 1 km upstream of the urban development. Although not directly affecting the project site, this event does reinforce the expectation that debris can be sourced downstream of Seymour Lake and can play a role in flooding of the lower Seymour River.

The project site is located on the left bank between the Mount Seymour Parkway bridge (1.5 km upstream from the river mouth) and the Dollarton Highway bridge (0.3 km upstream from the river mouth). The river through this reach generally has established riparian vegetation of large trees (i.e. cottonwoods) and shrubs with well graded banks and beds ranging from boulders through sand. The channel reach upstream of the bridge is relatively straight with shallow, long meanders. Meander spacing becomes shorter, although not particularly tight, downstream of the Mount Seymour Parkway bridge.

### 4.1.2 Previous Studies

NHC and other consultants have conducted several studies of the Seymour River primarily for bridge design and flood hazard identification. These studies incorporated hydraulic analysis using one-dimensional (1D) and two-dimensional (2D) steady flow numerical models. Notable flood elevations presented by these studies are tabulated in Table 1, in GD. Variability in the simulations include simulated inflow, downstream water level (DS WSEL), potential aggradation or channel blockage such as at the bridges, and to a lesser extent channel roughness. Although, the studies presented use a 200-year instantaneous flow the calculation of such a flow varies slightly between studies.

#### Table 1. Previous hydraulic study of Seymour River

<table>
<thead>
<tr>
<th>Study</th>
<th>Model</th>
<th>Inflow (m³/s)</th>
<th>DS WSEL (m)</th>
<th>Location</th>
<th>Flood El. (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHC (2004)</td>
<td>River 2D</td>
<td>775</td>
<td>2.6</td>
<td>Dollarton Bridge</td>
<td>4.4 – 4.9</td>
</tr>
<tr>
<td>NHC (2010)</td>
<td>HEC-RAS 1D</td>
<td>808</td>
<td>1.9</td>
<td>Dollarton Bridge</td>
<td>3.9</td>
</tr>
<tr>
<td>NHC (2010)</td>
<td>HEC-RAS 1D</td>
<td>808</td>
<td>3.4</td>
<td>Dollarton Bridge</td>
<td>5.0</td>
</tr>
<tr>
<td>KWL (2014)</td>
<td>MIKE 11</td>
<td>790</td>
<td>~ 3</td>
<td>Dollarton Bridge</td>
<td>~ 5.5 – 6.0</td>
</tr>
<tr>
<td>NHC (2010)</td>
<td>HEC-RAS 1D</td>
<td>808</td>
<td>1.9</td>
<td>333 m DS of Seymour Parkway Br</td>
<td>6.7</td>
</tr>
<tr>
<td>NHC (2010)</td>
<td>HEC-RAS 1D</td>
<td>808</td>
<td>3.4</td>
<td>333 m DS of Seymour Parkway Br</td>
<td>6.9</td>
</tr>
<tr>
<td>KWL (2014)</td>
<td>MIKE 11</td>
<td>790</td>
<td>~ 3</td>
<td>333 m DS of Seymour Parkway Br</td>
<td>~ 6 – 6.5</td>
</tr>
<tr>
<td>NHC (2012)</td>
<td>HEC-RAS 1D</td>
<td>808</td>
<td>3.4</td>
<td>333 m DS of Seymour Parkway Br</td>
<td>6.2</td>
</tr>
</tbody>
</table>

1 Flood elevation is stated as the water level adjacent to the upstream end of the project site without any additional freeboard applied.

2 Peak flow, as opposed to maximum daily average flow, expected to occur once every 200 years, alternatively considered peak flow with a 0.5% probability of being exceeded in any given year

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Despite the flood studies using similar design flood hydrology (i.e. 800 m$^3$/s), a relatively wide range of flood levels have been presented. Differences in downstream tidal elevation, inflow, aggradation, debris blockage, and simulated channel roughness can attribute for the differences in flood water elevations. All studies except NHC (2010) included debris obstructions in the simulations, which result in higher flood water elevations.

Comparison of the proposed project site elevation of El. 5.3 to 8.4 m with the flood levels predicted by the previous studies, El. 6.2 to 6.9 m at the upstream end of the project site and El. 3.9 m to 6.0 m at the downstream end of the project site, suggests that portions are at risk of flooding during extreme Seymour River flood events with occurrence interval of 200-year or less.

### 4.1.3 Seymour River Hydraulic Analysis

DNV has adopted the 200-year flood levels presented by the 2014 KWL report for the 200-year flood expected under the flow and tidal conditions projected for the year 2100. Within areas deemed at risk to flood hazard the DNV consider mapped flood inundation and potential overflow.

**Figure 3** provides an overview map of areas inundated through direct connection to the Seymour River with a depth of inundation 0.05 m or greater. The figure shows that inundation could occur in the area west and northwest of the project site, but not directly over the project site.

A ridge of developed land between Old Dollarton Road and Seymour River, west of the project site, provides a flood barrier between the project site and the Seymour River. Water level at the project site could extend up to this level through seepage or stormwater connections, however this is expected to be minor due to the relatively short duration of a Seymour flood event (hours not days or weeks). Failure of this land mass is not expected except under extensive, unmitigated channel migration through this area, which is unlikely due to the extent of residential development on top and west of the high ground. However, the elevation of this ridge is only marginally above the simulated flood level and could be overtopped for events in excess of the 200-year event or through minor changes in grade, localized hydraulics during a flood, or localized subsidence. The design flood level adjacent to the project site is El. 6.1 m.

**Figure 3** also indicates inundation along the upstream edge of Mount Seymour Parkway. The simulated upstream flood level is near the crest elevation of Mount Seymour Parkway, and could foreseeably lead to overtopping of the road. Flow overtopping Mount Seymour Parkway (east of the bridge) is expected to flow southwest through Seymour River Heritage Park (back to the Seymour River) but also down Seymour River Place towards the project site. At the intersection of Old Dollarton Road and Seymour River Place, flow could head east along Old Dollarton Road or continue south along the eastern edge of the project site towards Front Street; high ground would prevent flow from heading west or southwest along Old Dollarton Road. Despite local low spots in the ground along these flow paths, the water level of flow leaving the intersection of Old Dollarton Road and Seymour River Place is expected to be controlled by location of local high ground at the intersections of Seymour River Place with Old Dollarton Road and with Front Street; both at El. 6.0 m.

The expected mechanism for flooding at the project site is from flow overtopping Mount Seymour Parkway due to blockage at the Mount Seymour Parkway bridge. It is expected that any infrastructure added between the project site and Burrard Inlet - such as Dollarton Highway - is not raised in the future without adequate drainage.
through the roadway (i.e. culverts with flood gates installed if a formal or informal sea dike is constructed down slope).

Figure 3. Seymour River simulated flood depth, 200-year flood based on year-2100 conditions (KWL, 2014)

4.2 Coastal Flood Hazard Assessment

Coastal flood hazard at the study property is derived from high water at the adjacent shore of Burrard Inlet, incorporating the combined effects of tide, storm surge, wind setup, wave run-up, and sea level rise (SLR).

In January 2011, the BC Ministry of Environment (MOE) published Climate Change Adaptation Guidelines for Sea Dikes and Coastal Flood Hazard Land Use (MOE, 2011a). The guidelines present an approach for developing a flood construction level (FCL) calculated as the summation of:

\[
FCL = \text{Higher High Water Level Large Tide (HHWLT)} + \text{the 200-year storm surge} + \text{sea level rise (SLR)} + \text{local subsidence} + \text{wave effects from a 200-yr storm} + 0.6 \text{ m freeboard}
\]

Referred to as the Designated Flood Level (DFL)

Referred to as the Flood Construction Reference Plane (FCRP)
The 2014 floodplain mapping study conducted by KWL also provides coastal flooding analysis in addition to the river flood scenarios presented in the previous section. The FCL within this area of the north shore of Burrard Inlet for the year 2012, 2100, and 2200 from the KWL flood study are summarized in Table 2.

### Table 2. Flood Construction Levels

<table>
<thead>
<tr>
<th>FCL Components</th>
<th>2012</th>
<th>2100</th>
<th>2200</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-year Water Level (m GD) (including tide, surge, wind set-up and wave run-up)</td>
<td>3.20</td>
<td>3.20</td>
<td>3.20</td>
</tr>
<tr>
<td>Sea Level Rise (m)</td>
<td>0.12</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Local subsidence (m)</td>
<td>0.0</td>
<td>-0.12</td>
<td>-0.24</td>
</tr>
<tr>
<td>Designated Flood Level (m)</td>
<td>3.32</td>
<td>4.08</td>
<td>4.96</td>
</tr>
<tr>
<td>Freeboard (m)</td>
<td>+0.6</td>
<td>+0.6</td>
<td>+0.6</td>
</tr>
<tr>
<td>Flood Construction Level (m GD)</td>
<td><strong>3.92</strong></td>
<td><strong>4.68</strong></td>
<td><strong>5.56</strong></td>
</tr>
</tbody>
</table>

DNV has adopted the year-2100 value for its FCL requirement. A map of KWL’s year-2100 coastal flood inundation projection is shown in Figure 4. The figure shows that the project site is beyond the inundation boundaries. The proposed future ground elevation ranges between El. 5.31 m and 8.42 m. Thus, the site is not expected to be inundated with coastal flood waters for events up to the 200-year event under current and future coastal high water conditions (up to the year 2100) at the proposed project site elevations. There is no known reason to suggest further study is warranted.

---

1 Shoreline section referred to as “Tidal Flats” in the study, which is located 700 to 900 m east of the subject property.
4.2 Maplewood Creek

Based on available drainage area, gradient and potential flow depths in Maplewood Creek, we do not consider Maplewood Creek to be capable of generating a flood hazard that would exceed that posed by Seymour River or Burrard Inlet. Therefore, Maplewood Creek was not further assessed with respected to potential flood hazard at the project site.

4.3 Flood Construction level

The DNV suggests setting FCL based on the 200-year instantaneous flood plus 0.6 m freeboard (DNV SPE 107). The DNV provides spatial data of FCLs that are to be considered for development within flood hazard areas. Within areas mapped as inundated during the 200-year flood (year 2100), the flood levels presented by DNV are the simulated flood levels from 2014 study plus 0.6 m freeboard. Areas not mapped as inundated but still considered at risk of flooding are assigned by the DNV an FCL equal to the ground elevation plus a 0.6 m freeboard. Based on this criterion, DNV recommends FCL values for the project site ranging from El. 6.42 m at the north end to El. 8.78 m at the southwest corner.

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2015 Old Dollarton Road – Maplewood Plaza – Flood Hazard Assessment
The expected mechanism of maximum flooding at the project site for events on the order of the 200-year event is Seymour River flooding occurring with partial blockage of the Mount Seymour Parkway bridge, leading to overflow of the road, and flow down the Seymour River Place to the project site. High ground at the intersection of Seymour River Place and Old Dollarton Highway and Seymour River Place and Front Street is expected to provide hydraulic control of such flood waters; hence the FCL for the project is recommend to be 0.6 m (freeboard) above the elevation of this high ground, that is El. 6.6 m.

Flooding from the Seymour River directly adjacent to the project site is not expected based on the high ground between the river and the project. However, the proposed FCL still provides in excess of 0.5 m freeboard⁴ from the calculated adjacent design water level.

The proposed FCL provides nearly 2 m of freeboard over the predicted 200-year coastal flood level up to the year-2100.

5 SUMMARY AND RECOMMENDATIONS

A hydrotechnical hazard assessment was conducted based on 200-year flood (0.5% annual exceedance probability) for up to the Year 2100 including climate change projections. From the study it is recommended that a flood construction level of El. 6.6 m be adopted for the project site.

This flood hazard assessment was conducted following APEGBC 2012 Class 3 flood hazard assessment guidelines. A summary of the APEGBC criteria for such an assessment is presented in Table 3.

Table 3. Summary of APEGBC Typical Class 3 Flood Hazard Assessment Methods and Deliverables

<table>
<thead>
<tr>
<th>APEGBC Flood Hazard Assessment Component</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical hazard assessment methods and climate/environmental change considerations</td>
<td></td>
</tr>
<tr>
<td>Site visit and qualitative assessment of flood hazard</td>
<td>Completed by NHC 2016</td>
</tr>
<tr>
<td>Identify any very low hazard surfaces in the consultation area (i.e., river terraces)</td>
<td>Completed by NHC 2016</td>
</tr>
<tr>
<td>Estimate erosion rates along river banks</td>
<td>Project site set back from the active river channel - any erosion is expected to be mitigated well before reaching the project site</td>
</tr>
<tr>
<td>2-D modelling of user-specified dike breach scenarios, modelling of fluvial geomorphic processes using 2-D morphodynamic models and their respective effects on flood hazard</td>
<td>Site not protected by dike, but overland flood scenario was considered as the design event. Erosion risk deemed low and no morphodynamic modelling analysis was conducted.</td>
</tr>
<tr>
<td>Identify upstream or downstream mass movement processes that could change flood levels (e.g., landslides leading to partial channel blockages, diverting water into opposite banks)</td>
<td>Potential blockage of upstream bridge is the design flood scenario.</td>
</tr>
</tbody>
</table>

⁴ freeboard increases from upstream to downstream of the project site as the proposed FCL remains constant despite the flood level lowering

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2015 Old Dollarton Road – Maplewood Plaza – Flood Hazard Assessment
<table>
<thead>
<tr>
<th><strong>APEGBC Flood Hazard Assessment Component</strong></th>
<th><strong>Notes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct simple time series analysis of runoff data, review climate change predictions for study region, include in assessment if considered appropriate</td>
<td>Completed by others and used in this assessment (KWL 2014)</td>
</tr>
<tr>
<td>Quantify erosion rates by comparative air photograph analysis</td>
<td>N/A – erosion risk deemed low</td>
</tr>
</tbody>
</table>

**Typical deliverables**

<table>
<thead>
<tr>
<th>**</th>
<th>**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter report or memorandum with at least water levels and consideration of scour and bank erosion</td>
<td>Completed</td>
</tr>
<tr>
<td>Cross-sections with water levels, flow velocity and qualitative description of recorded historic events, estimation of scour and erosion rates where appropriate with maps showing erosion over time</td>
<td>Not Required</td>
</tr>
<tr>
<td>Maps with area inundated at different return period, flow velocity, flow depth, delineation of areas prone to erosion and river bed elevation changes, estimates of erosion rates</td>
<td>Completed</td>
</tr>
</tbody>
</table>

## 6 SAFE CERTIFICATION

NHC has not assessed the property for hazards related to site drainage (local runoff), fire, debris flow, debris flood, landslide, or any other hazards besides those resulting directly from flood and/or river erosion emanating from Seymour River, Maplewood Creek, or coastal flooding from Burrard Inlet. With respect to flood and erosion hazard, for flood events less than or equal to the 200-year peak instantaneous flow in the Seymour River and 200-year high water of Burrard Inlet, NHC certifies that the subject property is considered safe for the use intended if:

1. All habitable space is above the FCL;
2. All infrastructure, utilities, and parking areas that are located below the FCL are designed such that the invert of any access points are above the FCL (i.e. allowing safe egress) and the structure is designed to withstand the appropriate hydrostatic pressures;
3. If the invert of access point other than parking area is below the FCL,
   - Area below the FCL should be flood proof.
   - All electrical and mechanical utilities should be located above the FCL.
   - Invert of any access points (i.e. windows that open) other than invert of the door should be above the FCL.
   - The structure is designed to withstand the appropriate hydrostatic pressure.
   - Doors with inverts below the FCL should be flood proof.
4. If the invert of the access point of the parkade is below the FCL:
   - Electrical and mechanical systems need to be installed above the FCL.
   - No storage is allowed within the parkade
   - An unobstructed means of pedestrian ingress and egress must be provided above the FCL.
5. Means of emergency egress is designed such that the invert is above the FCL, and evacuation plan is created in consideration of FCL;

6. All flood protection works are designed by a qualified registered professional. Short and long term maintenance requirements for the flood protection works are outlined by a qualified registered professional and these work are followed by the owner/operator of the property; and

7. Final building plans and as-built conditions have been assessed and approved for compliance with the conditions specified herein by a qualified registered professional using BC Building Code Letters of Assurance of Professional Design and Commitment for Field Review (Schedule B) and Assurance of Professional Field Review and Compliance (Schedule C-B).

8. Any future flood works constructed by DNV or others between the project site and Burrard Inlet - such as a sea dike - incorporates adequate drainage to allow any Seymour River overflow to drain to Burrard Inlet (i.e. culverts with flood gates).
7 CLOSURE

We hope this work and report meets your current needs. If you have any questions or would like to further discuss these findings, please contact Mr. Dale Muir or Mr. Edwin Wang at our North Vancouver office at (604) 980-6011.

Sincerely,

Northwest Hydraulic Consultants Ltd.

Prepared by: Dan Maldoff
Project Engineer

Prepared by: Edwin Wang, PEng.
Coastal Engineer

Reviewed by: Dale Muir, PEng.
Principal

DISCLAIMER

This document has been prepared by Northwest Hydraulic Consultants Ltd. in accordance with generally accepted engineering practices and is intended for the exclusive use and benefit of Maplewood Limited Partnership and Rositch Hemphill Architects, and their authorized representatives for specific application to the 2016 flood hazard assessment for the property at 2015 Old Dollarton Road in the District of North Vancouver (Lot G and Lot H, Block 18, DL 193, New Westminster District Plan 20080). The contents of this document are not to be relied upon or used, in whole or in part, by or for the benefit of others without specific written authorization from Northwest Hydraulic Consultants Ltd. No other warranty, expressed or implied, is made. Northwest Hydraulic Consultants Inc. and its officers, directors, employees, and agents assume no responsibility for the reliance upon this document or any of its contents by any parties other than Maplewood Limited Partnership.
REFERENCES


District of North Vancouver (2012b). Creek Hazard Development Permit Area Map 2.2.


PHOTOS
Photo 1  Current project site, facing south along Old Dollarton Road

Photo 2  Seymour River Place, facing north toward Seymour Parkway from northern boundary of project site

Photo 3  Old Dollarton Road, facing east from northern boundary of project site
Photo 4  Old Dollarton Road, facing west from western edge of project site toward Seymour River

Photo 5  Old Dollarton Road, facing northwest along western edge of study site

Photo 6  Front Street, facing east along southern edge of project site

Photo 7  Front Street, facing east from eastern boundary of project site
Photo 8  Driveway along eastern boundary of study site, facing south

Photo 9  Parking lot east of driveway along eastern boundary of study site, facing east

Photo 10  Adjacent property east of driveway along eastern boundary of study site, facing east
FLOOD HAZARD AND RISK ASSURANCE STATEMENT AND COVENANTS
To: Natasha Letchford  
Community Planner  
District of North Vancouver

The proposed location for the $1 \times 10^{-6}$ and $0.3 \times 10^{-6}$ risk contour lines for the Maplewood area are correct as recommended by my report of August 8, 2012 (attached as an appendix). There is one exception noted which is important to establishing the separation distance for light and medium industrial activity from commercial activities. That being the location of the $1 \times 10^{-5}$ risk contour line which is suggested to be along Spicer Road and is missing from District of North Vancouver drawing (Proposed Risk Acceptable Contours Maplewood Charrette – October 2016, “Official Community Plan – Risk Contours”). I reference the Major Industrial Accidents Council of Canada (MIACC) – Risk Acceptability Criteria for acceptable level of risk shown on the following pages. This is considered to be Canada’s best practice.

