AGENDA INFORMATION		Dept. Manager	GM/ Director	CAO
☑ Regular Meeting	Date: Dec 15, 2014			
☐ Workshop (open to public)	Date:			

The District of North Vancouver
REPORT TO COUNCIL

November 25, 2014
File: 3060-20/20.14

AUTHOR: Doug Allan, Community Planner

SUBJECT: **BYLAWS 8080 AND 8094: REZONING AND HOUSING AGREEMENT BYLAWS FOR A 16 UNIT APARTMENT PROJECT AT 1591 BOWSER AVENUE**

RECOMMENDATION:

It is recommended that:

1. **Bylaw 8080, which rezones the subject site from Marine Drive Commercial Zone (C9) to Comprehensive Development Zone 83 (CD83) to enable the development of a 16 unit apartment project, be given FIRST Reading;**

2. **Bylaw 8094, which authorizes a Housing Agreement to prevent future rental restrictions on the subject property, be given FIRST Reading; and**

3. **Bylaw 8080 be referred to a Public Hearing.**

REASON FOR REPORT:

To obtain Council's authorization to proceed to Public Hearing to amend the site's zoning (Bylaw 8080) to enable the development of a 16 unit condominium apartment building. Associated with the rezoning bylaw is a Housing Agreement Bylaw (Bylaw 8094) to prevent future rental restrictions.

SUMMARY:

London Meridian Properties Inc., proposes to redevelop the commercial property at 1591 Bowser Avenue with a 3 storey apartment building containing 16 units. Implementation of the project requires rezoning, a housing agreement bylaw and issuance of a development permit. The rezoning bylaw, Bylaw 8080, and a Housing Agreement Bylaw, Bylaw 8094, are recommended for First Reading and Bylaw 8080 is recommended for referral to a Public Hearing. A development permit will be forwarded to Council for consideration if the rezoning proceeds.

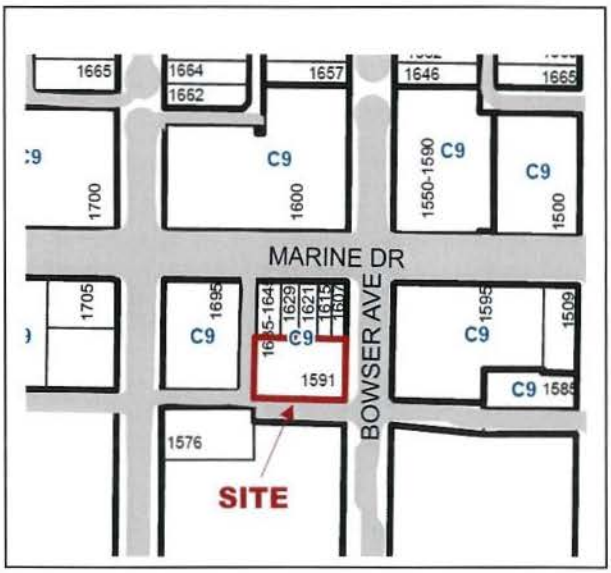
EXISTING POLICY:

Official Community Plan

The subject property is designated as *Commercial Residential Mixed Use Level 1*. This designation is *"...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."* The proposed development does not include independent commercial uses, but, as the site is located one half block south of Marine Drive, the residential project, with limited live-work use, is appropriate.

Zoning

The development site is zoned Marine Drive Commercial Zone (C9) as shown on the accompanying map. The C9 zone contains different height and FSR regulations depending upon whether the site is larger or smaller than 1100m^2 (12,000ft.^{2}). In this case, the site, at 1023.4m^2 (11,015ft.^{2}), is smaller and as a result building height is limited to 8m (26.25ft.) and FSR to a maximum of 1.0. For reference, sites greater than 1100m^2 (12,000ft.^{2}) allow for a height of 13.5m (44.3ft.) and an FSR of 1.75.



The proposed building is 11m (36ft.) high with a density of 1.68. To enable the proposed building height and greater FSR for this site, Bylaw 8080 proposes the establishment of a new Comprehensive Development Zone 83 (CD83) tailored specifically to this project.

Development Permit Areas

The subject lot is designated as Development Permit Areas for:

- Form and Character of Multi-Family Housing; and
- Energy and Water Conservation and Greenhouse Gas Emission Reductions.

In addition, the site is subject to the Form and Character Design Guidelines applicable to Marine Drive. A development permit report outlining the project's compliance with the applicable DPA guidelines, will be provided for Council's consideration should the rezoning proceed.

Strata Rental Protection Policy

Corporate Policy 8-3300-2 ("Strata Rental Protection Policy") applies to this project as the rezoning application would permit development of more than five residential units. The policy requires a Housing Agreement to ensure that future strata bylaws do not prevent owners from renting their units and Bylaw 8094 is provided for Council's consideration.

ANALYSIS:

The Site and Surrounding Area:

As illustrated on the following aerial photograph, the site is located on the west side of Bowser Avenue, south of Marine Drive. Two open lanes are located to the south and west. The site is 1,023.4m^2 (11,015.7ft.^{2}) in area.