As part of the overall recommendations in my August 8, 2012 report, I included this contour to define the boundary between heavy industrial development (Canexus, Erco, Newalta, etc) and light to medium industries such as repair shops, or fabrication shops which are usually connected close to heavy industry. I would strongly suggest including the $1 \times 10^{-5}$ line along Spicer Road and continuing it to the east and west as you see fit.

The $1 \times 10^{-6}$ and $0.3 \times 10^{-6}$ line to the West appears to be good as it parallels the heavy industrial area (darker blue) to the South. Again I would extend the $1 \times 10^{-5}$ contour line probably up to the Iron Workers Memorial Bridge.

To the East you have properly shown the risk contours to bend towards the South giving the appropriate distance from the heavy industrial area. You may want to consider bending both lines towards the North if you have in mind more industrial development along the shoreline. Again the $1 \times 10^{-5}$ contour is important to draw here as well.
Major Industrial Accidents Council of Canada – Risk Acceptability Criteria
(Now managed through the Canadian Society for Chemical Engineering – Process Safety Management Division)

Annual Individual Risk
Chance of fatality per year

<table>
<thead>
<tr>
<th>Risk Source</th>
<th>No other land use</th>
<th>Manufacturing, warehouses, open space (e.g., parkland, golf courses, etc.)</th>
<th>Low-density residential (up to 10 units with ground level access, per net hectare) and commercial, including offices, retail centers, restaurants, entertainment centers, sporting complexes</th>
<th>High-density residential and commercial, including places of continuous occupancy such as hotels and tourist resorts</th>
<th>Sensitive developments (e.g., hospitals, child care facilities and aged care housing developments)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Contour</td>
<td>100 in a million ((10^4))</td>
<td>10 in a million ((10^5))</td>
<td>1 in a million ((10^6))</td>
<td>0.3 in a million ((0.3 \times 10^6))</td>
<td></td>
</tr>
</tbody>
</table>

Allowable Land Uses

Proposed Risk Acceptable Contours

Suggested \(1 \times 10^{-5}\) risk contour boundary
Originally in 2006 a risk assessment was conducted by Alp and Associates showing the risk contours for $1 \times 10^{-5}$ and $1 \times 10^{-6}$ to be located as shown below.

Original Risk Assessment Conducted for the Chlorine Plant before the TCP Project
Conducted by Alp and Associates (2006)

Subsequently Canexus upgraded their facility to reduce the quantity of hazardous Chlorine on site through up to date technology (their TCP project) and were able to accept to reduce the risk contours to those shown below.
Summary:

The choice to locate the risk contours as shown is correct based on the previous work conducted August 8\textsuperscript{th}, 2012. The final drawing should include the 1 X 10-5 risk contour as discussed. I trust this meets your needs. Should you have any further questions please do not hesitate to get in touch.

Doug McCutcheon, P. Eng.
EXECUTIVE SUMMARY:

The “Scope of Work” included:

1. Review the inventory of chemicals by substance type, location and maximum quantity and assess what substances pose a theoretical risk to residents/businesses in the nearby Village Centre.
2. Identify the geographical scope of potential risk and recommend the boundaries of the eventual Development Permit Area.
3. Discuss the relative merits of building, site and area-level measures to mitigate any identified theoretical risks.

In “Step 1” the identified chemicals were assessed for potential to cause harm to the community of Maplewood. Four existing industrial operations plus a proposed new one were looked at in terms of risk and acceptability to the community using the Major Industrial Accidents Council of Canada risk based land use planning criteria. An analysis for hazards followed by calculations to determine the extent of impact outside the company property lines and the probability of such events was undertaken for this report. The result showed only those hazards and risks for the Canexus facilities are of concern. All other facilities either had no concerns or the impact could only be felt within their company property lines.

For “Step 2” of the Scope of Work, The opportunity to utilize the Canexus peer reviewed Quantitative Risk Assessment was instrumental in forming the basis for suggesting risk based planning needs for the proposed Maplewood community development. Because there are no other company risks to consider using the Canexus study provided a sound approach to determine acceptable buildings and occupancies, a clear opportunity to implement the MIACC criteria, Canada’s best practice.

The MIACC Criteria is shown as a pictorial view on Figure 3 on page 16. It was developed in conjunction with a global approach to understanding just what society is willing to accept in terms of the impact from industrial operations. An industrial facility needs to control its level of risk but if it has the potential to impact beyond the property line, certain activities are allowed as one gets further away from the industrial site because the risk levels decline as one moves further from the industrial source based on the MIACC approach. The further away from the source of risk more activities for a higher concentration of people are allowed. As seen in Figure 3 a smaller graph indicates the numbers of people impacted can grow continuously the further out from the industrial facility one gets. The point is it is not a “step change” but a continuous gradual change.

The MIACC approach does not prescribe specific distances to each risk level. This is left up to individual jurisdictions to decide on based on their circumstances such as the type of industry, the type of community, and the emergency planning needs of the area, either way the company is responsible to meet the risk criteria and the most stringent criteria will dictate what they include in their facility designs.

The MIACC approach to risk based land use planning accepts that if the risk levels to the community are less than one chance in a million of a fatality (1 X 10⁻⁶), there is no requirement
to add additional measures to the already existing building codes. This review specifically noted the impact of a Chlorine or Hydrogen Chloride release from Canexus would have offsite consequences potentially leading to fatalities. The Canexus “Technology Conversion Project” (TCP) - 2006 Quantitative Risk Assessment by Dr. Alp shows there can be consequences impacting the community but since the probability is so low the impacts are within acceptable limits. Further, if advance warning systems are in place to alert the community and if residents close their windows and doors (shelter in place) there is ample time to protect oneself in an emergency (Dr. David Wilson University of Alberta). Typically a major release will take a lot of time (many minutes and possibly up to an hour) to travel to the residential community leaving the emergency response teams time to work at implementing an effective plan to evacuate people.

A release of Chlorine will create a heavier than air cloud that will stay together and move with the wind. That cloud will stay close to the ground as it moves forward mixing with air on the cloud surface. The mixing action will eventually dilute the cloud to a lower safe concentration a certain distance down wind. Because the cloud is heavier than air it moves with the wind but slowly as the wind brushes over the body of the cloud. Further the cloud movement will be slowed by obstructions on the ground. Some of it will be absorbed by moisture in the air and vegetation. it will take time to reach the Village area. Further the cloud will have some early warning odours at very low concentrations giving time for people to take action before their safety is compromised.

For the case of a Hydrogen Chloride (HCl) vapour release the scenario is somewhat different because HCl is not as heavy as Chlorine gas and closer to air. The cloud will move forward with the wind with more mixing action. Similar to Chlorine the cloud will travel next to the ground and be impacted by obstructions as it moves forward. HCl is easily absorbed in water where Chlorine is not. And HCl also is detectable at very low concentrations giving time for people to react in a safe manner.

Applying the MIACC criteria to the proposed community layout it is recommended to designate Spicer Road as risk contour 1 X 10⁻⁵, Front Street as risk contour 1 X 10⁻⁶ and Old Dollarton as the 0.3 X 10⁻⁶ risk contour, appropriate building developments would fit the existing plan as well as provide tools for determining acceptable future development projects. Applying the MIACC criteria to the proposed community beyond the 1 X 10⁻⁶ risk contour line (north of Front Street) would require no additional scope to the building designs. This would also mean no specific additions to building requirements would be needed to ensure acceptable risk levels, with the exception of a small area on the south side of the 1 X 10⁻⁶ risk contour (GWL holdings, north of Dollarton Highway and south of Front Street) for buildings with residential components where the following are suggested:

- HVAC systems that maintain a slight positive pressure inside the building to keep Chlorine from entering.
- Including toxic gas detectors for Chlorine on building HVAC systems to automatically shutdown air intake on high Chlorine levels.
- At least two stair wells with battery back up lighting and sealed doors at each floor level.
- Emergency phones for contact with emergency responders and building residents.
- Building PA system.
- Use local radio and TV stations for communications to residents.
o Building owners and management would need to ensure emergency plans for all residents in the building clearly defining what to do to protect themselves should they be asked to evacuate or to shelter inside.

“Step 3” of the Scope of Work basically boils down to developing a specific emergency plan for the new Maplewood community with special consideration for the zone between Front Street and Dollarton Highway. Here there is some residential development proposed. Because the design for the residential area is for multi story buildings there is a need to recognize some special design considerations as noted above.

Emergency planning and notification systems complement building designs and for the Maplewood area should also be considered as a means to protect residents and at least provide comfort and quality of life. Although risk assessments do not take into consideration existing emergency response planning the outcome of risk assessments is the basis for developing emergency plans, based on understanding the risks involved. In fact this is exactly the premise for emergency planning in Canada as described in Canadian Standards Association guideline “CAN/CSA-Z731-03 - Emergency Preparedness and Response”. Such emergency plans when promptly initiated and followed through will reduce the consequences of major incidents.

Recommendations include:

o Ensure there is a special emergency planning recognition of the residents living in the zone between $1 \times 10^{-5}$ and $1 \times 10^{-6}$ risk contours (New Dollarton and Front Street).

o For any residences between the $1 \times 10^{-5}$ and $1 \times 10^{-6}$ risk contours provide for at least two roads in and out of the areas and no dead end roads where there is only one exit. Where possible this may not be practical to do for example Seymour River Place), the emergency plan should note these as a special case within the emergency plan for alternative action such as alternate evacuation pathways.

o Recommend including an automated phone calling system to alert citizens downwind of a Chlorine release in the area between the $1 \times 10^{-5}$ and $1 \times 10^{-6}$ risk contours. These systems do have challenges but are a reliable tool to use in emergency communications. It is recommended the District strongly encourage residents in the area to register annually and make it a requirement for strata’s and rental buildings.

o Consider including emergency sirens activated specifically for Chlorine releases for notification of people within the $1 \times 10^{-5}$ and $1 \times 10^{-6}$ risk contours. They have a simple way of communicating serious emergencies and if their installation and use are communicated well with the community they can be a very useful tool. They need to be routinely and regularly tested which is something that can be incorporated into regular emergency planning communications activities already conducted. The sirens are costly and do require regular maintenance though. It is recommended that these be a requirement for Strata and rental buildings.

o All the recommendations need to be done in consultation with the Emergency Services department.

The intention of this report is to assess the proposed development and make recommendations for defining the “Development Permit Area” (DPA) from a risk based land use planning approach. Maintaining a positive relationship between the industrial activities and the residential life style is at the basis of the risk based approach and the MIACC criteria. Through recognizing the global involvement towards determining acceptability of risk and applying that
outcome into developments like this that positive relationship can be successful. The community can be satisfied they meet the global and Canadian standards and industry can be successful into the future knowing what they need to do to manage their operations to meet that standard., and not fear future encroachment on their operations.

I believe this analysis is appropriate for the study area. Please let me know of any questions. Thank you for asking me to develop this review.

Doug McCutcheon, P. Eng.
“Maplewood Plaza Proposed Development
- Risk Based Review”

The District of North Vancouver

For

“Maplewood Limited Partnership”

FINAL REPORT

March 20TH, 2016

Prepared By:

Doug McCutcheon and Associates, Consulting

A Division of “Human Factors Impact Ltd.”
EXECUTIVE SUMMARY

This review has been prepared for the “Maplewood Limited Partnership” and the proposed development of the Maplewood Plaza located on Lot G and H, Block 18 District Lot 193, New Westminster District Plan 20080. The postal address is 229 Seymour River Place and 2015 Old Dollarton Highway.

The objective of this report is to assess the proposed Maplewood Plaza development acceptability based on risk and the potential impact of the heavy industry to the south, particularly the Canexus Chlorine manufacturing plant. The planned development will be a mixed use complex consisting of two buildings with a residential component and some commercial retail space. The development will be southeast of Old Dollarton Highway north of Front Street and southwest of Seymour River Pl. (Figure 1). This assessment is based upon the risk based land use criteria as originally set out through the Canadian Society for Chemical Engineering – Process Safety Management division (now managing the original work completed by the Major Industrial Accidents Council of Canada (MIACC) and now referred to as the CSChE-PSM (MIACC) criteria which is Canada’s best practice for risk based land use planning and has been referred to by the District of North Vancouver.

Figure 1 shows the location of the proposed development and its relationship to the heavy industrial activity to the south. That heavy industrial activity is the source of the risk for the project. Figure 2 shows the acceptable levels of risk using the CSChE-PSM (MIACC) criteria as a basis for the Maplewood Centre location. Figure 3 shows the acceptable land use criteria for various risk levels as defined by the CSChE-PSM (MIACC) criteria and also shows the range of risk exposures expected for the new Maplewood Plaza development.

Several risk assessments were reviewed for this report with the main emphasis on the Maplewood Chemical Hazard DPA Preliminary Study - for the District of North Vancouver – Final Report August 8th, 2012 content and the results from the HTEC Ltd. Hydrogen Project Risk Assessment for the District of North Vancouver – Final Report March 26th, 2012 report. The reports involved characterizing the levels of risk impact from the industrial area in terms of consequence and probability. Additionally the two Great West Life Realty Advisors reports were reviewed for any specific concerns.

The process used for the two risk study reports were intended to determine where risk would be acceptable for land use planning needs. The result determined the best approach would be to set an acceptable risk level of $1 \times 10^{-5}$ along Spicer Road and $1 \times 10^{-6}$ along Front Street. This was accepted by the District and local businesses specifically Canexus and their Chlorine manufacturing operations. The HTEC project was added later and too met the criteria for land use planning purposes.

A review of the report contents as well as the GWL Realty Advisory reports showed the acceptable land use risk levels to meet current criteria and the District of North Vancouver requirements. With respect to the Maplewood Plaza development the entire proposed design for residential and commercial use will fit outside of the $1 \times 10^{-6}$ risk level zone. Anything north of the $1 \times 10^{-6}$ risk line of Front Street can become high density with the exception of “Sensitive Institutions” such as school, hospitals and seniors homes.
The CSChE-PSM (MIACC) risk based land-use planning criteria as shown on Figure 3 is a direct result of Canada’s approach to managing industrial risks as a result of the Bhopal India incident of 1984. The Bhopal incident raised the question in Canada and around the world asking if it could happen in our country and what do we have that will prevent it from happening. To answer the questions a consensus organization of industrial experts, government (federal and provincial) and academia was formed and we know it as the Major Industrial Accidents Council of Canada (MIACC). That body of Canada’s best experts developed many resources, one was the answer directly associated with the Bhopal India incident around proper land use planning in and adjacent to industrial areas.

The process involved a global view of what best practices there are as well as developing a means to “measure risk” so decisions can be made to properly address risk to people’s health and safety. That measurement focused on what would be an acceptable level of risk for an individual located in the same location for 24 hours per day over one year. Without such a number making appropriate decisions could not happen. That risk number was universally accepted and tested in the courts in the United Kingdom which gives us an acceptable level of risk to expose people to, in order to enjoy the standard of living we desire as people. That value is; “industry can impact beyond their property lines as long as the risk to an individual staying in one location for an entire year is not greater than one chance in a million of a fatality as a result of an incident on the industrial property.” This risk level is in the same order of magnitude as an individual being struck by lightning, a very low number, but one that has been termed acceptable in the eyes of the public. And definitely a number any company can now design and operate their businesses and meet.

In summary, I support the planned Maplewood Plaza development to be appropriate for the District of North Vancouver requirements. The only care required is to recognize the need to not allow for any “Sensitive Institutions” within the development.

Please let me know of any questions. Thank you for asking me to develop this review.

Doug McCutcheon, P. Eng
Figure 1: Proposed Maplewood Plaza Location
Figure 2: Maplewood Centre Acceptable Risk Contours

(Doug McCutcheon and Associates; Maplewood Chemical Hazard DPA Preliminary Study - for the District of North Vancouver – Final report August 8th, 2012)
Figure 3: CSChE-PSM (MIACC) Acceptable Level of Risk Criteria

### Annual Location Risk
(chance of fatality per year)

- **100 in a million** ($10^{-4}$)
- **10 in a million** ($10^{-5}$)
- **1 in a million** ($10^{-6}$)
- **0.3 in a million** ($0.3 \times 10^{-6}$)

<table>
<thead>
<tr>
<th>Risk Source</th>
<th>No other land use</th>
<th>Manufacturing, warehouses, open space (parkland, golf courses, etc.)</th>
<th>Low-density residential (up to 10 units with ground level access, per net hectares) and commercial (including offices, retail centers, restaurants, entertainment centers, sporting complexes)</th>
<th>High-density residential and commercial, including places of continuous occupancy such as hotels and tourist resorts</th>
<th>Sensitive institutions (e.g., hospitals, child and aged care facilities, schools)</th>
</tr>
</thead>
</table>

**Allowable Land Uses**

- **South End Risk Level Exposure**
- **North End Risk Level Exposure**
- **Proposed Maplewood Plaza Site Range of Risk Exposure**
REFERENCES

Doug McCutcheon and Associates; Maplewood Development Proposal Assessment – The District of North Vancouver for GWL Realty Advisors Inc – Final Report March 16th, 2009

Doug McCutcheon and Associates; Maplewood Chemical Hazard DPA Preliminary Study - for the District of North Vancouver – Final Report August 8th, 2012


DISCLAIMER

The information presented in this document was compiled and interpreted exclusively for the purposes stated with respect to the “Maplewood Plaza Development Proposal”. Doug McCutcheon and Associates, Consulting provided this report solely for the purpose noted above.

Reasonable skill, care and diligence has been exercised to assess the information acquired during the preparation of this report, but makes no guarantees or warranties as to the accuracy or completeness of this information. The information contained in this report is based upon, and limited by, the circumstances and conditions acknowledged herein, and upon information available at the time of its preparation. The information provided by others is believed to be accurate but cannot be guaranteed.

Doug McCutcheon and Associates, Consulting does not accept any responsibility for the use of this report for any purpose other than the “Maplewood Plaza Development Proposal”, and does not accept responsibility to any third party for the use in whole or in part of the contents of this report. Any alternative use including that by a third party, or any reliance on, or decisions based on this document, is the responsibility of the alternative user or third party.

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Any questions concerning the information or its interpretation should be directed to Doug McCutcheon, P. Eng.
Maplewood Chemical Hazard DPA
Preliminary Study

For

The District of North Vancouver

FINAL REPORT

AUGUST 8th, 2012

Prepared By:

DOUG MCCUTCHEON AND ASSOCIATES, CONSULTING
A DIVISION OF “HUMAN FACTORS IMPACT LTD.”
EXECUTIVE SUMMARY:

The “Scope of Work” included:

1. Review the inventory of chemicals by substance type, location and maximum quantity and assess what substances pose a theoretical risk to residents/businesses in the nearby Village Centre.
2. Identify the geographical scope of potential risk and recommend the boundaries of the eventual Development Permit Area.
3. Discuss the relative merits of building, site and area-level measures to mitigate any identified theoretical risks.

In “Step 1” the identified chemicals were assessed for potential to cause harm to the community of Maplewood. Four existing industrial operations plus a proposed new one were looked at in terms of risk and acceptability to the community using the Major Industrial Accidents Council of Canada risk based land use planning criteria. An analysis for hazards followed by calculations to determine the extent of impact outside the company property lines and the probability of such events was undertaken for this report. The result showed only those hazards and risks for the Canexus facilities are of concern. All other facilities either had no concerns or the impact could only be felt within their company property lines.