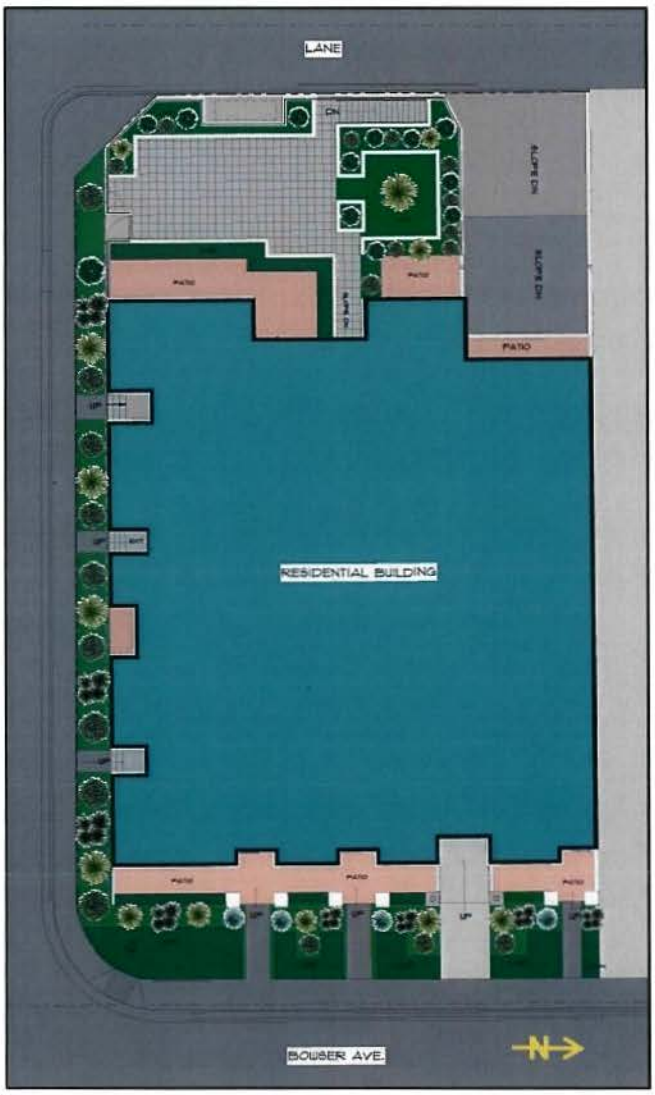
Surrounding properties consist of: developed commercial properties (C9) to the north, east and west; and, "Illahee", a multi-family project (RM6), to the south.

The site is currently occupied by a 2 storey commercial building over a partial basement level, with surface parking, illustrated on the following aerial image as viewed from the south.

Project Description:

a) Site Plan/Building:

The project consists of a single building containing 16 apartment units in a 3 storey, flat roof building form as illustrated on the following site plan and building images.



The unit mix consists of 5 studios, 3, one bedroom, 6, two bedroom units and, 2, three bedroom units, ranging from 60m^2 (643ft.^{2}) to 150m^2 (1617ft.^{2}) in size. The total floor area is 1716m^2 (18,473ft.^{2}) resulting in an FSR of approximately 1.68. The building is 11m (36ft.) in height. The applicant has proposed that the 6 units on the main floor be permitted to have live/work use.

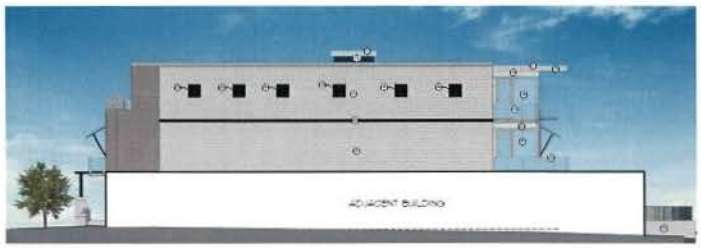
In response to input from staff and the community, the architect has worked to revise the building design/massing to act as a transition between the typical form of development on Marine Drive

and the lower density multi-family development to the south. The building elevations are illustrated in the following images. The principal building materials consist of brick accented with hardi panel. As the north elevation will not be visible when the site to the north is redeveloped, this elevation consists of a grey-coloured, split face, concrete block with dark charcoal smooth-face block as an accent material.

East (Bowser) Elevation

West Elevation

South Elevation



North Elevation

b) Parking/Access:

Parking proposed is a total of 22 spaces (1.37 spaces/unit), provided underground with access off the lane to the west of the site. The applicant's transportation consultant, Bunt & Associates, provided an analysis utilizing the District's Parking Principles for OCP Town and Village Centres. For projects within 400m of a Frequent Transit Development Area such as this site, 1.2 spaces/unit, including visitor parking is contemplated. This ratio is supported by the Metro Vancouver Apartment Parking Study which examined required apartment parking supply. Both the District and Metro Vancouver parking ratios would require 20 spaces for this development. Based on that analysis, Bunt & Associates concluded that a supply of 22 spaces was adequate for this project. Therefore, staff support the proposed parking as the site is close to transit service on Marine Drive and it is within the range of parking provided for other projects on Marine Drive. To support the parking rate, Bunt & Associates suggested several Transportation Demand Management strategies including:

- electric vehicle parking;
- car sharing; and
- the provision of bicycle facilities within the building.

Staff will continue to work with the consultant to finalize a trip reduction strategy which, in addition to the above measures, will incorporate personal travel planning and 6 month transit pass programs.

c) Landscaping:

The landscaping concept consists of several different elements, including:

- street tree planting along Bowser Avenue;
- low shrub/lawn planting and sidewalk along the south property line to create a separation between the east/west lane and the building; and
- screen planting around an exterior resident amenity patio and water feature, to the rear (west) of the building.

Details of the landscape concept will be provided as part of a future development permit report.

d) Accessible Units

In response to the District's Adaptable Design Guidelines, 4, (25%), of the units will be designed to meet the Level 2 standard and the remaining 12 units (75%) will meet Level 1B.

Reduced copies of site, architectural and landscape plans are included as Attachment A for Council's reference.

OFF-SITE IMPROVEMENTS:

The application includes the construction of a new sidewalk in the lane to the south and off-site, streetscape upgrades along Bowser, including the introduction of street trees.