For “Step 2” of the Scope of Work, The opportunity to utilize the Canexus peer reviewed Quantitative Risk Assessment was instrumental in forming the basis for suggesting risk based planning needs for the proposed Maplewood community development. Because there are no other company risks to consider using the Canexus study provided a sound approach to determine acceptable buildings and occupancies, a clear opportunity to implement the MIACC criteria, Canada’s best practice.

The MIACC Criteria is shown as a pictorial view on Figure 3 on page 16. It was developed in conjunction with a global approach to understanding just what society is willing to accept in terms of the impact from industrial operations. An industrial facility needs to control its level of risk but if it has the potential to impact beyond the property line, certain activities are allowed as one gets further away from the industrial site because the risk levels decline as one moves further from the industrial source based on the MIACC approach. The further away from the source of risk more activities for a higher concentration of people are allowed. As seen in Figure 3 a smaller graph indicates the numbers of people impacted can grow continuously the further out from the industrial facility one gets. The point is it is not a “step change” but a continuous gradual change.

The MIACC approach does not prescribe specific distances to each risk level. This is left up to individual jurisdictions to decide on based on their circumstances such as the type of industry, the type of community, and the emergency planning needs of the area, either way the company is responsible to meet the risk criteria and the most stringent criteria will dictate what they include in their facility designs.

The MIACC approach to risk based land use planning accepts that if the risk levels to the community are less than one chance in a million of a fatality (1 X 10^{-6}), there is no requirement
to add additional measures to the already existing building codes. This review specifically noted the impact of a Chlorine or Hydrogen Chloride release from Canexus would have offsite consequences potentially leading to fatalities. The Canexus “Technology Conversion Project” (TCP) - 2006 Quantitative Risk Assessment by Dr. Alp shows there can be consequences impacting the community but since the probability is so low the impacts are within acceptable limits. Further, if advance warning systems are in place to alert the community and if residents close their windows and doors (shelter in place) there is ample time to protect oneself in an emergency (Dr. David Wilson University of Alberta). Typically a major release will take a lot of time (many minutes and possibly up to an hour) to travel to the residential community leaving the emergency response teams time to work at implementing an effective plan to evacuate people.

A release of Chlorine will create a heavier than air cloud that will stay together and move with the wind. That cloud will stay close to the ground as it moves forward mixing with air on the cloud surface. The mixing action will eventually dilute the cloud to a lower safe concentration a certain distance down wind. Because the cloud is heavier than air it moves with the wind but slowly as the wind brushes over the body of the cloud. Further the cloud movement will be slowed by obstructions on the ground. Some of it will be absorbed by moisture in the air and vegetation. it will take time to reach the Village area. Further the cloud will have some early warning odours at very low concentrations giving time for people to take action before their safety is compromised.

For the case of a Hydrogen Chloride (HCl) vapour release the scenario is somewhat different because HCl is not as heavy as Chlorine gas and closer to air. The cloud will move forward with the wind with more mixing action. Similar to Chlorine the cloud will travel next to the ground and be impacted by obstructions as it moves forward. HCl is easily absorbed in water where Chlorine is not. And HCl also is detectable at very low concentrations giving time for people to react in a safe manner.

Applying the MIACC criteria to the proposed community layout it is recommended to designate Spicer Road as risk contour 1 X 10^-5, Front Street as risk contour 1 X 10^-6 and Old Dollarton as the 0.3 X 10^-6 risk contour, appropriate building developments would fit the existing plan as well as provide tools for determining acceptable future development projects. Applying the MIACC criteria to the proposed community beyond the 1 X 10^-6 risk contour line (north of Front Street) would require no additional scope to the building designs. This would also mean no specific additions to building requirements would be needed to ensure acceptable risk levels, with the exception of a small area on the south side of the 1 X 10^-6 risk contour (GWL holdings, north of Dollarton Highway and south of Front Street) for buildings with residential components where the following are suggested:

- HVAC systems that maintain a slight positive pressure inside the building to keep Chlorine from entering.
- Including toxic gas detectors for Chlorine on building HVAC systems to automatically shutdown air intake on high Chlorine levels.
- At least two stair wells with battery back up lighting and sealed doors at each floor level.
- Emergency phones for contact with emergency responders and building residents.
- Building PA system.
- Use local radio and TV stations for communications to residents.
Building owners and management would need to ensure emergency plans for all residents in the building clearly defining what to do to protect themselves should they be asked to evacuate or to shelter inside.

“Step 3” of the Scope of Work basically boils down to developing a specific emergency plan for the new Maplewood community with special consideration for the zone between Front Street and Dollarton Highway. Here there is some residential development proposed. Because the design for the residential area is for multi story buildings there is a need to recognize some special design considerations as noted above.

Emergency planning and notification systems complement building designs and for the Maplewood area should also be considered as a means to protect residents and at least provide comfort and quality of life. Although risk assessments do not take into consideration existing emergency response planning the outcome of risk assessments is the basis for developing emergency plans, based on understanding the risks involved. In fact this is exactly the premise for emergency planning in Canada as described in Canadian Standards Association guideline “CAN/CSA-Z731-03 - Emergency Preparedness and Response”. Such emergency plans when promptly initiated and followed through will reduce the consequences of major incidents.

Recommendations include:
- Ensure there is a special emergency planning recognition of the residents living in the zone between $1 \times 10^{-5}$ and $1 \times 10^{-6}$ risk contours (New Dollarton and Front Street).
- For any residences between the $1 \times 10^{-5}$ and $1 \times 10^{-6}$ risk contours provide for at least two roads in and out of the areas and no dead end roads where there is only one exit. Where possible this may not be practical to do for example Seymour River Place), the emergency plan should note these as a special case within the emergency plan for alternative action such as alternate evacuation pathways.
- Recommend including an automated phone calling system to alert citizens downwind of a Chlorine release in the area between the $1 \times 10^{-5}$ and $1 \times 10^{-6}$ risk contours. These systems do have challenges but are a reliable tool to use in emergency communications. It is recommended the District strongly encourage residents in the area to register annually and make it a requirement for strata’s and rental buildings.
- Consider including emergency sirens activated specifically for Chlorine releases for notification of people within the $1 \times 10^{-5}$ and $1 \times 10^{-6}$ risk contours. They have a simple way of communicating serious emergencies and if their installation and use are communicated well with the community they can be a very useful tool. They need to be routinely and regularly tested which is something that can be incorporated into regular emergency planning communications activities already conducted. The sirens are costly and do require regular maintenance though. It is recommended that these be a requirement for Strata and rental buildings.
- All the recommendations need to be done in consultation with the Emergency Services department.

The intention of this report is to assess the proposed development and make recommendations for defining the “Development Permit Area” (DPA) from a risk based land use planning approach. Maintaining a positive relationship between the industrial activities and the residential life style is at the basis of the risk based approach and the MIACC criteria. Through recognizing the global involvement towards determining acceptability of risk and applying that
outcome into developments like this that positive relationship can be successful. The community can be satisfied they meet the global and Canadian standards and industry can be successful into the future knowing what they need to do to manage their operations to meet that standard, and not fear future encroachment on their operations.

I believe this analysis is appropriate for the study area. Please let me know of any questions. Thank you for asking me to develop this review.

Doug McCutcheon, P. Eng.
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GENERAL REPORT:

INTRODUCTION TO RISK (Specifically Industrial Risk):

Risk = (Consequence) X (Probability)

*Industrial Risk is the potential (probability) to cause a fatality (consequence) to an individual and is expressed as a number for example; one chance in a million (1 X 10^6) or one chance in ten thousand (1 X 10^4), etc.*

As a society we have various needs and demands in order to enjoy our quality of life. Industry depends on these demands and supports our needs but included in their industrial activities is a certain amount of potential (probability) for something unwanted (consequence) to happen. It turns out that there is always a probability for that unwanted consequence to happen, it is never zero. Recent examples of such events include the Costa Concordia cruise ship disaster or the recent BC sawmill explosions and fires where the public may have been put in situations where there may be fatalities.

In 1984 a major industrial accident happened in Bhopal India where a very large release of a toxic chemical killed approximately 2,500 people within hours and well over 20,000 deaths have resulted from that event to date. That incident impacted the world in general. The unacceptability of that event initiated a global response resulting in standards and guidelines to be used to proactively determine:

- What the consequence would be in terms of fatalities from such an event.
- What the probability (likelihood) of such an event happening would be, and
- What would be considered to be an acceptable level of risk we can measure our activities against, and finally
- How to manage any of that risk to prevent the unwanted event from happening.

A very key part of the development of these standards and guidelines was to determine what society considers an “Acceptable Level of Risk”. To this end a global dialogue ensued resulting in:

- *If the annual probability of a fatality imposed on an individual located in one location for an entire year is less than one chance in a million (1 X 10^5) the risk is considered to be acceptable.*

Note this is based on an individual being exposed involuntarily to an industrial operation for an entire year. This allows for calculating risk numbers for comparison purposes. To put this in context, below is Figure 3 describing the probability of a fatality that may give a basis to help understand what society is willing to accept in terms of that probability of a fatality in order to enjoy the quality of life we demand as a society today.
Globally the acceptable level of risk for an industrial operation is similar to that risk that we as individuals are willing to accept when we travel by commercial air, rail or bus transportation systems where the pilot or train engineer or bus driver are in control. In fact industry is expected to design and operate facilities to not exceed this acceptable risk level ceiling.

In order to test this global opinion the courts of the United Kingdom were asked to participate and concluded this to be reasonable for society today to expect from industrial developments. The result is many of these standards have found there way into regulation and law in various countries. Also it is considered to be best practice meaning professional judgement around industrial projects needs to include this type of analysis.

Finally, Canada has been actively involved and through the work of the Major Industrial Accidents Council of Canada (MIACC) produced the accepted technical guidance needed and is recognized as Canada’s best practice here and abroad. Some jurisdictions have included the MIACC approach in land use bylaws and some standard setting organizations have referenced the MIACC approach. This risk assessment uses the MIACC approach.
PROCESS USED TO COMPLETE THE STUDY:

SCOPE OF WORK
Description of Work
The objective of this study is to facilitate the responsible (re)development of the Maplewood Village Centre by identifying the area and relative risk of chemical hazards and evaluating a range of planning/design measures that would reasonably mitigate developments from the potential risk (if any) of proximate chemical industries. This has three main and sequential aspects are noted in the following steps:

1. **Review the inventory of chemicals by substance type, location and maximum quantity and assess what substances pose a theoretical risk to residents/businesses in the nearby Village Centre.** This study should assess the levels of risk posed by different substances and articulate which risks can be reasonably addressed through site planning and building design measures and which by can only be addressed by other means (e.g. emergency response).

2. **Identify the geographical scope of potential risk and recommend the boundaries of the eventual Development Permit Area.** If appropriate, this mapping should indicate the varying degrees of risk associated with different areas if alternative design measures should apply in these sub-areas.

3. **Discuss the relative merits of building, site and area-level measures to mitigate any identified theoretical risks.** The consultant is expected to provide judgement on the relative efficacy (the capacity to produce an effect.) of different design tools for managing the built environment, including for example: site planning, building orientation and design; fenestration (Openings in a building) and ventilation controls; notification measures (e.g. sirens, sensors); shelter in place provisions. If appropriate, these recommendations should indicate the relative suitability or necessity of recommended measures as they may apply to different land uses, building forms and/or densities.

In a subsequent phase of this project, the findings and recommendations of this study will inform the establishment of a development permit area where specific design guidelines apply.
PROCESS USED FOR STEP 1:
Review the inventory of chemicals by substance type, location and maximum quantity and assess what substances pose a theoretical risk to residents/businesses in the nearby Village Centre.

A risk assessment consists of first identifying hazards that may have an adverse impact outside the company property lines, refer to Appendix 3 “Risk Management Process”. Once the hazards are known consequences and probabilities can be determined for each hazard. Step 1 of the Scope of Work followed the risk assessment process for hazard identification, consequence analysis and a probability study to determine first if there is a “risk” concern to be aware of. In Canada the process defined through the Major Industrial Accidents Council of Canada (MIACC) follows the steps identified above as best practice.

1. Hazard Identification:
The MIACC process for risk assessments identifies six group characteristics to consider;

Table 1: MIACC Hazard Identification Groups and Characteristics

<table>
<thead>
<tr>
<th>Group</th>
<th>Group Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Flammable liquids (pool fire hazard)</td>
</tr>
<tr>
<td>B</td>
<td>Flammable liquids (flash fire hazards)</td>
</tr>
<tr>
<td>C</td>
<td>Liquefied flammable gases (flash fire hazard)</td>
</tr>
<tr>
<td>D</td>
<td>Toxic gases liquefied by compression (toxic cloud hazard)</td>
</tr>
<tr>
<td>E</td>
<td>Toxic gases liquefied by cooling (toxic cloud hazard)</td>
</tr>
<tr>
<td>F</td>
<td>Toxic liquid (toxic cloud hazard due to evaporation)</td>
</tr>
</tbody>
</table>

NOTE: One additional concern was added to consider the impact of a shockwave (overpressure) from an explosion.

Hazards identified for this project included:
- Impact due to a fire (UNIVAR and NEWALTA have identified concerns)
- Impact as a result of a toxic release to the community (Hydrogen Sulphide at NEWALTA, Chlorine and Hydrogen Chloride at Canexus concerns were identified)
- Damage as a result of an explosion (the new “Hydrogen Technology and Energy Corporation” (HTEC) project concern was identified)

Chemical inventories for four neighbouring companies were provided and compared to the MIACC lists of hazardous substances (reference; “MIACC Hazardous Substances Risk Assessment: a Mini-Guide for Municipalities and Industry – 1994”). This guide is a listing of hazardous substances which are frequently encountered in Canada which, if released, could cause fatalities off company sites. A “threshold quantity” is listed for each substance where a risk assessment is recommended if the company exceeds those quantities.

Of the chemicals considered there were two at Canexus identified, Chlorine and Hydrogen Chloride gas (both group “D” characteristics) as the major risk issue that could impact the Maplewood community. Other chemicals having the possibility of creating offsite fatalities include:
- Ethanol is stored in large quantities in two large tanks at UNIVAR Canada and is highly flammable (group “A” characteristics). Although not on the MIACC Hazardous
Chemicals list should a fire develop the impact of the radiant heat will extend beyond the company property line.

- $\text{H}_2\text{S}$ is generated at the NEWALTA facility and a release of small amounts could be harmful to the public.
- Sodium Chlorate was noted as a product manufactured and stored at ERCO Worldwide but is not considered directly harmful. Sodium Chlorate will though, act as an oxidizing agent and accelerate a fire scenario in the case of a warehouse fire liberating small concentrations of Chlorine to the atmosphere.
- Hydrogen Peroxide is used by NEWALTA and ERCO Worldwide which is also an oxidizing agent in a fire situation.
- A lubricating oil fire contained within the NEWALTA site can create radiant heat sufficient to cause fatalities if heated.
- Other chemicals listed are of very small quantities and not harmful off site.
- Or in the case of Caustic Soda, Ethylene Glycol, and Hydrochloric Acid which are in large quantities, there are no offsite impacts.

2. Consequence Analysis:

For each hazard identified there is one or more consequence to consider. When evaluating possible consequences the concern is how far outwards from the company facility can fatalities be expected. There is a distance that can be calculated and the objective is to determine where that will be for a realistic worst case scenario. Once defined, for the worst case, all other possible scenarios will be of less impact. Tables 2 & 3 below describe for different events how to measure what the consequence of a fatality will look like. The consequences listed in the middle column (irreversible effects) are used to measure that distance.

**Table 2: Some Types of Measurable Consequences**

<table>
<thead>
<tr>
<th>TYPE OF INCIDENT</th>
<th>CONSEQUENCE Odour/Irritation Threshold</th>
<th>CONSEQUENCE Irreversible Effects Threshold</th>
<th>CONSEQUENCE Life Threatening Effects Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic Release (concentration - 1 hour exposure)</td>
<td>ERPG-1</td>
<td>ERPG-2</td>
<td>ERPG-3</td>
</tr>
<tr>
<td>Fireball - Immediate Ignition (radiation intensity - 60 second exposure)</td>
<td>1st Degree Burns 2 Kw/m² 600 BTU/hr/ft²</td>
<td>2nd Degree Burns 5 Kw/m² 1600 BTU/hr/ft²</td>
<td>3rd Degree Burns 8 Kw/m² 2500 BTU/hr/ft²</td>
</tr>
<tr>
<td>Flash Fire – Delayed Ignition (flammable gas dispersion)</td>
<td>NOTE there is no lower level consequence</td>
<td>1/2 of Lower Flammability Limit</td>
<td>1/2 of Lower Flammability Limit</td>
</tr>
<tr>
<td>Pool / Jet Fire (radiation intensity - 90 second exposure)</td>
<td>1st Degree Burns 1 Kw/m² 400 BTU/hr/ft²</td>
<td>2nd Degree Burns 4 Kw/m² 1200 BTU/hr/ft²</td>
<td>3rd Degree Burns 6 Kw/m² 1900 BTU/hr/ft²</td>
</tr>
<tr>
<td>Unconfined Vapor Cloud Explosion (overpressure)</td>
<td>Window Breakage 0.3 psig 0.02 bar</td>
<td>Partial Demolition of Houses 1.0 psig 0.07 bar</td>
<td>Threshold of Ear drum rupture. Lower limit of serious structural damage 2.3 psig 0.16 bar</td>
</tr>
</tbody>
</table>
Definitions:

- **Kw/m²**: are kilowatts per meter squared. A measure of heat energy over a surface area.

- **Psig & bar**: are measures of pressure

- **ERPG-1**: is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for one hour without experiencing other than mild transient adverse health effects or perceiving a clearly objectionable odour.

- **ERPG-2**: is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing any irreversible or other serious health effects or symptoms that could impair their abilities to take protective action.

- **ERPG-3**: is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing life-threatening health effects.