GREEN BUILDING MEASURES:

Compliance with the Green Building Strategy is mandatory for projects requiring rezoning. The project is targeting an energy performance rating 30% better than the ASHRAE90.1-2007 standard which represents a significant improvement over the Green Building Strategy Energy Performance baseline (13% better than ASHRAE90.1-2007), and will achieve a building performance equivalent to Built Green HD™ 'Gold'.

Key energy and building performance measures include:

- condensing tankless water heaters;
- the provision of operable windows for natural ventilation;
- glazing with improved insulation values;
- ventilation heat recovery;
- air source heat pumps;
- certified sustainably harvested dimensional lumber and flooring; and
- window shading devices on west elevation;

COMMUNITY AMENITY CONTRIBUTION:

The District's Community Amenity Policy requires a contribution for projects which propose an increase in density. The CAC for this apartment project is based on $15.00/sq.ft. of the increased

residential floor area over the base density. This amounts to a CAC estimated at approximately $111,850. The community amenity contribution has been included as part of the density bonus provisions in the proposed CD83 Zone and the zoning provisions note that the District may use the CAC funds for any of the following:

- public art;
- park, trail, environmental or other public realm improvements;
- municipal or recreation service or facility improvements; or
- the affordable housing fund.

IMPLEMENTATION:

Implementation of this project requires Council's consideration of: rezoning (Bylaw 8080); a Housing Agreement Bylaw, (Bylaw 8094); issuance of a development permit; and, registration of a Development Covenant.

Bylaw 8080 (Attachment B) rezones the subject property from Marine Drive Commercial Zone (C9) to a new Comprehensive Development 83 Zone (CD83) which:

- establishes low rise apartment as a permitted use;
- allows live/work use as a permitted use under specified conditions;
- allows home occupations as an accessory use;
- establishes a base density (Floor Space Ratio) of 1.0;
- requires a housing agreement and a community amenity contribution to support an FSR increase to 1.68;
- establishes building coverage, setback and building height regulations;
- requires compliance with acoustic requirements; and
- establishes parking and bicycle parking regulations unique to this project.

Bylaw 8094 (Attachment C) authorizes the District to enter into a Housing Agreement to ensure that the proposed units remain available as rental units.

The Development Covenant will be required prior to the adoption of the Rezoning and Housing Agreement bylaws and will include requirements for:

- a green building covenant;
- a stormwater management covenant;
- a covenant to ensure the final trip reduction strategy is implemented prior to the issuance of an occupancy permit;
- a construction management plan; and
- a right-of-way for a 4m x 4m corner cut over the southwest corner of the site to improve traffic movement and visibility at the junction of the two abutting lanes.

CONCURRENCE:

Staff

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

Advisory Design Panel

The application was considered by the Advisory Design Panel on June 12, 2014 and the Panel passed the following motion:

"THAT the ADP has reviewed the proposal and recommends **APPROVAL** of the project **SUBJECT** to addressing the following items to the satisfaction of staff:

- consideration of simplification of the building envelope to allow for successful detailing;
- review of the format of common amenity area with regard to the relationships to the adjacent private outdoor spaces and accessibility of the amenity area overall
- review of the north wall treatment including transition of materials, durability and detailing;
- review of format of canopies particularly with regard to management of drainage;
- review of location and access to waste disposal facilities;
- confirmation of building code compliance regarding balcony and roof projections within 1.2m of the north property line; and
- review of glazing and solar gain issues for west elevation."

In response to the Panel's motion and discussions with staff:

- the south elevation has been revised to simplify the detailing;
- the rear common amenity space has been buffered from the surrounding lanes with low walls and hedging and the private resident decks are delineated with additional hedge planting;
- the north elevation has been redesigned to include a grey-coloured split-face block with contrasting charcoal-coloured block and the brick material used on the east elevation which and this will also address the Building Code concern identified by the Panel; and
- solar shades have been added to the windows on the west elevation.

PUBLIC INPUT:

A facilitated Public Information Meeting was held on June 19, 2014 and was attended by 12 members of the public. Seven written submissions were provided following the meeting. Comments received included the following:

- the potential for the units to be rented;
- the project architecture, building coverage and density;
- the size of the balconies;
- the anticipated length of construction;
- the proposed parking;
- potential impacts on property values;

- topics regarding the adjacent lanes and additional traffic;
- the development of adjacent properties to the north;
- the absence of a traffic signal at Bowser Avenue and Marine Drive; and
- the possibility of installing speed bumps to slow traffic in the lanes.

In response to input, the applicant has revised the project by: reducing the number of units from 24 to 16 and the number of storeys from 4 to 3; reducing the density (FSR); revising the project design to create an improved transition to the residential use to the south of the site, including a large setback at the 3rd floor; and adjusting the amount of visitor parking to provide more resident parking.

A copy of the facilitator's report is included as Attachment D.

CONSTRUCTION MANAGEMENT PLAN:

In accordance with the requirements of the Development Covenant, a construction management plan is required to be accepted by the District prior to the issuance of any building permit. This is intended to minimize, and where possible avoid, construction impacts on local traffic and transit and the quality of life for nearby residents. This plan must be in place prior to the commencement of any building demolition works.

CONCLUSION:

This project is in keeping with the building form envisioned in the OCP. The applicant is proposing building height and density in between their C9 zoning and the larger lot C9 zoning, and therefore, rezoning is required to implement the project. The architect and staff have worked to soften the mass of the building, including: reducing the number of units and residential floors; setting the upper storey back from the main and second floors; designing the building with residential elements to create more of a transition between the existing residential development and the future redevelopment of the properties along Marine Drive; and, designed an improved north elevation as this wall will be visible to Marine Drive until the abutting properties to the north are redeveloped. As a result, staff support the rezoning to permit a transitional height and FSR for this property. The project is now ready for Council's consideration.