### Table 3: Consequences Specific to Thermal Radiation Incidents


<table>
<thead>
<tr>
<th>Intensity Kw/m²</th>
<th>Consequential Exposure Damage to People</th>
<th>Consequential Damage to Equipment</th>
</tr>
</thead>
</table>
| 37.5           | • Significant injury after 10 seconds exposure.  
                 • 1% lethality after 10 seconds exposure  
                 • 100% lethality after 100 seconds exposure | Sufficient to cause damage to process equipment. |
| 25             | • Significant injury after 10 seconds exposure.  
                 • 1% lethality after 30 seconds exposure  
                 • 100% lethality beyond 100 seconds exposure | Minimum energy to ignite wood at indefinitely long exposures & “unpiloted” |
| 12.5           | • Significant injury after 60 seconds exposure.  
                 • 1% lethality after 80 seconds exposure | Minimum energy required for “piloted” ignition of wood, melting of plastic tubing |
| 9.5            | • Significant injury after 60 seconds exposure.  
                 • 1% lethality after 80 seconds exposure | No significant damage |
| 4 **           | • Significant injury after 90 seconds exposure. | No significant damage |
| 1.6            | • Pain threshold met after 60 seconds | No significant damage |

**Any intensity level that is greater than 4 Kw/m² can lead to fatalities.**

Once the main hazardous chemical (Chlorine and Hydrogen Chloride) were identified along with Ethanol, Hydrogen Sulphide, Hydrogen and lubricating oil as there were large quantities of these noted, a consequence analysis was conducted and shown of the individual plants in Table 4 below. Calculations included toxic cloud impacts for Chlorine and Hydrogen Sulphide and radiant heat impacts from fires involving Ethanol and lubricating oil. The consequence results are noted here and shown in Appendix 2:
Table 4: Consequences Having the Potential to Impact Maplewood

<table>
<thead>
<tr>
<th>Company</th>
<th>Chemical</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canexus</td>
<td>Chlorine</td>
<td>As described in the Alp Risk Assessment report the risk of a fatality will be one in a million (1 X 10⁻⁶) just north of Front Street.</td>
</tr>
<tr>
<td></td>
<td>Hydrogen Chloride gas</td>
<td>A release will impact beyond the Canexus property line but within the impact distances for Chlorine.</td>
</tr>
<tr>
<td></td>
<td>Hydrogen Explosion</td>
<td>An impact of up to 28 metres from inside the site with no impact beyond the property line.</td>
</tr>
<tr>
<td>NEWALTA</td>
<td>Hydrogen Sulphide gas</td>
<td>A release from the Hydro-treater unit will not be impactful beyond the property line.</td>
</tr>
<tr>
<td></td>
<td>Lubricating Oil</td>
<td>A lubricating oil spill and possible fire will not impact beyond the property line.</td>
</tr>
<tr>
<td>UNIVAR</td>
<td>Ethanol</td>
<td>A major tanks spill to the diked area will have a radiant heat impact about 155 metres from the tanks but will not impact the Maplewood Village area.</td>
</tr>
<tr>
<td>HTEC</td>
<td>Hydrogen Explosion</td>
<td>Can impact up to 200 metres from the site location and will not impact beyond the property line.</td>
</tr>
<tr>
<td></td>
<td>Hydrogen fire</td>
<td>An impact of up to 100 metres with no impact beyond the property line.</td>
</tr>
<tr>
<td>ERCO Worldwide</td>
<td>None of note</td>
<td>None to note</td>
</tr>
</tbody>
</table>

Of the chemicals two at Canexus were identified, (Chlorine and Hydrogen Chloride (HCl) gas both group “D” characteristics) as the major risk issue that could impact the Maplewood community. Both have a strong odour at low safe concentrations which act as early warning properties and an emergency can be responded to effectively. However they are different, of note is a release of HCl gas is more easily handled as water spray will absorb the gas, where only small amounts will be absorbed in water for a Chlorine gas release. An emergency plan for a Chlorine release will be very similar to that for a Hydrogen Chloride release.

Other chemicals having the possibility of creating offsite fatalities include:

- Ethanol stored in large quantities in two large tanks at UNIVAR Canada and is highly flammable (group “A” characteristics). Although not on the list should a fire develop the impact of the radiant heat will extend beyond the company property line but will not impact the Maplewood Village Centre area.

There were other concerns evaluated:

- H₂S is generated at the NEWALTA facility but not enough to escape the property that would be harmful to the public.
- Sodium Chlorate was noted as a product manufactured and stored at ERCO Worldwide but is not considered directly harmful to the Maplewood Village Centre. Sodium Chlorate will act as an oxidizing agent and accelerate a fire scenario in the case of a warehouse fire liberating small concentrations of Chlorine to the atmosphere.
- Hydrogen Peroxide is used by NEWALTA and ERCO Worldwide which is also an oxidizing agent in a fire situation and not considered to be harmful to the Maplewood Village Centre.
- A lubricating oil fire contained within the NEWALTA site can create radiant heat sufficient to cause fatalities but only on site and not beyond the property line.
3. The Probability Study:
As noted at the beginning, risk is a combination of consequences and probabilities. Using the tools and methods we have today consequences can be accurately determined. As far as the probability side of the risk equation they too can be accurate and reasonable. Generally company data is the more accurate data but there have been peer reviewed research data made available too which can give an accurate value as well, usually a conservative value.

The probability data used is described as a number between 0 and 1 on an annual basis. 0 meaning it will never happen and 1 being it always is happening. As one will see these risk assessments are using numbers that are very low like 0.000001 (1 X 10⁻⁶) and almost zero. The public is not very willing to accept risk but if they want to have a certain standard of living they must take some risk but not very much. This puts a lot of emphasis on companies to build, operate and manage their business with care. It also puts emphasis on building codes and standards to be strong.

Probability values were assumed from the Canexus TCP Project - Alp QRA for Chlorine and as shown on Figure 19 as the annual probability of a fatality to the Maplewood area. The result is a probability of a fatality just north of Front Street of 1 X 10⁻⁶ (one chance in a million on an annual basis).

For the other consequences accepted and conservative peer reviewed academic probabilities were used as shown in Tables 5, 6 & 7 below.

- For the Hydrogen Chloride gas release the probability chosen was 1 X 10⁻⁴ to 6 X 10⁻⁶ on an annual basis, based on a tank leak.
- For the UNIVAR flammable Ethanol case the probability is 1 X 10⁻⁵ to 6 X 10⁻⁷, a tank leak that catches fire. *(Note only 10% of these types of flammable liquid releases catch fire).*
- The probability for the release of Hydrogen Sulphide from the NEWALTA site is 1 X 10⁻⁸ to 1 X 10⁻¹⁰, based on a piping leak on site.
- And the probability of a pressure tank release of Hydrogen at HTEC is 1 X 10⁻⁵ causing an explosion and fire.

Failure Data for several situations have been identified through various analyses around the world. Below are a few databases, which would be appropriate for these circumstances. These databases have been developed as research projects and have undergone rigorous peer review to ensure their validity. Normally, company databases will provide a more accurate probability, however few companies collect this data. The probability data shown in Tables 5 & 7 are used for this analysis.
### Table 5: Probability Data from the Canvey and Rijmond Reports

<table>
<thead>
<tr>
<th>Type of failure</th>
<th>Canvey Report # Incidents / km</th>
<th>Rijmond Report # Incidents / year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe leak</td>
<td>$3 \times 10^{-4}$</td>
<td>$1 \times 10^{-8}$ to $1 \times 10^{-10}$</td>
</tr>
<tr>
<td>Tank leak</td>
<td>$1 \times 10^{-6}$</td>
<td>$1 \times 10^{-4}$ to $6 \times 10^{-5}$</td>
</tr>
<tr>
<td>Railcar derail &amp; spill</td>
<td>$1 \times 10^{-4}$</td>
<td>$1 \times 10^{-4}$ to $4 \times 10^{-5}$</td>
</tr>
<tr>
<td>Pump failure</td>
<td>$1 \times 10^{-4}$</td>
<td>$1.4 \times 10^{-5}$ to $3.6 \times 10^{-4}$</td>
</tr>
<tr>
<td>Hose failure</td>
<td>$1 \times 10^{-4}$</td>
<td>$6 \times 10^{-5}$ to $4 \times 10^{-6}$</td>
</tr>
<tr>
<td>Valve opening (relief valve)</td>
<td>$1 \times 10^{-8}$/km traveled</td>
<td>$1\times10^{-10}$ to $1\times10^{-8}$/km traveled</td>
</tr>
<tr>
<td>Truck road spill incident</td>
<td>$1 \times 10^{-8}$/km traveled</td>
<td>$1\times10^{-10}$ to $1\times10^{-8}$/km traveled</td>
</tr>
</tbody>
</table>

_DATA from the UK HSE analysis of incidents 1978 and from the Netherlands review 1982 For a Rotterdam link to the North Sea._

### Table 6: Probability Data from the Center for Chemical Process Safety

<table>
<thead>
<tr>
<th>Type of failure</th>
<th>Center for Chemical Process Safety Mean Time Between Failures (MTBF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator error (serious incident)</td>
<td>252,000 hours or once per 28 years</td>
</tr>
<tr>
<td>Detection system failure</td>
<td>220,000 hours or once per 25 years</td>
</tr>
<tr>
<td>Truck loading or unloading failure</td>
<td>1,156,000 hours or once per 131 years</td>
</tr>
<tr>
<td>Spills and leaks</td>
<td>148,000 hours or once per 17 years</td>
</tr>
<tr>
<td>Process control system failure</td>
<td>167,000 hours or once per 19 years</td>
</tr>
</tbody>
</table>

_DATA from an analysis of LNG plants by CCPS (1 year = 8,760 hours) Data is also per person, per system, per truck operation, per tank._

### Table 7: Probability Data from the Center for Chemical Process Safety

<table>
<thead>
<tr>
<th>Type of Failure</th>
<th>Probability</th>
<th>Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atmospheric storage tank release</td>
<td>$1 \times 10^{-4}$</td>
<td>Rijmond Report</td>
</tr>
<tr>
<td>Pressure storage tank release</td>
<td>$1 \times 10^{-5}$</td>
<td>Canvey Report</td>
</tr>
<tr>
<td>In-plant piping release</td>
<td>$1 \times 10^{-9}$</td>
<td>Rijmond Report</td>
</tr>
<tr>
<td>Pipelines</td>
<td>$6.2 \times 10^{-4}$/Km</td>
<td>ERCB</td>
</tr>
<tr>
<td>Pumps</td>
<td>$1 \times 10^{-4}$</td>
<td>Rijmond &amp; Canvey Reports</td>
</tr>
<tr>
<td>Truck transport incident</td>
<td>$1.6 \times 10^{-9}$/Km</td>
<td>Transport Canada</td>
</tr>
<tr>
<td>Rail transport Dangerous Goods release</td>
<td>$3.8 \times 10^{-8}$/Km</td>
<td>Transport Canada</td>
</tr>
<tr>
<td>Hose failure and full bore release</td>
<td>$4 \times 10^{-5}$</td>
<td>Rijmond Report</td>
</tr>
<tr>
<td>BLEVE’s</td>
<td>$1 \times 10^{-10}$</td>
<td>Lees</td>
</tr>
</tbody>
</table>
PROCESS USED FOR STEP 2:
Identify the geographical scope of potential risk and recommend the boundaries of the eventual Development Permit Area.

Step 2 asks to identify the geographical scope of potential risk and recommend the boundaries of the eventual Development Permit Area. The main concern being the Canexus TCP Quantitative Risk Assessment risk contours as shown in Figure 2. Here previous work has been conducted by this author with respect to recommending a decision to designate the centerline of Front Street as the location of a $1 \times 10^{-6}$ (one chance in a million) acceptable level of risk for the purposes of land use planning. Here there are two areas to look at:

- Where the risk contours as described by MIACC should be placed.
- What should the allowable residential density be for the region between the $1 \times 10^{-5}$ and $1 \times 10^{-6}$ risk contours?

The approach is to accept the Canexus risk contour for $1 \times 10^{-6}$ as a starting point. The contour line is approximately 50 metres north of Front Street (as shown in Figure 2 below and Figure 19). The recommendation is to locate that contour along Front Street for land use planning purposes.

Figure 2: Approximate Location of the Canexus $1 \times 10^{-6}$ Risk Contour North of Front Street
Figure 3: MIACC Land Use Planning Criteria

**Annual Individual Risk**

*Chance of fatality per year*

- **100 in a million** ($10^{-4}$)
  - Risk source: No other land use
  - Manufacturing, warehouses, open space (e.g., parkland, golf courses, etc.)

- **10 in a million** ($10^{-5}$)
  - Low-density residential (up to 10 units with ground level access, per net hectare) and commercial, including offices, retail centers, restaurants, entertainment centers, sporting complexes

- **1 in a million** ($10^{-6}$)
  - High-density residential and commercial, including places of continuous occupancy such as hotels and tourist resorts

- **0.3 in a million** ($0.3 \times 10^{-6}$)
  - Sensitive developments (e.g., hospitals, child care facilities and aged care housing developments)

**Density & Distance from Risk Source**

(MIACC Criteria)

**Allowable Land Uses**
With the establishment of the $1 \times 10^{-6}$ risk contour through Front Street and adjusting it accordingly to the west and east extremities as shown in Figure 4 below, the $1 \times 10^{-5}$ risk contour can be drawn through Spicer Road. This allows for light to medium industry as shown by MIACC to be located south of Spicer Road with commercial and some residential between Spicer Road and Front street. As well a similar contour line through the “Old Dollarton Hwy.” is recommended to define the $0.3 \times 10^{-6}$ risk level and satisfy the need for sensitive institutions such as the existing Maplewood school.

**Figure 4: Maplewood Centre Recommended Risk Contours for Land Use Planning**
These distances are relatively short in comparison to other jurisdictions where there is a much larger heavy industrial component involved, but in my view appropriate. With just the Canexus operation having a risk impact on the existing and planned community of Maplewood, setting into play these risk criteria will ensure risks that have already been accepted will fit into the development plan and future proposed industrial developments will need to design to meet the same criteria. The result is the District of North Vancouver will be meeting Canada’s best practices as outlined in the MIACC criteria as shown. The criteria for sensitive developments \((0.3 \times 10^{-6})\) will most likely be the key risk focus for any future proposed projects as meeting that criteria will most likely mean the other risk criteria will be easily met.

The previous work conducted for the Maplewood Development Proposal Assessment (Figure 5 below) recommended that the risk contour for \(1 \times 10^{-6}\) be placed along Front Street as it was close to the calculated risk level for the Canexus TCP Project. The reason being, having a reasonable and clear differentiation like a street makes it easy to plan and eliminates many questions when it comes to development proposals. It also gives development officers clear guidance for making decisions particularly when approved and discretionary uses are defined for the risk zones.

**Figure 5: Maplewood Development Proposal Assessment**

Excerpt from the Maplewood Development Proposal Assessment Report for the GWL Project (Appendix 4):

As there is no specific distances designated by the MIACC criteria but the criterion does put low density housing within the \(1 \times 10^{-5}\) and the \(1 \times 10^{-6}\) risk zones and close to the \(1 \times 10^{-6}\) risk contour, and the GWL proposal is to develop the northern edge of their property for low density residential, I look at this as meeting the MIACC criterion. Further with the choice to develop based on a “low density residential” density of 8 units/acre (average). I would conclude the GWL proposal which includes the two vacant parcels in the calculation does meet the MIACC criteria.
**Residential density determination:**
The second point to consider is the allowable residential densities for the area between $1 \times 10^5$ and $1 \times 10^6$ risk contours. The Maplewood Development Proposal Assessment, specifically for the GWL project, provided rationale to allow residential development for the lands of 8 units/net acre (19.8 Units/net hectare). The new MIACC criterion suggests just 10 units/net hectare, which is less than the numbers for the GWL development. This may impact the number of apartments planned for the west extremity of the GWL lands (see Figure 8: *Potential Building Heights*).

Also, the MIACC criteria is specific to having “ground level access”. Several story residential buildings would not be suggested as appropriate. This preference is from emergency responder input for aiding evacuation during emergencies.

But the current plan would be acceptable with the following suggested design requirements. As the GWL project moves forward the acceptance of this difference along with building design requirements and recognition in emergency planning are acceptable solutions, in my opinion. There are many such discrepancies in all communities, the MIACC criteria is a guideline not a requirement. The fact they are recognized and appropriately dealt with is indeed sound due-diligence.

This focus is on residential buildings but the following consideration for building design requirements should be given to all buildings within the $1 \times 10^5$ and $1 \times 10^6$ risk contours. It is recommended to make it a requirement for a professional to review building designs for these considerations. Consideration to building design features includes:

- HVAC systems that maintain a slight positive pressure inside the building to keep Chlorine from entering.
- Including toxic gas detectors for Chlorine on building HVAC systems to automatically shutdown air intake on high Chlorine levels.
- At least two stair wells with battery back up lighting and sealed doors at each floor level.
- Emergency phones for contact with emergency responders and building residents.
- Building PA system.
- Use local radio and TV stations for communications to residents.
- Emergency plans for all residents in the building clearly defining what to do to protect themselves should they be asked to evacuate or to shelter inside.

If protective design action is included as described there is no need to require specially designed “sheltering in place rooms” within the buildings.

The Canadian Building code sets standards for the construction of buildings in Canada and Provinces generally follow those requirements and will be adequate for buildings where the risk levels are lower than $1 \times 10^6$. Research (*Dr. David Wilson – University of Alberta*) has shown building constructed to the Canadian code standards are tight because of our winters in comparison to those in warmer climates and in fact can offer several hours (typically 2 – 3hours in Canada) of protection (sheltering in place) should a toxic gas release impact the building. Following the building code for development north of Front Street (the $1 \times 10^6$ risk contour) would be sufficient protection. For buildings south of Front Street, adding some if not all the suggested additions noted above provide a safe haven as well as time for emergency responders to provide safe rescue.
PROCESS USED FOR STEP THREE:

Discuss the relative merits of building, site and area-level measures to mitigate any identified theoretical risks.

Step three asked to provide judgement on the relative efficacy (the capacity to produce an effect) of different design tools for managing the built environment, including for example: site planning, building orientation and design; fenestration (openings in a building) and ventilation controls; notification measures (e.g. sirens, sensors); shelter in place provisions. If appropriate, these recommendations should indicate the relative suitability or necessity of recommended measures as they may apply to different land use.

The work conducted through the MIACC process as well as globally considered unwanted impact on people. To this end the acceptability of one chance in a million (1 X 10$^{-6}$) on an annual basis of a fatality created by an unwanted industrial accident was considered to be the key. The MIACC criteria states that residential development need not consider any further features as long as the risk is lower than one in a million i.e. north of Front Street. As long as this criteria is met there is no need for further building design features.

However, as noted in Step 2, there are some multi story buildings already proposed for the GWL project between New Dollarton and Front Street which are within the 1 X 10^{-5} and 1 X 10^{-6} risk contours with the following suggested additional features:

- HVAC systems that maintain a slight positive pressure inside the building to keep Chlorine from entering.
- Including toxic gas detectors for Chlorine on building HVAC systems to automatically shutdown air intake on high Chlorine levels.
- At least two stair wells with battery back up lighting and sealed doors at each floor level.
- Emergency phones for contact with emergency responders.
- Building PA systems for emergency plan activation needs.
- Use of local radio and TV stations for communications to residents.
- Building owners and management would need to ensure emergency plans for all residents in the building clearly defining what to do to protect themselves should they be asked to evacuate or to shelter inside.

Emergency planning for the Maplewood area should also be considered as a means to protect residents and at least provide comfort and quality of life in the form of peace of mind. Recommendations include:

- Ensure there is a special emergency planning recognition of the residents living in the zone between 1 X 10^{-5} and 1 X 10^{-6} risk contours (New Dollarton and Front Street).
- For the above mentioned zone for any residences between the 1 X 10^{-5} and 1 X 10^{-6} risk contours provide for at least two roads in and out of the areas and no dead end roads where possible. This may not be practical to do for example Seymour River Place), the emergency plan should note these as a special case within the emergency plan for alternative action such as alternate evacuation pathways.
- Consider including an automated phone calling system to alert citizens downwind of a Chlorine release. These systems do have challenges but are a reliable tool to use in emergency communications.
- Emergency sirens activated specifically for Chlorine releases should be considered. They have a simple way of communicating serious emergencies and if their installation and
use are communicated well with the community they can be a very useful tool. They need to be routinely and regularly tested which is something that can be incorporated into regular emergency planning communications activities already conducted.