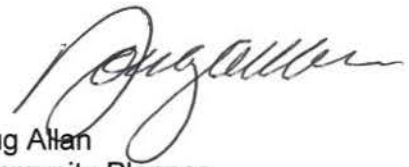
OPTIONS:

The following options are available Council's consideration:

1) Introduce Bylaws 8080 and 8094 and refer Bylaw 8080 to a Public Hearing (staff recommendation); or

2) Defeat Bylaws 8080 and 8094 at First Reading.

Respectfully submitted,



Doug Allan
Community Planner
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Attachments

A – Reduced Project Plans
B – Bylaw 8080
C – Bylaw 8094
D – Public Information Meeting Facilitator's Report

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 & Environment	____	❑ ITS	____	❑ Recreation Com.	____
❑ Economic Development	____	❑ Solicitor	____	❑ Museum & Arch.	____
❑ Human resources	____	❑ GIS	____	❑ Other:	____

BOWSER ST. APARTMENT

1591 BOWSER STREET, NORTH VANCOUVER, BC.

GENERAL NOTES

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DRAWINGS OF THE OTHER CONSULTANTS.

THESE DRAWING COMPLY WITH THE BRITISH COLUMBIA BUILDING CODE 2006 AND THE CODE COMPLIANCE REPORT / EQUIVALENCY REPORT BY PROTECTION ENGINEERING.

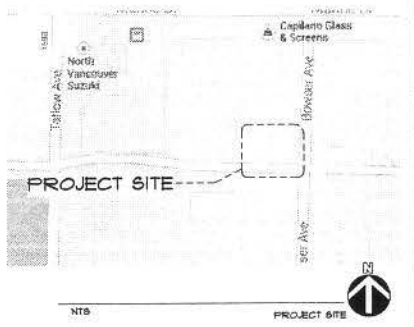
ANY DISCREPANCIES NOTED IN THE DOCUMENTS TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

A SEPARATE SPECIFICATION IS PROVIDED FOR THE ARCHITECTURAL DETAILS COMPONENTS AND WORK.

A GEOTECHNICAL REPORT BY GEOTECHNICAL CONSULTANTS IS AVAILABLE AND MUST BE CONSULTED FOR ANY WORK OR COMPONENTS AFFECTED BY THE REPORT.

INSPECTIONS BY THE ENVELOPE CONSULTANT AQUA-COAST ENGINEERING LTD. AT SPECIFIED TIMES IN THE WORKS IS REQUIRED AND MUST BE ADHERED TO.

VICINITY MAP



DATA SHEET

DATE	MAY/2/2014		
PROJECT	BOWSER (LOFTS ON LANE)		
ADDRESS:	1591 BOWSER STREET, NORTH VANCOUVER, BC.		
LEGAL DESCRIPTION	LOT 11 BLOCK A DISTRICT LOT 625 PLAN 1431		
SITE SIZE			
GROSS LOT AREA	11018.66 SQ.FT.	1023.38 SQ.M	0.25 Acres
LANE WIDENING	6.77 SQ.FT.	0.62 SQ.M	
NET SITE AREA	11008.9 SQ.FT.	1022.76 SQ.M	0.25 Acres

TOTAL FLOOR AREAS

LEVEL	AREA	AREA SQ.MT
PARKADE	967.31	898.58
MAIN FLOOR	6628.52	615.81
SECOND FLOOR	6713.97	623.53
THIRD FLOOR	5021.51	476.40

TOTAL AREA (EXCULDING PARKADE) : 18,473.52 SQ.FT (1716.0) SQ.M

FLOOR SPACE RATIO:
FSR = NET AREA / LOT AREA
FSR = 18,473.52 / 11015.66 SQ.FT OR 1716.0/ 1023.38 SQ.M
FSR = 1.67

SITE COVERAGE:
S.C. = MAIN FLOOR AREA+DRIVEWAY / LOT AREA (AS PERCENTAGE)
S.C. = 6628.52+784.2/ /11015.66SQ.FT OR 688. 39/ 1023.5 SQ.M
S.C. = 67%

BUILDING COVERAGE:
B.C. = MAIN FLOOR AREA / LOT AREA (AS PERCENTAGE)
B.C. = 6628.52/11015.66SQ.FT OR 616.3'/ 1023.5 SQ.M
B.C. = 60.22%

BUILDING HEIGHT = 34.42 FT. OR 10.48 MT.

NO. OF UNITS PROPOSED = 16
NO. OF UNITS PER ACRE = 60

S.NO.	TYPE	UNIT TYPE	AREA(SF)	MAIN	2nd	3rd	TOTALS	ALL FLOORS
1	TYPE-A	1-BED	848.88	1	0	0	1	848.9 SF
2	TYPE-A1	1-BED	826.45	0	1	0	1	826.4 SF
3	TYPE-B	BACHELOR	645.37	1	0	0	1	645.4 SF
4	TYPE-B1	BACHELOR	642.74	0	1	0	1	642.7 SF
5	TYPE-C	BACHELOR	686.50	1	0	0	1	686.5 SF
6	TYPE-C1	BACHELOR	675.03	0	1	0	1	675.0 SF
7	TYPE-D	BACHELOR	793.76	1	0	0	1	793.8 SF
8	TYPE-E	2-BED	1271.45	1	0	0	1	1271.4 SF
9	TYPE-E1	2-BED	1214.00	0	1	0	1	1214.0 SF
10	TYPE-E1	2-BED	1218.12	0	0	1	1	1218.1 SF
11	TYPE-F	3-BED	1332.61	1	0	0	1	1332.6 SF
12	TYPE-G	1-BED	1072.82	0	1	0	1	1072.8 SF
13	TYPE-H	3-BED	1616.87	0	1	0	1	1616.9 SF
14	TYPE-J	2-BED	1111.75	0	0	1	1	1111.7 SF
15	TYPE-K	2-BED	1068.70	0	0	1	1	1068.7 SF
16	TYPE-L	2-BED	1062.36	0	0	1	1	1062.4 SF
Grand total				6	6	4	16	16219.1 SF

TOTAL BACHELOR	05
TOTAL ONE BED	03
TOTAL TWO BED	06
TOTAL THREE BED	02

PROPOSED PARKING (ALL UNDERGROUND)

PARKING REQUIRED :
1 STALL PER UNIT + 1 STALL PER 100 SQ.MT. (16X1) = 16 NOS
NET AREA/100 X 1 (16683.69/100 X1) = 17 NOS
TOTAL = 33 NOS
MAXIMUM PARKING REQUIRED (16X2) = 32 NOS
(INCLUDING 4 VISITOR PARKING)

TOTAL PARKING REQUIRED	= 32 NOS
TOTAL PARKING PROVIDED	= 32 NOS
STALL CAR PARKING PROVIDED	= 06 NOS
HANDICAPPED CAR PARKING PROVIDED	= 01 NOS

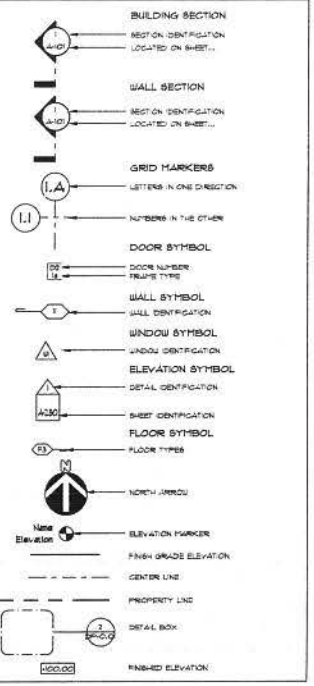
SHEET INDEX

SHEET NO.	ARCHITECTURAL
DP-0.01	DATA SHEET
DP-1.00	SITE PLAN
DP-1.1	3D VIEWS
DP-1.02	PARKADE PLAN
DP-1.03	MAIN FLOOR PLAN - COLOR
DP-1.04	SECOND & THIRD FLOOR PLANS - COLOR
DP-1.06	EAST ELEVATION
DP-1.08	WEST ELEVATION
DP-1.09	NORTH ELEVATION
DP-2.11	SITE PLAN
DP-3.11	PARKADE FLOOR PLAN
DP-3.21	MAIN FLOOR PLAN
DP-3.31	SECOND & THIRD FLOOR PLANS
DP-3.41	ROOF PLAN
DP-5.11	ELEVATIONS
DP-5.21	ELEVATIONS
DP-6.11	ENLARGED DETAILS

ABBREVIATION

ALUM.	ALUMINUM
BI	DRY STACK MINI BASALT RETAINING WALL
BIS	BUILT-IN SEATING
CB	CATCH BASIN
CD	COMPUTER DESK
CE	CEILING DOOR
CP	2'-0"X2'-0" CONCRETE PAVING STONE
DW	DISH WASHER
F	FRIDGE
FP	FIRE PLACE
GWB	GYPSUM BOARD
HP	HEAT PUMP
HR	HAND RAIL
HW	HAND WASH
HWT	HOT WATER TANK
P.T.	PRESSURE TREATED
PLYWD.	PLYWOOD
SU	SHELVING UNIT
TG	TAMPERED GLASS
V	VENT
WC	WALL CURTAIN
WD	WASHER/DRYER
WS	WINDOW SEAT

GRAPHIC SYMBOLS



CONSULTANTS

ARCHITECT:

DOUGLAS R. JOHNSON ARCHITECT LTD.
#374-901 WEST 3RD.ST.
NORTH VANCOUVER, BC V7P 3P9
PH. (604)998-3381
FAX. (604)998-0217
EMAIL: drjarch@shaw.ca