- All the recommendations need to be done in consultation with the Emergency Services department.
APPENDICES:

Appendix 1 – Study Area Information and Scope of Work

Appendix 2 – Chemical Hazard Information

Appendix 3 – Risk Management Process

Appendix 4 – Maplewood Development Proposal Assessment The District of North Vancouver For “GWL Realty Advisors Inc” - FINAL report March 16th, 2009

Appendix 5 – A Review of the Maplewood Development Concept Plan Clarification - October 14th, 2008

Appendix 6 – References
APPENDIX “1”

Study Area Information and Scope of Work
Figure 6: Study Area:
Figure 7: Maplewood Village Centre land Use Map:
Maplewood Chemical Hazard DPA Preliminary Study  
DRAFT Terms of Reference

1.0 INTRODUCTION
As part of the creation of a mixed use community in Maplewood Village Centre, the District of North Vancouver seeks qualified consultants to review the potential risk of chemicals present in proximate industrial areas and provide recommendations to support the establishment of a development permit area for chemical hazards which would include guidelines regarding site planning and building design measures to reasonably mitigate this risk.

2.0 PROJECT BACKGROUND
The District Official Community Plan (OCP), adopted in June 2011, identifies Maplewood Village Centre as a site for growth and revitalization, with a high street or ‘village heart’ centred on Old Dollarton Road between Seymour River Place and Riverside Drive. Given the proximity of existing chemical industries to the south of the Village, District OCP policy for Maplewood Village Centre 3.3.1 commits to “Prepare a Development Permit Area with associated guidelines for chemical hazards”. This current study is being commissioned as a first step to respond to this policy direction, by evaluating potential chemical risk and discussing ways site planning and building design could respond to any identified risk. The preparation of the actual Development Permit Area, and other aspects of risk preparedness (e.g. emergency response, public education, etc), are to be prepared separately and are not part of the scope of this study.

Under the authority of the Local Government Act, municipalities are able to designate Development Permit Areas (DPA) where specific requirements apply to certain forms of development, such as multifamily, commercial or institutional uses. DPAs are intended to respond to particular circumstances and objectives by providing guidelines that apply to development in the defined area. Any proposed building within an established DPA cannot proceed without the issuance of a Development Permit. The purpose of the DPA proposed for this study is to manage development for potential hazardous conditions that may arise due to the proximity of chemical industries. The DPA would apply to new multifamily residential, commercial and institutional developments proximate to chemical industries and not to the chemical industries themselves, which are subject to their own safety regulations, including building and fire code requirements. As the first step, the purpose of this current study will be to review potential risks and identify an area where planning/design measures could be established to mitigate any risk. This study will then be used as the basis for preparing the actual DPA, which will be part of a second separate exercise.

The Village Centre (see Study Area Figure 1) is approximately 35 hectares in size and is roughly bounded on the west by Seymour River Place, on the north by Mount Seymour Parkway, on the south by Dollarton Highway, and on the east by Forester Street. Existing uses include a mix of single family homes and older multifamily rental properties, a school, and some newer commercial and light industrial developments. A considerable proportion of the planned future Village development consists of primarily undeveloped District-owned land east of Riverside Drive. The OCP contemplates a significant intensification of use in the Village through a range of mixed use and multifamily developments, with the anticipated addition of approximately 1500
net new residential units and approximately 100,000 square feet of commercial space over the next 20 years (see Land Use Map Figure 2).

A number of industries exist outside of the Village Centre in the heavy, waterfront industrial lands to the south. Major uses in this area include shipbuilding, chemical industries, and a waste transfer station. A light industrial area exists between these heavy industrial uses and the Village Centre, with new business park developments fronting Dollarton Highway. Previous studies in this area have identified chlorine at the Canexus plant as a chemical with the potential for off-site impacts on a community level. To this end, a quantitative risk assessment (QRA) was conducted in 2006 in support of a technology conversion project at Canexus. The technology conversion project has resulted in a substantially reduced risk of a chlorine release and reduced potential for community impacts. The findings of the QRA informed the proposed land uses and densities in the adopted OCP, which are generally consistent with the Major Industrial Accidents Council of Canada (MIACC) guidelines (see Risk Contours, Figure 3). With land uses now determined, design guidelines to manage future development are required. While chlorine is currently understood to represent a potential risk to the adjacent Maplewood community, a review and consideration of other chemicals present in proximate industrial areas and associated management practices is requested to confirm or revise this understanding and define the area and relative risk of potential hazards to support the establishment of development guidelines to manage risk. The District can provide an inventory of chemicals by substance type, location and maximum theoretical quantity to interested and qualified applicants subject to completion of a non-disclosure statement.

3.0 SCOPE OF WORK

3.1 Description of Work
The objective of this study is to facilitate the responsible (re)development of the Maplewood Village Centre by identifying the area and relative risk of chemical hazards and evaluating a range of planning/design measures that would reasonably mitigate developments from the potential risk (if any) of proximate chemical industries. This has three main and sequential aspects:

2. **Review the inventory of chemicals by substance type, location and maximum quantity and assess what substances pose a theoretical risk to residents/businesses in the nearby Village Centre.** This study should assess the levels of risk posed by different substances and articulate which risks can be reasonably addressed through site planning and building design measures and which by can only be addressed by other means (e.g. emergency response).

3. **Identify the geographical scope of potential risk and recommend the boundaries of the eventual Development Permit Area.** If appropriate, this mapping should indicate the varying degrees of risk associated with different areas if alternative design measures should apply in these sub-areas.

4. **Discuss the relative merits of building, site and area-level measures to mitigate any identified theoretical risks.** The consultant is expected to provide judgement on the relative efficacy (*the capacity to produce an effect.*) of different design tools for
managing the built environment, including for example: site planning, building orientation and design; fenestration (Openings in a building) and ventilation controls; notification measures (e.g. sirens, sensors); shelter in place provisions. If appropriate, these recommendations should indicate the relative suitability or necessity of recommended measures as they may apply to different land uses, building forms and/or densities.

In a subsequent phase of this project, the findings and recommendations of this study will inform the establishment of a development permit area where specific design guidelines apply.

3.2 Deliverables
• Provide a draft interim report (6 copies) and in electronic form on the findings of the study.
• Prepare, conduct, facilitate and record the input from up to three meetings with District staff and Council on the recommended options and issues.
• In consultation with District staff, prepare and provide the final report (10 hard copies and in electronic format) by 7 May 2012 summarizing the process with recommendations for the proposed geographic scope of the Development Permit Area and recommendations regarding the suitability and efficacy of mitigation strategies to form the Design Guidelines.

3.3 Project Timeline
The project is anticipated to start within seven days of the award of contract, mid-March 2012, and to proceed according to the following timeline:
• March 19, 2012 Anticipated start date
• April 2, 2012 Submit Interim Report for review by District staff
• April 9, 2012 Meet with District staff to review the report and the preliminary recommendations for the Development Permit Area and Guidelines
• April 16, 2012 Based on the meeting, revise the draft report for review by District staff
• April 30, 2012 Present a summary of the report and its conclusions at a Council workshop
• May 7, 2012 Submit Final report

It is noted that timelines may have to be varied due to unanticipated complexities in the process.

3.4 Project Administration
The project will be administered for the District of North Vancouver by the Manager of Sustainable Community Development or designate. The project administrator will coordinate all communications and meetings with the consultant, disseminate information from the consultant to District staff and Council and coordinate feedback from the District to the consultant in a timely manner. Progress review points will be established with the consultant to monitor progress of the project. A complete draft report is expected to be provided for review by the project administrator prior to the completion of the project. Any proposed changes in scope to the project or changes to key personnel identified in the proposal must be approved by the project administrator.
3.5 Resources
The Manager of Sustainable Community Development will oversee all the stages of this project as outlined above. In addition the District will provide the following documents and resources to aid the project:

- Inventory of chemicals by substance, location and maximum quantity
- Peer review of the Quantitative Risk Assessment conducted for the technology conversion at Canexus

The budget for this project is set at a maximum of $10,000. Proposals exceeding this amount will not be considered.
Figure 8: Potential Building Heights:
Figure 9: District of North Vancouver Maplewood Industries:
Figure 10: Maplewood Village Centre Land Use Plan Area:
Figure 11: Maplewood Village Centre Land Use Area - Including Industry:
Figure 12: Maplewood Village Centre Aerial Photo – Front Street:
APPENDIX “2”

Chemical Hazard Information
Chemical Hazards: Maplewood Village Centre Land Use Plan – Industries:

Figure 13: NEWALTA Site:

Figure 14: ERCO Worldwide:
(None of note that would have an impact beyond the property line)

However, of note is Sodium Chlorate and Hydrogen Peroxide, “oxidizing agents”, which will accelerate burning when involved in a fire situation, it may ignite combustibles.
Figure 15: Proposed HTEC Fatality Risk Contours for Radiant Heat and Explosion Shockwave Impacts

Figure 16: UNIVAR Canada Site:

- Explosion Shockwave at 200 metres
- Radiant Heat at 100 metres
- Radiant Heat of 4 Kw/m² at 155 metres
Figure 17: Canexus Site:

Figure 18: Canexus TCP Project Risk Contours:
Appendix “3”

Risk Management Process

Acceptable Level of Risk Criteria (MIACC)
Figure 19: The Risk Management Process:

The process used to do Risk Assessments follow this globally accepted methodology. The proposal presented above is in line this method.

This risk management process represents what is practiced around the world particularly for hazardous industries but including others. Each step requires different activities to be conducted in differing formats. The result is a process that has been used successfully globally for over 20 years and is considered to be the best we currently have.
What does each box mean?

1. **Doing Planned Reviews:**
   This is a management function. Here you would be conducting what ever reviews you need to do that will provide the data needed to monitor your operations or new project designs. Here is the database for your safety and loss management system. It would include incident investigations, insurance company reviews, regulatory activities (pressure vessel inspections, environmental reporting, asset renewal needs, changes to laws, code updates, etc.). Not to mention the regular data you collect on your business operations and maintenance activities. The point is you want to be proactive so gathering the data and doing trend analyses in conjunction with statistical analyses will keep you ahead of trouble.

2. **Identification of Hazards:**
   One of the outcomes of doing the reviews you mandate as a management team as well as listening to industry activities in general through associations and the news, will be the identification of hazards (or for a better term concerns). Your management team will receive the data and in the wisdom of the team will determine what needs to be further analyzed through doing a risk analysis or analyses.

You may wish to do formal reviews of projects for hazards and this is where a Hazard and Operability Study (HazOp) will come into play. Other tools are available but for the processing industries HazOp’s are well thought of. A HazOp can be done on an existing process as well.

It should be noted that legally a hazard analysis is required and once a hazard is identified action to correct the hazard and communicate the concerns is required under the provincial OH&S Act requirements. This emphasizes the need for effective due-diligence by all companies.

3. **Risk Assessment/ Analysis:**
   There are many tools available to help do the risk assessment. There are many tools available to quantify the consequences of all kinds of hazards. Explosions, toxic cloud dispersion models, toxic exposures, lethality, noise, water pollution plumes, etc. etc. All these provide the accurate consequence data you would need to make the right choices.

Probability specifically pertains to the failure of systems, humans, equipment, etc. Data is available generically but the best data is in the company’s own database with respect to maintenance records and operational records. Probability (frequency) is also quantifiable.

4. **Is the Risk Acceptable?**
   In order to enjoy the standard of living we as a society would like to have we need to be aware there is a certain amount of risk associated with that. To this end globally, it has been determined it is okay to expose an individual to one chance in a million (1 X 10⁻⁶) of a fatality on an annual basis due to an industrial activity nearby. For more detail on this see Appendix “G” and the MIACC criteria (Major Industrial Accidents Council of Canada).

Most company management have developed a risk matrix to describe and communicate company policy. The matrix is used to describe what is a low (acceptable) level risk, medium (acceptable with certain conditions) level risk and high (unacceptable) level risk.
These matrices clarify to employees what they must do and what is acceptable. The low-level risks are usually acceptable without any further management involvement or design additions. Medium risk is the one where management needs to be involved to ensure the risk is kept under control and it is worthwhile noting here management’s responsibilities come to the front line as they are assuming the responsibility for taking the risk.

5. **Manage the Residual Risk:**
   *Once a risk is determined to be acceptable it must be managed. This is the largest box in the process as you now have the responsibility for assuming the risk and preventing any incident from happening. This is outlined further in the Process Safety Management systems, which are found around the world as the accepted methods for managing risks.*

   These consist of 10 – 20 management elements that must be carried out to manage the risks in an acceptable way. Don’t forget that once a risk is accepted it does not go away. It is there waiting for an opportunity to happen unless your management systems are actively monitoring your operation for concerns and take proactive actions to correct potential problems.

6. **Can the Risk be Reduced?**
   *Often there are ways to reduce the risk once a risk is determined to be unacceptable. The term “Inherently Safe” implies methods, which will eliminate or reduce the risk. Further controls, management systems, protective features, etc. can be added to reduce the risk to an acceptable level.*

7. **Reduce the Risk:**
   *If the proposed change is viable then do the necessary changes.*

   Note that once the change is made the process is once again used to evaluate for possible new hazards and risks. Changes in processes often create potential problems upstream or downstream. If they are not uncovered your operational risk may go up unknowingly to yourselves.

8. **Discontinue the Activity:**
   *A very important step is to recognize the risk is too high. Management needs to be clear on this one and make the right decisions. Company values, objectives, etc. all come to play in this box including the idea of lost profits, personal promotions, professional defeat, etc.*

   This statement is a key one because it says you will not do something that is unsafe, pollutes, damages assets, risks your business needlessly, or impacts the public’s view of you negatively. Also, your employees are watching your performance and their support for your management decisions is something you need.

   There is a psychological component to this too. People will not easily admit defeat when trying to do their jobs. Unless management says and demonstrates that it is okay to stop people will continue to try and succeed which often leads to taking unacceptable risks.
Figure 20: Acceptable Level of Risk Criteria (MIACC):

The MIACC Risk Acceptability Criteria describes the level of risk for a member of the public who is inadvertently exposed to an industrial incident must be better than a $1 \times 10^{-6}$ chance of a fatality. However as the risk contour moves towards the source of the risk the risk level increases understandably. But note that this risk cannot be higher than $1 \times 10^{-4}$ of a fatality. With this in mind special focus on the workplace is needed to further lessen the exposure potential for workers.

This acceptable risk criteria is Canada's approach to a global consensus around industrial risks and land use planning. The concept is developed from a legal conclusion that from a public point of view it is acceptable to have an individual exposed to one chance in a million of being fatally injured over a one year time frame. With this information through the consensus organization called the Major Industrial Accidents Council of Canada the above criteria was agreed on.

The type of activity along with the exposure level and density of people all play a part in the determination of the acceptable level for Canada. This is completely in line with the rest of the industrial world.

Strathcona County refers to the MIACC criteria in their land-use planning bylaws. Both have not made any special additions to the criteria.
APPENDIX “4”

Maplewood Development

Proposal Assessment
Maplewood Development Proposal Assessment

The District of North Vancouver

For

“GWL Realty Advisors Inc”

FINAL REPORT

MARCH 16th, 2009

Prepared By:

DOUG MCCUTCHEON AND ASSOCIATES, CONSULTING
A DIVISION OF “HUMAN FACTORS IMPACT LTD.”
Executive Summary:

The intention of this report is to assess the proposed development of 83 units along the northern boundary of the open space next to Front Street and near the risk level of $1 \times 10^{-6}$ for the Canexus TCP project. This assessment is based upon the risk based land use criteria as originally set out through the Major Industrial Accidents Council of Canada (MIACC).

The proposed project includes the development of a mixed-use building on the remaining Great West Life vacant lands located in the Maplewood area (see Figure “3” in Appendix “1”). The suggested dwelling units are to be located at the north-west corner of the two remaining vacant parcels. The form of development will be a low-rise apartment building consisting of mainly studio and one bedroom units, situated over-top of commercial space located at grade. The balance of the vacant lands will be used for non-residential uses.

The report is intended to clarify the MIACC risk based land-use criteria and relate it to the proposal by Great West Life (GWL) to develop a commercial and residential development in the area directly north of Dollarton Highway and known as Maplewood.

The MIACC risk based land-use planning criteria as shown on Figure 5 in Appendix “2” of this report is a direct result of Canada’s approach to managing industrial risks as a result of the Bhopal India incident of 1984. The Bhopal incident raised the question in Canada and around the world asking if it could happen in our country and what do we have that will prevent it from happening. To answer the questions a consensus organization of industrial experts, government (federal and provincial) and academia was formed and we know it as MIACC. That body of Canada’s best experts developed many resources of which one was the answer directly associated with the Bhopal India incident around proper land use planning in and adjacent to industrial areas.

The process involved a global view of what best practices there are as well as developing a means to “measure risk” so decisions can be made to properly address risk to people’s health and safety. That measurement focused on what would be an acceptable level of risk for an individual located in the same location for 24 hours per day over one year. Without such a number making appropriate decisions could not happen. That risk number was universally accepted and tested in the courts in the United Kingdom which gives us an acceptable level of risk to expose people to, in order to enjoy the standard of living we desire as people. That value is; “industry can impact beyond their property lines as long as the risk to an individual staying in one location for an entire year is not greater than one chance in a million of a fatality as a result of an incident on the industrial property.” This risk level is in the same order of magnitude as an individual being struck by lightning, a very low number, but one that has been termed acceptable in the eyes of the public. And definitely a number any company can now design and operate their businesses and meet.

Canexus was asked to provide these risk calculations for their current operation and their new operation after the TCP project is operating. They showed for the new operation the $1 \times 10^{-6}$ risk level to be north of Front Street (see Figure 2 Appendix “1”).
One thing the MIACC risk based land use criteria did not do was to prescribe the numbers of people that could be located in each risk zone. It did imply though, that population density would increase the further away one gets from the risk source. Again see Figure 5 in Appendix “2” which demonstrates this point. This allowed for effective risk calculations based on what ever industrial activity was there, to determine population density. Also of note is the MIACC criteria does not define distances either just risk levels.

This left open the opportunity for jurisdictions to determine what would be an acceptable population density to use. Again MIACC does not get into this detail. However from a 2000 study conducted through Cornell University and support previously given to this study by A D Little to the District of North Vancouver (April 2002), along with corroborating studies in the Twin Cities area of Minnesota, a land use planning view shows 8 units/acre (average) represents the transition from an urban to rural designation or a low density definition (see Appendix “3” for these reports and my summary). It is my understanding the District of North Vancouver agreed at the time this was a reasonable definition for low density residential and from my view appears to represent just what the MIACC criterion is suggesting. As there is nothing to prescribe the 8 units/acre (average) density it appears to be a very reasonable value to use to help define low density residential use and it would be an acceptable level of risk and one I can support, in my opinion.

The MIACC criteria, as shown in the drawing on Figure 5 Appendix “2” shows low density residential development is allowed within the 1 X 10^8 and the 1 X 10^6 risk zones. And the drawing specifically shows that low density residential needs to be near to the lower risk level of 1 X 10^6 within that zone. This concurs with the GWL proposed development and the 1 X 10^6 risk contour for the Canexus TCP project. It is also important to note the proposed development design also restricts the numbers of people in the residents by designing mainly studio and one bedroom residences. By restricting the numbers of people the probability of a fatality will be reduced and support the MIACC criteria.