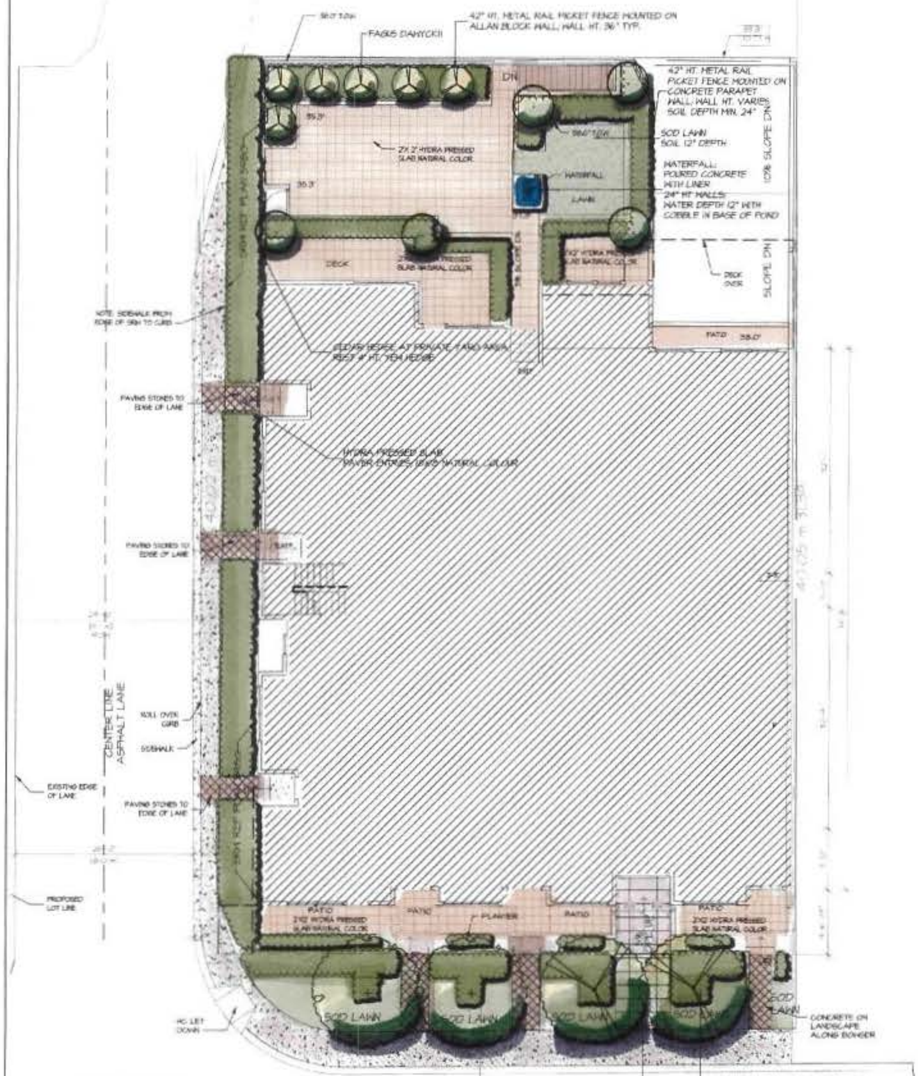
ATTACHMENT A

BOWSER ST. APARTMENT
1591 BOWSER STREET, NORTH VANCOUVER, BC.
DATA SHEET

DOUGLAS R. JOHNSON ARCHITECT LTD.
#374-901 WEST 3RD.ST.
NORTH VANCOUVER, BC V7P 3P9
PH. (604)998-3381
FAX. (604)998-0217

1 1/2" = 1'-0"

DP-0.01



IMPORTANT NOTES:

1. THE DNV IS FINALIZING THE STREET TREE VARIETAL. HOWEVER, IT IS NOTED, THAT STRUCTURAL SOIL MAYBE REQUIRED IF EACH TREE DOES NOT RECEIVE ITS REQUIRED 15 CUBIC METERS OF QUALITY GROWING MEDIUM.
2. PLEASE ENSURE THAT THE BASE OF THE STREET TREE OPENING IS NO LESS THAN 1 METER IN DIAMETER.
3. IT IS RECOMMENDED THAT THE BOULEVARD IS MAINTAINED FOR A PERIOD OF 2 YEARS, 24 MONTHS BY THE PROPERTY OWNER. AFTER WHICH TIME THE CITY WILL MAINTAIN THE BOULEVARD WHILE THE FUTURE PROPERTY OWNER WILL MAINTAIN ALL OTHER OFF SITE LANDSCAPE ITEMS. THIS INCLUDES, BUT NOT LIMITED TO: TREE WATERING, SHRUB WATERING AND WEEDING.
4. PRIOR TO LANDSCAPE CONSTRUCTION COMMENCING, THE LANDSCAPE CONTRACTOR, LANDSCAPE ARCHITECT AND CITY REP MUST MEET FOR THE PRE-CONSTRUCTION MEETING.
5. ALL TREES AND PLANTS MUST BE INSPECTED BY A DNV REP PRIOR TO INSTALLATION. ANY PLANT MATERIAL NOT ADHERING TO THE BCLNA STANDARDS WILL BE REJECTED.
6. FINAL SELECTION OF OFFSITE TREES AND FURNITURE WILL BE MADE BY DNV STAFF. PLEASE CONTACT DNV PARK DESIGNER PRIOR TO PURCHASING OFF SITE ITEMS. (604) 990-3867

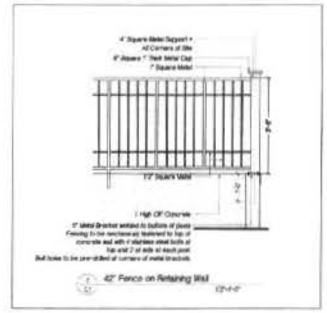
PLANT SCHEDULE

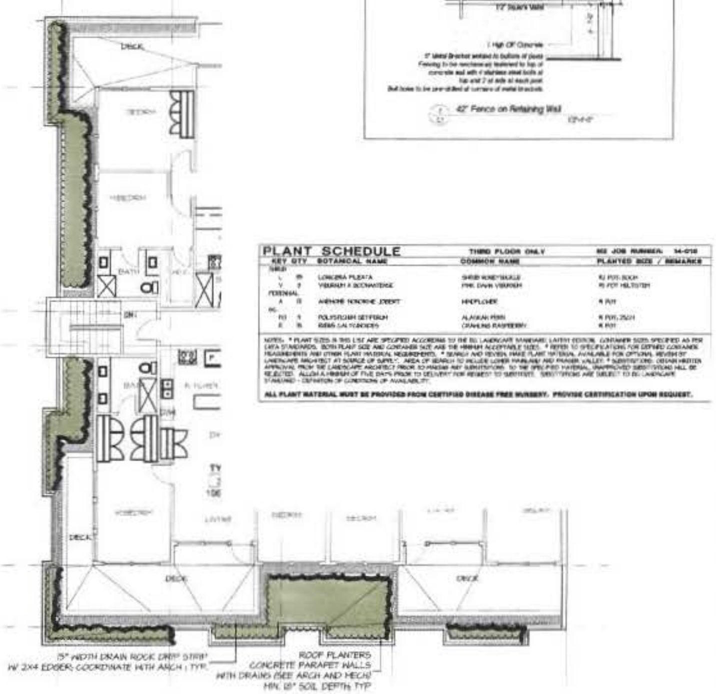
M2 JOB NUMBER: 14018

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
	[illegible]	ACER CIRCINATUM	VINE MAPLE	[illegible]
	[illegible]	ACER PALMATUM 'BLOODGOOD'	JAPANESE MAPLE	[illegible]
	[illegible]	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	[illegible]
	[illegible]	FAGUS SYLVATICA 'DAWYCK'	DAWYCK BEECH	[illegible]
SHRUB				
	[illegible]	BUXUS MICROPHYLLA 'WINTER GEM'	LITTLE-LEAF BOX	[illegible]
	[illegible]	SARCOCOCCA HOOKERIANA VAR. HUMILIS	HIMALAYAN SWEET BOX	[illegible]
	[illegible]	TAXUS X MEDIA [illegible]	YEW	[illegible]
	[illegible]	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN CEDAR	[illegible]
	[illegible]	VIBURNUM X BODNANTENSE	PINK DAWN VIBURNUM	[illegible]
GRASS				
	[illegible]	CAREX MORROWII 'AUREO VARIEGATA'	GOLDEN VARIEGATED JAPANESE SEDGE	[illegible]
PERENNIAL				
	[illegible]	ANEMONE 'HONORINE JOBERT'	WINDFLOWER	[illegible]
GC				
	[illegible]	PACHYSANDRA TERMINALIS 'GREEN SHEEN'	JAPANESE SPURGE	[illegible]
	[illegible]	POLYSTICHUM SETIFERUM	ALASKAN FERN	[illegible]
	[illegible]	RUBUS CALYCINOIDES	CRAWLING RASPBERRY	[illegible]

NOTES: [illegible]

ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. PROVIDE CERTIFICATION UPON REQUEST.





PLANT SCHEDULE

THIRD FLOOR ONLY — M2 JOB NUMBER: 14-018

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
SHRUB				
L	[illegible]	LONICERA PILEATA	SHRUB HONEYSUCKLE	[illegible]
V	[illegible]	VIBURNUM X BODNANTENSE	PINK DAWN VIBURNUM	[illegible]
PERENNIAL				
A	[illegible]	ANEMONE 'HONORINE JOBERT'	WINDFLOWER	[illegible]
GC				
PO	[illegible]	POLYSTICHUM SETIFERUM	ALASKAN FERN	[illegible]
R	[illegible]	RUBUS CALYCINOIDES	CRAWLING RASPBERRY	[illegible]

NOTES: [illegible]

ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. PROVIDE CERTIFICATION UPON REQUEST.

THIRD FLOOR PLANTERS ON ROOF
SCALE: $\frac{1}{8}$" = 1'-0"

M2 LANDSCAPE ARCHITECTURE

#220 - 26 Lorne Mews
New Westminster, British Columbia
V3M 3L7
Tel: 604.553.0044
Fax: 604.553.0045
Email: office@m2la.com

NO.	DATE	REVISION DESCRIPTION	DR.
1	[illegible]	NEW SITE PLAN FROM ARCHITECT	[illegible]

SEAL:

PROJECT: RESIDENTIAL
1591 BOWSER ST.
NORTH VANCOUVER, B.C.

DRAWING TITLE: LANDSCAPE PLAN

DATE:	[illegible]	DRAWING NUMBER:
SCALE:	$\frac{1}{8}$"=1'-0"	L1
DRAWN:	MEJ	
DESIGN:	MEJ	
CHK'D:		OF 3
M2LA PROJECT NUMBER:		14-018

3D VIEW 1 (1 / DP-1.01)

3D VIEW 2 (2 / DP-1.01)

NO.	DATE	ISSUED
1	9 MAY 2014	ISSUED FOR DP [illegible]
2	26 SEPT 2014	DP REVISIONS

BOWSER ST. APARTMENT

BOWSER STREET,
NORTH VANCOUVER, BC

3D VIEWS

DOUGLAS R. JOHNSON ARCHITECT LTD.
#374–901 WEST 3RD ST.
NORTH VANCOUVER, BC V7P 3P9

6" = 1'-0"

DP-1.01

1 DP-1.06 EAST ELEVATION-COLOR - BOWSER STREET

MATERIAL INDEX

SYMBOL	MATERIAL	COLOR
HS	HARDI SIDING	BM 2137-00 GREY OWL
HSI	HARDI SIDING	BM GG 533 NORTH SEA
BC	BRICK	MUTUAL MATERIALS REDONDO GREY
W	WINDOW	SILVER
FL	FLASHING	SILVER
GR	GUARD/RAILING	GLASS/SILVER
G	GALVALUME CORRUGATED METAL SIDING	SILVER
BR	BRICK	MUTUAL MATERIALS REDONDO GREY
FB	FASCIA/TRIM BOARD	BM 2128-40 SHADOW GREY
B1	8" x 8" SPLITFACE CONCRETE BLOCK	NATURAL CONCRETE
B2	8" x 16" GROUND FACE CONCRETE	BLACK CHARCOAL
A2	AWNING	ZINC

DOUGLAS R. JOHNSON ARCHITECT LTD.
#374–901 WEST 3RD.ST.
NORTH VANCOUVER, BC V7P 3P9

NO.	DATE	DESCRIPTION
1	2 MAY 2014	ISSUED FOR DP RESUBMISSION
2	24 SEP 2014	DP RESUBMISSION

BOWSER ST. APARTMENT
1591 BOWSER STREET,
NORTH VANCOUVER, BC.