Strathcona County and Sturgeon County municipal jurisdictions in Alberta who have heavy industrial activities have adopted the MIACC criteria and developed risk zones to manage development. The point here is the companies in the heavy industrial areas that have the potential to cause off site impacts have endorsed this approach as it allows them the opportunity and freedom to do business as long as their operations meet the risk criteria. Something they have desired and have found acceptable towards being a viable business. I would expect Canexus, based upon the risk assessment they have conducted and the existing development already in the area, would see this in the same light as the distances from their risk source is well within these criteria of 1 X 10^5 and 1 X 10^6 as defined by MIACC for low density residential use.

As there is no specific distances designated by the MIACC criteria but the criterion does put low density housing within the 1 x 10^5 and the 1 x 10^6 risk zones and close to the 1 x 10^6 risk contour, and the GWL proposal is to develop the northern edge of their property for low density residential, I look at this as meeting the MIACC criterion. Further with the choice to develop based on a “low density residential” density of 8 units/acre (average). I would conclude the GWL proposal which includes the two vacant parcels in the calculation does meet the MIACC criteria.
I believe this analysis is appropriate for the study area. Please let me know of any questions. Thank you for asking me to develop this review.

Doug McCutcheon, P. Eng
Area Information
SUBJECT SITES Labeled “FUTURE BUILDINGS”

SUBJECT PROPERTIES

Individual Risk Distribution around the Plant – Potential Future Plant Operations after Technology Conversion

(Figure 1)
Alp & Associates Quantitative Risk Assessment

(Figure 2)
Great West Life Subject Area under Review

(Figure 3)
Maplewood Local Plan - Maplewood Village Centre Concept

Approximate location of the $1 \times 10^6$ risk contour after the Canexus TCP Project

(Figure 4)
MIACC Criteria
MIACC Risk Based Land Use Planning Criteria

![MIACC Risk Based Land Use Planning Criteria Diagram](image)

Density & Distance from Risk Source (MIACC Criteria)

![Density & Distance from Risk Source Diagram](image)

(Figure 5)
Low Density Residential Studies
Summary:

The following reviews were conducted as part of an ongoing risk analysis of the chlorine facility now owned by Canexus. As I see it, over the years the District of Vancouver has been trying to determine a safe distance for development in the area near the Chlorine plant site. Several risk assessments were conducted to determine risk contours. Arthur D Little Inc. was commissioned to evaluate a previous 1997 risk assessment and they were able to provide along with their report an “opinion” as to what is considered to be a reasonable definition of “low density residential” as 8 units/acre (average). Again the MIACC criteria does not specify population densities for the risk criteria so making this determination is one that is primarily up to the local jurisdiction to determine.

The initial reference to low density residential lands is one that is not specific to heavy industrial activity near residential neighbourhoods but does provide a basis to work from. I chose to consider one other source developed in Minneapolis and St Paul Minnesota which is included below and they too reference a definition of 7 – 9 units/acre as an average for low density residential. Their choice to compare urban and rural does represent a change and in my view adequately reflects the MIACC criteria for changing population densities as one moves further away from an industrial risk source (Appendix “2” Figure 5).

Also included below is an opinion expressed by Lisa Bendixen in a letter to the District of North Vancouver indicating her evaluation of the Cornell study and application to low density residential development. Again the opinions are just that in relation to the MIACC criteria as MIACC did not determine population density in reference to their risk based land use criteria. However the application of 8 units/acre (average) does have a basis as a definition for low density residential development as based on the two sources recognized here. And they are a reasonable basis in my opinion and one that I can support as GWL moves forward.
April 22, 2002

J. Irwin Torry
Manager of Community Planning
The District of North Vancouver
355 West Queens Road
North Vancouver
British Columbia
V7N 4N5

Re: ADL Reference No. 75818

Dear Irwin:

Arthur D. Little, Inc. has reviewed the revised Maplewood Plan (as documented in your letter of April 17, 2002) against the 1997 risk contours for the Nexen plant and the MIACC Guidelines on risk levels. We based this review on the facility conditions captured in the 1997 risk assessment prepared by Bovar Environmental, thus any recent changes or improvements at the site that would affect the contours are not reflected.

The MIACC Guidelines use the phrase “low density residential” without providing any specific definition of low density. Although there are many different definitions of “low density residential” in use in various communities, they generally seem to be limited to 8 units/acre or less. Furthermore, a survey by Cornell University examining the impact of low-density-only zoning on housing choices used a definition of less than 8 units/acre in a survey of over a thousand communities.

The District’s proposal to allow a limited number of multiple dwelling or mixed-use housing units between the $10^{-5}$ and $10^{-4}$/year contours appears to be consistent with the intent of the MIACC Guidelines. The proposed use of an average of 8 units/acre, rather than a maximum of 8 units/acre also seems reasonable, in part because the variations in density that lead to the average of 8 units/acre are not excessive and because the overall areas involved are relatively small. The proposed plan also recognizes that the density could increase (somewhat) near the $10^{-3}$/year contour, but should decrease near the $10^{-2}$/year contour (corresponding to the non-linearity of the risk levels). Totally new areas of development are also limited near the $10^{-1}$/year contour, in turn limiting the potential risk exposure.

Sincerely,

Lisa M. Bendixen
Principal, Global Environment & Risk
Does Low-Density Zoning Affect Low Minority Populations?

by Lew Sichelman

A Cornell University study might just provide the first hard evidence that low-density-only zoning has an exclusionary effect on housing choices for Blacks and Hispanics in the country's major metropolitan areas.

Federal reports as far back as the 1960s have suggested such a correlation, but no comprehensive study has ever been undertaken to prove that assertion.

Now, though, research by Assistant Professor of City and Regional Planning Rolf Pendall at the Ithaca, N.Y. school found that compared to other communities, there were about half as many Blacks and two-thirds as many Hispanics in the jurisdictions with lower housing densities.

Pendall's study, which was published in the spring 2000 issue of the Journal of the American Planning Association (JAPA), is being hailed as "a major breakthrough" by Stuart Meck, principal investigator of the APA's Growing SmartSM project.

"Until now," Meck said, "no surveys have ever nailed down with good statistical analysis the contention, made by other studies as far back as the late 1960s, that low-density-only zoning has an exclusionary effect on housing choices for minorities."

The study covered 1980 and 1990 Census Bureau data and included a survey of 1,510 jurisdictions in the country's 25 largest metropolitan areas.

Altogether 77 percent or 1,168 communities representing 32 percent of the nation's 1990 population responded to Pendall's survey. Ninety percent of the jurisdictions that replied to the survey had zoning ordinances, although only 15 percent had low-density-only zoning (fewer than eight housing units per acre).

"I conducted the study to determine whether exclusionary zoning is still a problem in major metropolitan areas," Pendall said, "and to see whether other land-use controls reduced ethnic and racial diversity in American communities."

If the housing dynamics in the jurisdictions with low-density-only zoning had been similar to those in communities without exclusionary zoning, he pointed out, the former areas would have some 31,300 more Blacks and 21,600 more Hispanics.

Pendall found that low-density only zoning is especially prevalent in metropolitan Boston, New York, Philadelphia, Pittsburgh, Cleveland and Atlanta. Municipalities in the West, Florida and Maryland tend to accommodate higher density residential development, regulating new housing more actively via greenbelts, building permit caps and adequate public facilities ordinances. Midwestern municipalities tend to regulate less actively with any of these tools.
The study also uncovered some anomalies. For example, places that used building permit caps and urban growth boundaries had lower concentrations of African Americans but not significantly lower concentrations of Hispanics.

Pendall suggests that communities with low-density-only zoning became more exclusive during the 1980s as a result of growing more slowly, shifting from multi-family to more single-family housing units, and shifting away from renter occupancy.

*Published: June 5, 2000*
Housing Density Fact Sheets for Minneapolis and Saint Paul

These two-page documents present local examples of housing and neighborhoods in and near Minneapolis and Saint Paul. The housing examples range in density from seven dwelling units per acre (du/ac) to 110 (du/ac). Each is presented with ground and aerial photographs, as well as a location map. Descriptions of the housing and site characteristics and census data—at the census tract and block levels—provide detailed information about each example.

Minneapolis and Saint Paul

- **Density Fact Sheets**: includes entire series (14.2 MB)
- **Humboldt Greenway**: 7 (du/ac) (692 KB)
- **Portland Place**: 8 (du/ac) (658 KB)
- **Hennepin Avenue and 32nd Street**: 11 (du/ac) (803 KB)
- **Crocus Hill**: 18 (du/ac) (1.19 MB)
- **Lyndale Avenue and 25th Street**: 19 (du/ac) (740 KB)
- **Riverplace / Saint Anthony**: 20 (du/ac) (1 MB)
- **Mill District**: 24 (du/ac) (753 KB)
- **Shingle Creek Commons**: 27 (du/ac) (1.4 MB)
- **Riverside / West Bank**: 28 (du/ac) (632 KB)
- **Linden Hills**: 32 (du/ac) (914 KB)
- **Cathedral Hill**: 34 (du/ac) (1.5 MB)
- **Stonehouse Square**: 40 (du/ac) (1.09 MB)
- **East Village**: 62 (du/ac) (936 KB)
- **Laurel Village**: 89 (du/ac) (672 KB)
- **Uptown**: 110 (du/ac) (707 KB)

Small Towns

- **Density Fact Sheets**: includes entire series (23.29 MB)
- **Chaska**: 9 (du/ac) (3.87 MB)
- **Cannon Falls**: 9 (du/ac) (3.83 MB)
- **Stillwater**: 12 (du/ac) (4.44 MB)
- **Red Wing**: 13 (du/ac) (2.36 MB)
- **Hastings**: 15 (du/ac) (4.09 MB)
- **Hastings**: 18 (du/ac) (4.24 MB)
- **Stillwater**: 22 (du/ac) (4.12 MB)

Suburbs

- **Density Fact Sheets**: includes entire series (29.63 MB)
- **Woodbury**: 8 (du/ac) (2.39 MB)
- **New Brighton**: 8 (du/ac) (2.25 MB)
- **Robbinsdale**: 9 (du/ac) (2.08 MB)
- **Eden Prairie**: 9 (du/ac) (2.56 MB)
- **Robbinsdale**: 9 (du/ac) (2.54 MB)
- **Woodbury**: 10 (du/ac) (2.26 MB)
• North Saint Paul: 10 (du/ac) (2.01 MB)
• Woodbury: 11 (du/ac) (1.89 MB)
• Eden Prairie: 18 (du/ac) (4.74 MB)
• Woodbury: 21 (du/ac) (2.32 MB)
• Woodbury: 32 (du/ac) (2.25 MB)
• Minnetonka: 50 (du/ac) (2.72 MB)

Outside of the Twin Cities Area

• River City Center (673 KB)
• River Gables (766 KB)
• Housing Density in the Twin Cities Scale Poster (2.33 MB)
• Housing Density in the Suburbs and Small Towns Scale Poster (24.73 MB)

These are photographs of individual buildings and developments of varying densities.
References
References


Does Low-Density Zoning Affect Low Minority Populations? by Lew Sichelman Published: June 5, 2000

Metropolitan Design Center, College of Architecture and Landscape Architecture, University of Minnesota, 1 Rapson Hall, 89 Church St SE, Minneapolis MN 55455, wwwdesigncenter.umn.edu

Arthur D Little Letter to the District of North Vancouver, April 22, 2002 from Lisa Bendixen
APPENDIX “5”

A Review of the Maplewood Development Concept Plan Clarification
- October 14th, 2008
Risk Based Land Use Planning

For the

District of North Vancouver

A Review of the

Maplewood Development Concept Plan

Clarification

OCTOBER 14\textsuperscript{TH}, 2008

Prepared By:

DOUG MCCUTCHEON AND ASSOCIATES, CONSULTING
A DIVISION OF “HUMAN FACTORS IMPACT LTD.”
The question to me was:
“On Page 3 of your June 11, 2008 opinion, you state, “I really want to point out this is not the correct approach and is not supported by MIACC criteria.” You then go on to say “I do not agree that such an approach can be used here.” Yet, under the Summary paragraphs, suggest that the ‘concept’ works and you could support it. ……… we’d like to have a more definitive statement from you that we can use in discussions with Council and also with both GWL and Canexus.”

Also, a second question:
“As an alternative, if the idea of 200 units is not defensible from a risk hazard perspective, we’re wondering if we can make an argument to Canexus to allow residential uses on Lot A at 8 units/acre based on the combine area of both Lots A and C. By my calculation, that would represent about 9.3 acres and permit in the order of 74 units (excluding the vacant service station site currently being remediated which GWL will eventually obtain title to and consolidate with the rest of Lot A).”

In order to answer the question I chose to work my way through the rationale in my June 11, 2008 report.

First, the MIACC work has not developed specific population densities to be used in conjunction with the risk-based land use planning criteria as described in my report. That is why I wrote my comments the way I did. MIACC was not going to as much detail as you have with respect to defining the 8 units/acre. Basically the MIACC criteria is intended to describe an ever increasing density of population as one moves further from the risk source. And the MIACC criteria will allow for low density residential dwellings with in the 1 X 10^-5 to 1 X 10^-6 risk contours. The provision being the residential developments would be on the outer limit of the zone closest to the 1 X 10^-6 contour.

I did research the 8 units/acre with respect to industrial development and specific to heavy industry and could not find a relationship although it is used to describe a transition to a rural environment. Hence I can see where your District has arrived at this as a means to measure development. And as my June 11, 2008 Opinion states makes sense to me. But I do need to reiterate there is no connection to the MIACC criteria.

However, with that in mind the MIACC criteria does allow for some means to measure low density residential development. It is not specific but I am okay with the 8 units per acre. I also need to reiterate the 8 units/acre population density needs to be closest to the 1 X 10^-6 risk contour near Front Street. As the 1 X 10^-6 contour represents the risk to an individual the risk level rises as the population density rises hence why MIACC indicates the development would need to be near Front Street.

The second question of a reduced density would be supported but again with the higher density units closest to the 1 X 10^-6 contour. The point again being the further from the risk source the population is housed the less the risk will be.

The risks are low. The District of North Vancouver has done an excellent job in considering the risk impact on the community of Maplewood. I would not hesitate in supporting the proposals by GWL as long as the higher density residential component is located next to the 1 X 10^-6 risk contour and not in any other quadrants of the zone in question.
I hope this helps you out. Please let me know if you have any questions. Thanks for the opportunity to clarify my earlier opinion.

Doug McCutcheon, P. Eng.
Approximate location of the $1 \times 10^{-6}$ risk contour after the Canexus TCP Project.

Map 1: Maplewood Local Plan - Maplewood Village Centre Concept

- Development sites (Table 1, Chapter 8)
  - Site 1: Live/work lofts/retail
  - Site 2: Apartments above retail
  - Site 3: Entranceway - commercial
  - Site 4: Entranceway - commercial
  - Focus on Front Street as new "High Street" apartments above retail
- Trail
- Maplewood Village Centre
- Open space
- MIACC guidelines apply, 8 units/acre. See Policy 6.1.8.
Great West Life Subject Area under Review

Approximate location of the $1 \times 10^{-6}$ risk contour after the Canexus TCP Project

Approximate location of the $1 \times 10^{-6}$ risk contour after the Canexus TCP Project
MIACC Risk Based Land Use Planning Criteria

Density & Distance from Risk Source (MIACC Criteria)
Canexus 2006 Risk Assessment Results

Approximate location of the $1 \times 10^{-6}$ risk contour after the Canexus TCP Project
APPENDIX “6”

References
References


MIACC Risk-based Land Use Planning Guidelines - June 1995


Disclaimer

“Maplewood Chemical Hazard DPA Preliminary Study”

The information presented in this document was compiled and interpreted exclusively for the purposes stated with respect to a risk assessment for the “Maplewood Chemical Hazard DPA Preliminary Study”. Doug McCutcheon and Associates, Consulting provided this report for the District of North Vancouver solely for the purpose noted above.

Reasonable skill, care and diligence has been exercised to assess the information acquired during the preparation of this report, but makes no guarantees or warranties as to the accuracy or completeness of this information. The information contained in this report is based upon, and limited by, the circumstances and conditions acknowledged herein, and upon information available at the time of its preparation. The information provided by others is believed to be accurate but cannot be guaranteed.

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Any questions concerning the information or its interpretation should be directed to Doug McCutcheon, P. Eng.
**SCHEDULE I**

**Site Profile**

**Introduction**

Under section 40 of the *Environmental Management Act*, a person who knows or reasonably should know that a site has been used or is used for industrial or commercial purposes or activities must in certain circumstances provide a site profile.

Schedule 2 of the Contaminated Sites Regulation sets out the types of industrial or commercial purposes or activities to which site profile requirements apply.

*If section 40 of the Environmental Management Act applies to you and you know or reasonably should know that the site has been used or is used for one of the purposes or activities found in Schedule 2 of the Contaminated Sites Regulation, you may be required to complete the attached site profile.*

**Notes/Instructions:**

Persons preparing a site profile must complete Section I, II and III, answer all questions in sections IV through IX, and sign section XI. If the site profile is not satisfactorily completed, it will not be processed under the *Environmental Management Act* and the Contaminated Sites Regulation. Failure to complete the site profile satisfactorily may result in delays in approval of relevant applications and in the postponement of decisions respecting the property.

The person completing this site profile is responsible for the accuracy of the answers. Questions must be answered to the best of your knowledge.

Section 27 (1) of the *Freedom of Information and Protection of Privacy Act* requires that provision of personal information concerning an individual must be authorized by that individual. Persons completing the site profile on behalf of the site owner must be authorized by the site owner.

One (1) site profile may be completed for a site comprised of more than one titled or untitled parcel, but individual parcels must be identified.

The latitude and longitude (accurate to 0.5 of a second using North American Datum established in 1983) of the centre of the site must be provided. Also, please attach an accurate map, containing latitude, longitude and datum references, which shows the boundaries of the site in question. Please use the largest scale map available.

If the property is legally surveyed, titled and registered, then all PID numbers (Parcel IDentifiers – Land Title Registry system) must be provided for each parcel as well as the appropriate legal description.

If the property is untitled Crown land (no PID number), then the appropriate PIN numbers (Parcel Identification Numbers – Crown Land registry system) for each parcel with the appropriate land description should be supplied.

If available, the Crown Land File Number for the site should also be supplied.

Anything submitted in relation to this site profile will become part of the public record and may be made available to the public through the Site Registry as established under the *Environmental Management Act*.

Under section 43 of the *Environmental Management Act*, corporate and personal information contained in the site profile may be made available to the public through the Site Registry. If you have questions concerning the collection of this information, contact the Site Registrar, at site@gov.bc.ca. For questions on site profiles, please send a message to siteprofiles@gov.bc.ca.
I  CONTACT IDENTIFICATION

A. Name of Site Owner:

Last_________________ First_________________ Middle Initial(s) ____ (and/or, if applicable)
Company Fonnie International Investment Limited
Owner’s Civic Address #202 - 261 East Pender Street
City Vancouver Province/State BC
Country Canada Postal Code/ZIP V6A 1T8

B. Person Completing Site Profile (Leave blank if same as above):

Last Wong First Ben Middle Initial(s) ____ (and/or, if applicable)
Company Trillion Realty Corp.

C. Person to Contact Regarding the Site Profile:

Last Liu First Donald Middle Initial(s) D (and/or, if applicable)
Company
Mailing Address 3125 Chrisdale Avenue
City Burnaby Province/State BC
Country Canada Postal Code/ZIP V5A3N4
Telephone (604) 671 4243 Fax (____) ____ - ________

II  SITE IDENTIFICATION

Please attach a site location map

All Property

Coordinates (using the North American Datum 1983 convention) for the centre of the site:
Latitude: Degrees____ Minutes____ Seconds____
Longitude: Degrees____ Minutes____ Seconds____

Please attach a map of appropriate scale showing the boundaries of the site.

For Legally Titled, Registered Property

Site Street Address (if applicable), See Survey

City ____________________________ Postal Code ____________________________
PID numbers and associated legal descriptions. *Attach an additional sheet if necessary.*

<table>
<thead>
<tr>
<th>PID</th>
<th>Legal Description</th>
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<tbody>
<tr>
<td></td>
<td>See Survey</td>
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<tr>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

Total number of titled parcels represented by this site profile is: ______

For Untitled Crown Land

PIN numbers and associated Land Description. *Attach an additional sheet if necessary.*

<table>
<thead>
<tr>
<th>PIN</th>
<th>Land Description</th>
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</thead>
<tbody>
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</tr>
</tbody>
</table>

Total number of untitled crown land parcels represented by this site profile is: ______

(And, if available)

Crown land file numbers. *Attach an additional sheet if necessary.*

<p>| | |</p>
<table>
<thead>
<tr>
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</tbody>
</table>

### III COMMERCIAL AND INDUSTRIAL PURPOSES OR ACTIVITIES

Please indicate below, in the format of the example provided, which of the industrial and commercial purposes and activities from Schedule 2 have occurred or are occurring on this site.

**EXAMPLE**

<table>
<thead>
<tr>
<th>Schedule 2 Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>appliance, equipment or engine repair, reconditioning, cleaning or salvage</td>
</tr>
<tr>
<td>F10</td>
<td>solvent manufacturing or wholesale bulk storage</td>
</tr>
</tbody>
</table>

*Please print legibly. Attach an additional sheet if necessary.*

<table>
<thead>
<tr>
<th>Schedule 2 Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### IV AREAS OF POTENTIAL CONCERN

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there currently or to the best of your knowledge has there previously been on the site any (please mark the appropriate column opposite the question):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Petroleum, solvent or other polluting substance spills to the environment greater than 100 litres?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>B. Residue left after removal of piled materials such as chemicals, coal, ore, smelter slag, air quality control system baghouse dust?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>C. Discarded barrels, drums or tanks?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D. Contamination resulting from migration of substances from other properties?</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

### V FILL MATERIALS

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there currently or to the best of your knowledge has there previously been on the site any deposit of (please mark the appropriate column opposite the question):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Fill dirt, soil, gravel, sand or like materials from a contaminated site or from a source used for any of the activities listed under Schedule 2?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>B. Discarded or waste granular materials such as sand blasting grit, asphalt paving or roofing material, spent foundry casting sands, mine ore, waste rock or float?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>C. Dredged sediments, or sediments and debris materials originating from locations adjacent to foreshore industrial activities, or municipal sanitary or stormwater discharges?</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

### VI WASTE DISPOSAL

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there currently or to the best of your knowledge has there previously been on the site any landfilling, deposit, spillage or dumping of the following materials (please mark the appropriate column opposite the question):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Materials such as household garbage, mixed municipal refuse, or demolition debris?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>B. Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>C. Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D. Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>E. Waste products from photographic developing or finishing laboratories; asphalt tar manufacturing; boilers, incinerators or other thermal facilities (e.g. ash); appliance, small equipment or engine repair or salvage; dry cleaning operations (e.g. solvents); or from the cleaning or repair of parts of boats, ships, barges, automobiles or trucks, including sandblasting grit or paint scrapings?</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
### VII TANKS OR CONTAINERS USED OR STORED, OTHER THAN TANKS USED FOR RESIDENTIAL HEATING FUEL

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there currently or to the best of your knowledge have there been previously on the site any (please mark the appropriate column opposite the question):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Underground fuel or chemical storage tanks other than storage tanks for compressed gases?</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>B. Above ground fuel or chemical storage tanks other than storage tanks for compressed gases?</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

### VIII HAZARDOUS WASTES OR HAZARDOUS SUBSTANCES

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there currently or to the best of your knowledge have there been previously on the site any (please mark the appropriate column opposite the question):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. PCB-containing electrical transformers or capacitors either at grade, attached above ground to poles, located within buildings, or stored?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>B. Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>C. Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### IX LEGAL OR REGULATORY ACTIONS OR CONSTRAINTS

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>To the best of your knowledge are there currently any of the following pertaining to the site (please mark the appropriate column opposite the question):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Government orders or other notifications pertaining to environmental conditions or quality of soil, water, groundwater or other environmental media?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>B. Liens to recover costs, restrictive covenants on land use, or other charges or encumbrances, stemming from contaminants or wastes remaining onsite or from other environmental conditions?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>C. Government notifications relating to past or recurring environmental violations at the site or any facility located on the site?</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### X ADDITIONAL COMMENTS AND EXPLANATIONS

(Note 1: Please list any past or present government orders, permits, approvals, certificates and notifications pertaining to the environmental condition, use or quality of soil, surface water, groundwater or biota at the site.

Note 2: If completed by a consultant, receiver or trustee, please indicate the type and degree of access to information used to complete this site profile. Attach extra pages, if necessary):

None of the above. See attached site investigation from 2007
The person completing the site profile states that the above information is true based on the person's current knowledge as of the date completed.

| 14-03-24 |
| Signature of person completing site profile | Date completed: (YY-MM-DD) |

### XII OFFICIAL USE

#### Local Government Authority

<table>
<thead>
<tr>
<th>Reason for submission <em>(Please check one or more of the following)</em></th>
<th>Soil removal</th>
<th>Subdivision application</th>
<th>Zoning application</th>
<th>Development permit</th>
<th>Variance permit</th>
<th>Demolition permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date received:</td>
<td>Local Government contact:</td>
<td>Date submitted to Site Registrar:</td>
<td>Date forwarded to Director of Waste Management:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name:</td>
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<td>Agency:</td>
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<td>Address:</td>
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<td>Telephone:</td>
<td>Fax:</td>
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</table>

#### Director of Waste Management

<table>
<thead>
<tr>
<th>Reason for submission <em>(Please check one or more of the following)</em></th>
<th>Under Order</th>
<th>Site decommissioning</th>
<th>Foreclosure</th>
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</thead>
<tbody>
<tr>
<td>Date received:</td>
<td>Assessed by:</td>
<td>Investigation Required?</td>
<td>YES NO</td>
</tr>
<tr>
<td>Name:</td>
<td>Region:</td>
<td></td>
<td>Decision date:</td>
</tr>
<tr>
<td>Region:</td>
<td>Telephone:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone:</td>
<td>Fax:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If site profile entered, SITE ID #:</td>
<td></td>
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<td></td>
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</tbody>
</table>

#### Site Registrar

<table>
<thead>
<tr>
<th>Date received:</th>
<th>Entered onto Site Registry by:</th>
<th>SITE ID #:</th>
<th>Entry date:</th>
</tr>
</thead>
</table>
The District of North Vancouver

REPORT TO COUNCIL

March 3, 2017
File: 02.0930/504

AUTHOR: Janine Ryder – Acting Manager, Real Estate & Properties

SUBJECT: Proposed Highway Closing and Dedication Removal Bylaw 8223 - 229 Seymour River Place Highway Closure

RECOMMENDATION:

THAT “229 Seymour River Place Highway Closure Bylaw 8223 2017” is given FIRST READING.

THAT Staff is authorized to publish notification of the road closure for two consecutive weeks as per the provisions in the Community Charter.

REASON FOR REPORT:
To obtain the First Reading of the “229 Seymour River Place Highway Closure Bylaw 8223 2017” to authorize the closure and the raising of title to 240 square feet (22.3 square metres) of road allowance adjacent to 229 Seymour River Place (the “Road Parcel”) (see Attachment 1), which will authorize the subsequent transfer of the Road Parcel to Fonnie International Investments Ltd. (“Fonnie”) for the purpose of consolidation with the adjacent properties for a mixed use development.

SUMMARY:
The District has entered into an Agreement of Purchase and Sale with Fonnie for the disposition of the Road Parcel for the appraised value of $72,000.00. The Agreement of Purchase and Sale is conditional on the adoption of a bylaw to close to traffic and remove the dedication of this lane allowance as set out in proposed Bylaw 8223 (see Attachment 2) and to obtain rezoning and OCP amendment bylaws.

EXISTING POLICY:
Sections 26 and 40 of the Community Charter, governs road closures and dispositions of municipal land. A road closure survey plan has been submitted by the applicant (see Attachment 3).
ANALYSIS:

Timing/Approval Process:
In accordance with Section 40 and Section 94 of the Community Charter council must provide a two week public notification period regarding its intention to close a portion of road allowance for the purpose of disposition. Council must then provide an opportunity for persons who consider they are affected by the proposed bylaw to make representations at a subsequent Council meeting.

Concurrence:
The proposed road closure has been reviewed and approved by the Planning, Finance and Transportation departments.

As the subject property is within 800 metres of an arterial highway, Ministry of Transportation and Infrastructure approval is required. A preliminary discussion with the Ministry of Highway has not highlighted any issues with the development.

Financial Impacts:
The District will receive the purchase price of $72,000.00 from Fonnie upon closure and subsequent transfer of the title to the land. The proceeds of the disposition of this Road Parcel will be placed into the Land Opportunity Fund as per the Land Opportunity Reserve Fund Policy 5-1840-8.

Public Input:
As per the provisions in the Community Charter, the public will have an opportunity for persons who consider they are affected by the road closure to make representations to Council.

Conclusion:
Staff recommends that Council give proposed Bylaw 8223 first reading and direct staff to publish notice of the road closure and disposition in accordance with the Community Charter.

Options:

1. Council to give proposed Bylaw 8223 first reading and direct staff to publish notice of road closure in accordance of the Community Charter.

2. Council does not give proposed Bylaw 8223 first reading.

Respectfully submitted,

Janine Ryder
Acting Manager, Real Estate & Properties
SUBJECT: Proposed Highway Closing and Dedication Removal Bylaw 8223 - 229 Seymour River Place Highway Closure

<table>
<thead>
<tr>
<th>REVIEWED WITH:</th>
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<tbody>
<tr>
<td>Sustainable Community Dev.</td>
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<td>Development Services</td>
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<td>Utilities</td>
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<tr>
<td>Engineering Operations</td>
<td></td>
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<tr>
<td>Parks &amp; Environment</td>
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<tr>
<td>Facilities</td>
<td></td>
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<tr>
<td>Human resources</td>
<td></td>
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<td>Clerk's Office</td>
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<td>Communications</td>
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<td>Finance</td>
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<td>Fire Services</td>
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<td>ITS</td>
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<tr>
<td>Solicitor</td>
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<tr>
<td>GIS</td>
<td></td>
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</tbody>
</table>

External Agencies:

- Library Board
- NS Health
- RCMP
- Recreation Com.
- Museum & Arch.
- Other:
ATTACHMENT 1
Subject Road Parcel
The Corporation of the District of North Vancouver

Bylaw 8223

A bylaw to close and remove highway dedication

WHEREAS under the Community Charter the Council may close to traffic and remove the dedication of a highway; and,

WHEREAS the Council has posted and published notices of its intention to close the highway referred to in this Bylaw and remove its dedication, and has provided an opportunity for persons who consider they are affected to make representations to the Council; and,

WHEREAS the Council does not consider that the closure will affect the transmission or distribution facilities or works of utility operators;

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

1. Citation

This bylaw may be cited as “229 Seymour River Place Highway Closure Bylaw 8223 2017”.

2. Bylaw to close and remove highway dedication

2.1 The portion of highway dedicated by Plan 1587, shown in the attached plan hereto as Schedule “A” is closed to all types of traffic and the dedication as highway is removed.

2.2 The Mayor and Clerk are authorized to execute and delivered such transfers, deeds of land, plans and other documents as are required to effect the aforesaid closure and removal of highway dedication.

READ a first time

NOTICE given under Section 94 of the Community Charter on

OPPORTUNITY for representations to Council provided in accordance with Section 40 of the Community Charter on

READ a second time
READ a third time

Certified a true copy of "Bylaw 8223" as at Third Reading

________________________
Municipal Clerk

APPROVED by the Ministry of Transportation and Infrastructure on

ADOPTED

________________________  __________________________
Mayor                     Municipal Clerk

Certified a true copy

________________________
Municipal Clerk
DISTRICT OF NORTH VANCOUVER
REGULAR MEETING OF COUNCIL

Minutes of the Regular Meeting of the Council for the District of North Vancouver held at 7:03 pm on Monday, April 3, 2017 in the Council Chambers of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

Present: Mayor R. Walton
Councillor M. Bond
Councillor J. Hanson
Councillor R. Hicks
Councillor L. Muri

Absent: Councillor R. Bassam
Councillor D. MacKay-Dunn

Staff: Mr. D. Stuart, Chief Administrative Officer
Ms. C. Grant, General Manager – Corporate Services
Mr. G. Joyce, General Manager – Engineering, Parks & Facilities
Mr. D. Milburn, General Manager – Planning, Properties & Permits
Mr. A. Wardell, Acting General Manager – Finance & Technology
Mr. J. Gordon, Manager – Administrative Services
Mr. T. Lancaster, Manager – Community Planning
Ms. J. Paton, Manager – Development Planning
Ms. J. Ryder, Acting Manager – Real Estate & Properties
Ms. C. Archer, Confidential Council Clerk
Mr. F. Donnelly, Research Analyst

1. ADOPTION OF THE AGENDA

1.1. April 3, 2017 Regular Meeting Agenda

MOVED by Councillor MURI
SECONDED by Councillor BOND
THAT the agenda for the April 3, 2017 Regular Meeting of Council for the District of North Vancouver is adopted as circulated.

CARRIED

2. PUBLIC INPUT

2.1. Mr. Hazen Colbert, 1100 Block East 27th Street:
- Commented on predators attracted by backyard hens;
- Remarked on recent survey work at Lynn Valley Kiwanis Manor and queried the possibility of affordable housing on the site; and,
- Spoke in favour of item 9.5 regarding the issuance of a Development Permit for Mountain Court Phase 2.

2.2. Mr. Bruce R. Lindsay, 4100 Block St. Pauls Avenue:
- Spoke in opposition to backyard hens; and,
- Commented on the risk of animal-borne illness and pests.
3. PROCLAMATIONS

3.1. Public Rail Safety Week – April 24-30, 2017

3.2. World Autism Awareness Day – April 2, 2017

4. RECOGNITIONS

Nil

5. DELEGATIONS

5.1. Kim Selody, Artistic Director, Presentation House Theatre
Re: Update on Programming and Building

Mr. Kim Selody, Artistic Director, Presentation House Theatre provided an update on Presentation House Theatre finances and activities, highlighting the contribution of the District and City of North Vancouver, as well as a modest surplus for the 2015-16 financial year. Mr. Selody provided an overview of Presentation House programming, including programs for youth, seniors, and First Nations students. Future plans for the premises were reviewed and it was noted that the spaces currently occupied by the gallery and museum will be available for hourly rental once they have been vacated in September 2017 and in 2019, respectively.

MOVED by Councillor HICKS
SECONDED by Councillor MURI
THAT the delegation of the Presentation House Theatre is received.

CARRIED

6. ADOPTION OF MINUTES

6.1. March 27, 2017 Regular Council Meeting

MOVED by Councillor MURI
SECONDED by Councillor HICKS
THAT the minutes of the March 27, 2017 Regular Council meeting are adopted.

CARRIED

7. RELEASE OF CLOSED MEETING DECISIONS

Nil

8. COUNCIL WORKSHOP REPORT

Nil

9. REPORTS FROM COUNCIL OR STAFF
9.1. Bylaw 8223: 229 Seymour River Place Highway Closure
File No. 02.0930/504

MOVED by Councillor HICKS
SECONDED by Councillor BOND
THAT “229 Seymour River Place Highway Closure Bylaw 8223, 2017” is given FIRST Reading;

AND THAT Staff is authorized to publish notification of the road closure for two consecutive weeks as per the provisions in the Community Charter.

CARRIED

9.2. Bylaw 8229: Belle Isle Place Highway Closure
File No. 02.0930/504

MOVED by Councillor HICKS
SECONDED by Councillor BOND
THAT “Belle Isle Place Highway Closure Bylaw 8229, 2017” is given FIRST Reading;

AND THAT Staff is authorized to publish notification of the road closure for two consecutive weeks as per the provisions in the Community Charter.

CARRIED

9.3. Request for Letters of Support for Bill C-323 – Amendment to the Income Tax Act to Provide Tax Credits for Expenses Related to Rehabilitation of Historic Properties
File No. 13.6800.01

MOVED by Councillor BOND
SECONDED by Councillor HICKS
THAT staff is directed to prepare letters to the Federal and Provincial governments on behalf of Mayor and Council expressing support for the introduction and implementation of Bill C-323.

CARRIED

9.4. Tenant Compensation and Relocation Packages: “Mountain Court” (1241-1289 E. 27th St.) and “Branches” (2601-2697 Whiteley Ct.)
File No. 08.3060.20/016.16

MOVED by Councillor MURI
SECONDED by Councillor HICKS
THAT the March 22, 2017 report of the Development Planner entitled Tenant Compensation and Relocation Packages: “Mountain Court” (1241-1289 E. 27th St.) and “Branches” (2601-2697 Whiteley Ct.) is received for information.

CARRIED
9.5. Development Permit 16.16: 1241-1289 E. 27th St.: Mountain Court Phase 2
File No. 08.3060.20/016.16

MOVED by Councillor BOND
SECONDED by Mayor WALTON
THAT Development Permit 16.16, for two buildings on the west side of the Mountain
Court project (Phase 2), is ISSUED.

CARRIED

10. REPORTS

10.1. Mayor

Mayor Walton reported on having thrown the first pitch at the first Lynn Valley Little
League game of the year.

10.2. Chief Administrative Officer

Nil

10.3. Councillors

10.3.1. Councillor Hicks reported on his attendance at the North Vancouver

10.3.2. Councillor Muri reported on Council’s tour of the new Delbrook Community
Centre.

10.3.3. Councillor Hanson reported on his attendance at the Blair Rifle Range
commemoration event on March 31, 2017.

10.4. Metro Vancouver Committee Appointees

10.4.1. Aboriginal Relations Committee – Councillor Hanson

Nil

10.4.2. Housing Committee – Councillor MacKay-Dunn

Nil

10.4.3. Regional Parks Committee – Councillor Muri

Nil

10.4.4. Utilities Committee – Councillor Hicks

Nil
10.4.5. Zero Waste Committee – Councillor Bassam
   Nil

10.4.6. Mayors Council – TransLink – Mayor Walton
   Nil

11. ANY OTHER BUSINESS
   Nil

12. ADJOURNMENT

   MOVED by Councillor MURI
   SECONDED by Councillor HICKS
   THAT the April 3, 2017 Regular Meeting of Council for the District of North Vancouver is
   adjourned.

   CARRIED
   (8:11 pm)

   Mayor
   Municipal Clerk
The District of North Vancouver
REPORT TO COUNCIL

February 14, 2018
File: 02.0930.20/504

AUTHOR: Lenia Calico, Property Services Agent

SUBJECT: Bylaw 8223, 2017: 229 Seymour River Place Highway Closure

RECOMMENDATION:
THAT the “229 Seymour River Place Highway Closure Bylaw 8223, 2017” is given SECOND and THIRD Readings.

REASON FOR REPORT:
The “229 Seymour River Place Highway Closure Bylaw 8223, 2017” (Attachment 1) will authorise the closure and raising of title to 240 square feet (22.3 square metres) of District road allowance (the “Road Parcel”) adjacent to 229 Seymour River Place in the Maplewood Village Centre Neighbourhood.

The road closure will authorize the subsequent transfer of the Road Parcel to Fonnie International Investments Ltd. (“Fonnie”) for the purpose of consolidating the closed road with their adjacent lots (Attachment 2) for a mixed use development.

SUMMARY:
- Bylaw 8223 received First Reading at the Regular Council Meeting on April 3rd, 2017.
- The road closure is subject to separate public process for rezoning.
- Notice was sent to third party utilities on April 3rd, 2017.
  - Telus, BC Hydro, Shaw and Fortis
- Public notification was published in the North Shore News on February 16th and February 23rd, 2018 (Attachment 3).
- An opportunity will be provided to persons who consider they are affected by the bylaw to make representations to Council on February 26th, 2018 regular Council Meeting as per section 40 of the Community Charter.
- As the subject road allowance is within 800 metres of an arterial highway, Ministry of Transportation and Infrastructure approval is required under Section 41 (3) of the Community Charter before adoption of the bylaw.
EXISTING POLICY:
Sections 26 and 40 of the Community Charter, governs road closures and dispositions of municipal land.

BACKGROUND:
The District has entered into a conditional Agreement of Purchase and Sale with Fonnie for the disposition of the Road Parcel for the appraised value of $72,000.00. The Agreement of Purchase and Sale is conditional on the adoption of a bylaw to close to traffic and remove the dedication of this lane allowance as set out in proposed Bylaw 8223 and to obtain rezoning.

A third party appraisal was completed by the appraisal firm Grover, Elliott & Co. Ltd. in February, 2017. The Road Parcel was appraised as if the road were consolidated with the adjacent lots owned by Fonnie based on the highest and best use at a proposed 2.5 Floor Space Ratio (FSR) and using a direct comparison approach.

Prior to completing the disposition to Fonnie contemplated in the Agreement of Purchase and Sale, the District must close to traffic and remove the dedication of the portions of road as set out in the proposed Bylaw 8223 and to obtain a rezoning bylaw.

Financial Impacts:
The DNV will receive the purchase price from Fonnie for the appraised market value of $72,000.00 upon closure and subsequent transfer of title. The proceeds of the disposition of this Road Parcel will be placed into the Land Opportunity Fund as per the Land Opportunity Reserve Fund Policy 5-1840-8.

Concurrence:
The proposed road closure has been reviewed and approved by the Planning, Finance and Transportation departments.

As the subject property is within 800 metres of an arterial highway, Ministry of Transportation and Infrastructure approval is required. A preliminary discussion with the Ministry of Highway has not highlighted any issues with the development.

Process/Public Input:
In accordance with Section 40 and Section 94 of the Community Charter council must provide notice of its intention to close a portion of road allowance. Council must then provide an opportunity for persons who consider they are affected by the bylaw to make representations at a subsequent Council meeting.

Utility companies have been provided notice and the opportunity to provide submissions regarding the proposed road closure.

Notice has been published in the North Shore News on Friday, February 16th and February 23rd, 2018.

The adoption of the road closure bylaw is subject to the adoption of a rezoning amendment bylaw for the adjacent Fonnie properties to a mixed use development.
Options:

1. That Council give the bylaw Second and Third Readings; or,

2. That Council give no further Readings to the bylaw and abandon the bylaw at First Reading.

Respectfully submitted,

Lenia Calico
Property Services Agent

Attachments:
1. 229 Seymour River Place Highway Closure Bylaw 8223, 2017
2. Site Map – Development Site & Subject Road Parcel
3. Notice Published in the North Shore News
ATTACHMENT 1

The Corporation of the District of North Vancouver

Bylaw 8223

A bylaw to close and remove highway dedication

WHEREAS under the *Community Charter* the Council may close to traffic and remove the dedication of a highway; and,

WHEREAS the Council has posted and published notices of its intention to close the highway referred to in this Bylaw and remove its dedication, and has provided an opportunity for persons who consider they are affected to make representations to the Council; and,

WHEREAS the Council does not consider that the closure will affect the transmission or distribution facilities or works of utility operators;

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

1. Citation

   This bylaw may be cited as “229 Seymour River Place Highway Closure Bylaw 8223 2017”.

2. Bylaw to close and remove highway dedication

   2.1 The portion of highway dedicated by Plan 1587, shown in the attached plan hereto as Schedule “A” is closed to all types of traffic and the dedication as highway is removed.

   2.2 The Mayor and Clerk are authorized to execute and delivered such transfers, deeds of land, plans and other documents as are required to effect the aforesaid closure and removal of highway dedication.

READ a first time April 3rd, 2017

NOTICE given under Section 94 of the *Community Charter* on

OPPORTUNITY for representations to Council provided in accordance with Section 40 of the *Community Charter* on

READ a second time
READ a third time

Certified a true copy of “Bylaw 8223” as at Third Reading

Municipal Clerk

APPROVED by the Ministry of Transportation and Infrastructure on

ADOPTED

Mayor ________________________________ Municipal Clerk ________________________________

Certified a true copy

Municipal Clerk
ATTACHMENT 2

Development Site & Subject Road Parcel
Notice

Road Closure and Property Disposition

Seymour River Place - Bylaw 8223

The District of North Vancouver intends to close to traffic the portion of road allowance shown outlined in red on the sketch and labelled as "Road to be Closed" within the 200 block of Seymour River Place and remove the highway dedication. This Road to be Closed has an area of approximately 22 square metres.

The Bylaw closing the road allowance and removing the dedication will be considered by Council at its regular meeting at the District Hall (355 West Queens Road, North Vancouver) on February 26, 2018 at 7 pm. Persons who consider they are affected by the bylaw will be provided an opportunity to make representations to Council at the meeting or by delivering a written submission to the Municipal Clerk by 4 pm on that date.

The District of North Vancouver then intends to transfer the Road to be Closed to Fonnie International Investments Ltd for the purpose of consolidation with the immediately adjacent lands belonging to Fonnie International Investments Ltd. This disposition is subject to adoption of bylaws to rezone the proposed development on the consolidated parcel. Opportunities for public participation and consultation including a public hearing will be provided prior to Council considering adoption of the bylaws.

The District of North Vancouver will receive the appraised value of $72,000 for the fee simple title to these lands.

If you have any questions please contact Janine Ryder, Manager, Real Estate and Properties at 604-990-2455, or ryderj@dnv.org.
DISTRICT OF NORTH VANCOUVER
REGULAR MEETING OF COUNCIL

Minutes of the Regular Meeting of the Council for the District of North Vancouver held at 7:05 p.m. on Monday, February 26, 2018 in the Council Chamber of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

Present: Acting Mayor R. Hicks
Councillor R. Bassam
Councillor M. Bond
Councillor J. Hanson
Councillor D. MacKay-Dunn
Councillor L. Muri (7:10 pm)

Absent: Mayor R. Walton

Staff: Mr. D. Stuart, Chief Administrative Officer
Mr. D. Milburn, General Manager – Planning, Properties & Permits
Mr. A. Wardell, Acting General Manager – Finance & Technology
Ms. J. Ryder, Manager – Real Estate & Properties
Ms. L. Brick, Deputy Municipal Clerk
Ms. S. Dale, Confidential Council Clerk

1. ADOPTION OF THE AGENDA

1.1. February 26, 2018 Regular Meeting Agenda

MOVED by Councillor MACKAY-DUNN
SECONDED by Councillor BASSAM
THAT the agenda for the February 26, 2018 Regular Meeting of Council for the District of North Vancouver is adopted as circulated.

CARRIED
Absent for Vote: Councillor MURI

2. PUBLIC INPUT

2.1. Mr. Corrie Kost, 2800 Block Colwood Drive:
• Spoke regarding the legalization of non-medical cannabis;
• Commented that the regulation of non-medical cannabis should be consistent in all three North Shore municipalities;
• Questioned the effectiveness of limiting the personal possession to 30 grams; and,
• Emphasized the importance of educating and engaging the public about the risks and potential consequences of cannabis.

3. PROCLAMATIONS

3.1. Rare Disease Day – February 28, 2018
4. RECOGNITIONS
   Nil

5. DELEGATIONS
   Nil

6. ADOPTION OF MINUTES

   6.1. February 19, 2018 Regular Council Meeting

      MOVED by Councillor BASSAM
      SECONDED by Councillor MACKAY-DUNN
      THAT the minutes of the February 19, 2018 Regular Council meeting are adopted.

      CARRIED
      Absent for Vote: Councillor MURI

   6.2. February 13, 2018 Public Meeting

      MOVED by Councillor BASSAM
      SECONDED by Councillor MACKAY-DUNN
      THAT the minutes of the February 13, 2018 Public Meeting are received.

      CARRIED
      Absent for Vote: Councillor MURI

   6.3. February 13, 2018 Public Hearing

      MOVED by Councillor BASSAM
      SECONDED by Councillor MACKAY-DUNN
      THAT the minutes of the February 13, 2018 Public Hearing are received.

      CARRIED
      Absent for Vote: Councillor MURI

7. RELEASE OF CLOSED MEETING DECISIONS
   Nil

8. COUNCIL WORKSHOP REPORT
   Nil

9. REPORTS FROM COUNCIL OR STAFF

   Councillor MURI arrived at this point in the proceedings.
9.1. **Bylaw 8316: Highway Dedication Bylaw 8316, 2018 Partially Repeal Bylaw**
File No. 06.2440.01/276.000

MOVED by Councillor BASSAM
SECONDED by Councillor BOND
THAT “Highway Dedication Bylaw 8316, 2018 Partially Repeal Bylaw” is given FIRST Reading.

CARRIED

9.2. **Bylaw 8223: 229 Seymour River Place Highway Closure**
File No. 02.0930.20/504

MOVED by Councillor HANSON
SECONDED by Councillor BASSAM
THAT “229 Seymour River Place Highway Closure Bylaw 8223, 2017” is given SECOND and THIRD Readings.

CARRIED

9.3. **Bylaws 8282, 8283 and 8285: Amendments to the Zoning Bylaw, Business Licence Bylaw and Bylaw Notice Enforcement Bylaw**
File No. 09.3900.20/000.000

MOVED by Councillor BASSAM
SECONDED by Councillor HANSON
THAT “District of North Vancouver Rezoning Bylaw 1367 (Bylaw 8282)” is given SECOND and THIRD Readings;

AND THAT “Business Licence Bylaw 4567, 1974, Amendment Bylaw 8283, 2017 (Amendment 48)” is given SECOND and THIRD Readings;


CARRIED

9.4. **2018 Parcel Tax Roll Review**
File No. 05.1940

MOVED by Councillor MURI
SECONDED by Councillor MACKAY-DUNN
THAT pursuant to Section 204(2)(b) of the Community Charter, the sitting of the 2018 Parcel Tax Roll Review Panel for the Parcel Tax Roll, be held in the Council Chamber on Monday April 9, 2018 at 4:30 p.m.

CARRIED
10. REPORTS

10.1. Mayor

Nil

10.2. Chief Administrative Officer

Nil

10.3. Councillors

10.3.1. Councillor Bassam reported on his meeting with the Lynn Valley Community Association regarding the Kirkstone Park dedication removal process.

10.3.2. Councillor Hicks reported on his attendance at the North Shore Jazz concert at the Kay Meek Centre on Saturday, February 24, 2018.

10.3.3. Councillor MacKay-Dunn reported on his attendance at the Metro Vancouver Board meeting on Friday, February 23, 2018 on behalf of Mayor Walton.

10.3.4. Councillor Muri commended Streets staff for their work clearing the snow and ice and suggested that steep streets in the District be closed during future snow storms.

10.3.5. Councillor Bassam spoke to the issue of abandoned vehicles during the recent snow storm and spoke to the importance of proper winter tires.

10.4. Metro Vancouver Committee Appointees

10.4.1. Aboriginal Relations Committee – Councillor Hanson

Nil

10.4.2. Housing Committee – Councillor MacKay-Dunn

Nil

10.4.3. Regional Parks Committee – Councillor Muri

Nil

10.4.4. Utilities Committee – Councillor Hicks

Nil

10.4.5. Zero Waste Committee – Councillor Bassam

Nil
10.4.6. Mayors Council – TransLink – Mayor Walton

Nil

11. ANY OTHER BUSINESS

Nil

12. ADJOURNMENT

MOVED by Councillor MURI
SECONDED by Councillor MACKAY-DUNN
THAT the February 26, 2018 Regular Meeting of Council for the District of North Vancouver is adjourned.

CARRIED
(7:25 p.m.)
RESIDENTIAL AND RETAIL TENANT HISTORY

for

"Maplewood Plaza Redevelopment"

Old Dollarton and Front Street, North Vancouver

January 2017

(owner of Maplewood Limited Partnership (MLP) formerly Fonnie International Investments Ltd.) developed the existing Maplewood Plaza and has owned it since 1985. At present, there are 28 residential units. They have been active in property investment/development and construction in Hong Kong, China, and the lower mainland of Vancouver since the 1970's. They have maintained ownership of the Maplewood Plaza and, notwithstanding the many offers from many developers, intend on developing the property and maintaining their investment in the district of North Vancouver.

We have been requested to provide a detailed report of how we intend to minimize the impact of our development on our tenants. This is a mixed-use development, and a such, have both retail and residential tenants.
OUR RESIDENTIAL TENANTS

Attached is list of the most recent tenants in the residential portion of Maplewood Plaza. There are 28 residential units, consisting of mostly one bedroom units. As MLP has been planning this development for some time, it was our intention to leave units vacant as tenants left so that no new tenants would need to suffer relocating unnecessarily. In this case, we have been near 60% occupancy rate for the past year.

As the project certainty was more clear, we held two information meetings April 16 and 30, 2016 to inform all our tenants at the developers desire to develop the site and the status of our development.

To ensure our tenants are properly compensated, MLP contracted a local firm, Brooke Pooni and Associates to conduct a survey based on other projects in the lower mainland of what compensation would be best suited for the disruption to our tenants. This report was provided DNV by MLP. We informed the tenants that a package will be forthcoming upon approval by the DNV in our two information meetings to our tenants.
Many of our tenants relocated prior to our notification of development, they are as follows:

<table>
<thead>
<tr>
<th>Tenant</th>
<th>Length of Lease</th>
<th>Date Moved In</th>
</tr>
</thead>
<tbody>
<tr>
<td>B3</td>
<td>38 months</td>
<td>Feb 2016</td>
</tr>
<tr>
<td>B5</td>
<td>148 months</td>
<td>Mar 2016</td>
</tr>
<tr>
<td>C5</td>
<td>12 months</td>
<td>Nov 2015</td>
</tr>
<tr>
<td>C6</td>
<td>93 months</td>
<td>Dec 2015</td>
</tr>
<tr>
<td>C8</td>
<td>24 months</td>
<td>June 2015</td>
</tr>
<tr>
<td>C12</td>
<td>56 months</td>
<td>Dec 2015</td>
</tr>
<tr>
<td>C16</td>
<td>20 months</td>
<td>March 2016</td>
</tr>
<tr>
<td>C18</td>
<td>11 months</td>
<td>March 2016</td>
</tr>
</tbody>
</table>

After our meetings in April, many of the tenants expressed their understanding of the situation and were quite surprised that we were notifying them of our development status. The guidelines at this point were not adopted by the DNV. There were some cases that we handled on a per person basis:

1. [Tenant Name] was notified in our April 2016 meetings and happy that we were providing the information about the development. As well as our promise to give a 6 month notice as to when we would plan of starting the development, [Tenant Name] made application to BC housing for an affordable apartment. BC housing could provide a unit, but that [Tenant Name] needed to take it immediately. [Tenant Name] is on a fixed income. [Tenant Name] was a tenant with us for almost 6 years. Even though our relocation guideline required the tenant to stay in the unit until we gave notice of development, MLP felt a responsibility to ensure [Tenant Name] was not impacted too much. We provided one month free rent as well as $1000 for moving expenses.

2. [Tenant Name] had saved enough to purchase a home. They have been good tenants with us for almost 8 years. They notified us of their intentions and, as with [Tenant Name], were premature for relocation guidelines, but in this situation, we also provided them with a month of free rent, and returned all their damage deposit.

3. The tenants in [Tenant Name] was offered a position in [Tenant Location]. [Tenant Name] took the position and had been in our complex for almost 6 years.

4. The MLP project team came across a situation where a new immigrant, due to unforeseen circumstances, was unable to stay in their rental unit and unable to find a new apartment. MLP wanted to help this person and offered one of the vacant units for rent at a discounted rate to help them through these hard times. They understand our situation and will relocate as needed.

5. We were approached by tenants in our building about our willingness to help their sponsorship of a Syrian family. We certainly understood the situation and recognized the need to help this family. MLP is offering this family accommodations for 6 months at no charge.
TENANT RELOCATION GUIDELINES

MLP realized in September 2015 that development of the Maplewood Plaza was nearing and that the tenants on the property need to be relocated at some point. We asked for fee proposals from several groups but settled on Brooke Pooni to analyze the situation and provide guidelines for MLP to help the transition of our tenants.

In summary, our intentions at our April meetings were to inform our tenants of plans to develop as well as the impact on them of our development plans and that we wish to provide them assistance in the transition/relocation, once we have development approvals. Following are the guidelines as suggested to us by Brooke Pooni in their report to us:

1. MLP would offer the assistance of Brook Pooni as a consultant to assist in relocating to market and non-market housing
2. Minimum 6 months' official notice to tenants
3. Free rent to tenants in the last 3 months of tenancy, or cash equivalency
4. $1000 move out cash allowance to each tenant, no receipts required
5. Long term tenant bonus of $100 for each year of tenancy for tenants over 5 years
6. Returning tenants to receive free rent for two months
7. First right to buy a unit in the new building
8. No rent increase from March 2016
9. Full return of all security/pet deposit

These guidelines will be offered once we have defined the development project.
RETAIL TENANTS

As we have in the residential portion of our building, we have notified our retail tenants of MLP intentions to develop the project. All retail tenants were informed at those meetings in April 2016, or earlier. We have 7 retail locations.

1. North Shore Sportswap – 3400 sf. Tenant had already given notice and moved out as of April 2016. We allowed the tenant to break their lease so that they can move into their new space in Pemberton Ave. in North Vancouver
2. Art of Grooming – we have discussed our development plans with the owner and have agreed on providing 3 months’ notice to vacate.
3. Panago – Have moved to the Northwoods site March 2016
4. Teknics Hair – Have moved to the Northwoods site March 2016
5. Altech Electric – the owner retired in 2015 and we did not re-lease the space
6. Pet Psychologist – left in 2013 and we have not re-leased the space.
7. Nigel Walker Consultants - we have discussed our development plans with the owner and have agreed on providing 3 months’ notice to vacate.

The remaining two tenants (Nigel Walker and the Art of Grooming) are aware of our intentions to develop and will be remaining in the space until the very end. We have a good working relationship with both the tenants and will keep them appraised of the situation.

Respectfully,

Maplewood Limited Partnership