EAST ELEVATION

1/4" = 1'-0"
05 OCT 2012
DP-1.06

1 / DP-1.08 WEST ELEVATION-COLOR

MATERIAL INDEX		
SYMBOL	MATERIAL	COLOR
HS	HARDI SIDING	BM 2137-00 GREY OWL
HS1	HARDI SIDING	BM GG 532 NORTH SEA
BC	BRICK	MUTUAL MATERIALS REDONDO GREY
W	WINDOW	SILVER
FL	FLASHING	SILVER
GR	GUARD/RAILING	GLASS/SILVER
G	GALVALUME CORRUGATED METAL SIDING	SILVER
BR	BRICK	MUTUAL MATERIALS REDONDO GREY
FB	FABRICATED BOARD	BM 2128-40 SHADOW GREY
B1	8" x 16" SPLITFACE CONCRETE BLOCK	NATURAL CONCRETE
B2	8" x 16" GROUND FACE CONCRETE	BLACK CHARCOAL
A2	AWNING	ZINC

NO.	DATE	DESCRIPTION
1	5 MAY. 2014	ISSUED FOR DP REZONING
2	26 SEPT. 2014	DP RESUBMIT

BOWSER ST. APARTMENT
1570 BOWSER STREET,
NORTH VANCOUVER, BC.

WEST ELEVATION

DOUGLAS R. JOHNSON ARCHITECT LTD.
#374-901 WEST 3RD.ST.
NORTH VANCOUVER, BC V7P 3P9

1/4" = 1'-0"

DP-1.08

1 DP-1.07 SOUTH ELEVATION (LANE)

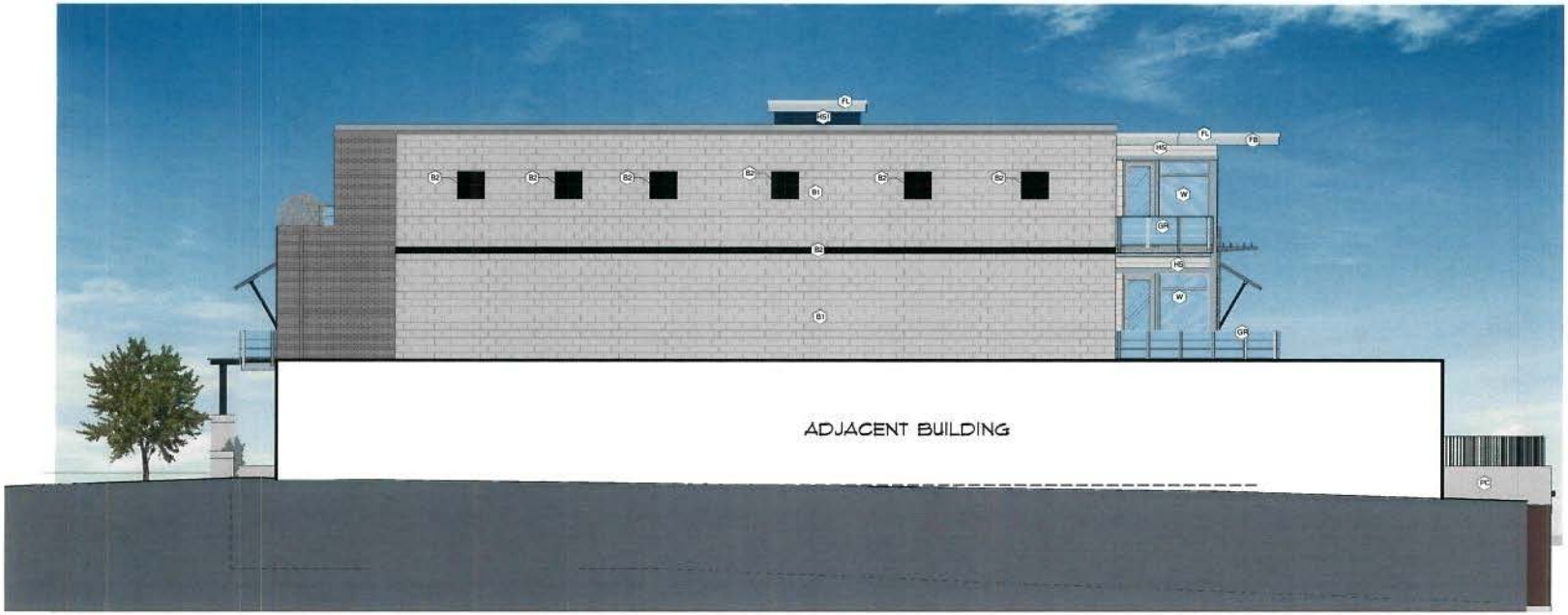
BOWSER ST. APARTMENT
150 BOWSER STREET,
NORTH VANCOUVER, BC.

SOUTH ELEVATION

DOUGLAS R. JOHNSON ARCHITECT LTD.
#374–901 WEST 3RD.ST.,
NORTH VANCOUVER, BC V7P 3P9

3/16" = 1'-0"

DP-1.07



1 / DP-1.09 NORTH ELEVATION (FROM MARINE)

MATERIAL INDEX

SYMBOL	MATERIAL	COLOR
HS	HARDI SIDING	BM 2137-00 GREY OWL
HS1	HARDI SIDING	BM GC 193 NORTH SEA
SC	BRICK	MUTUAL MATERIALS REDONDO GREY
W	WINDOW	SILVER
FL	FLASHING	SILVER
GR	GUARD/RAILING	GLASS/SILVER
G	GALVALUME CORRUGATED METAL SIDING	SILVER
BR	BRICK	MUTUAL MATERIALS REDONDO GREY
FB	FASCIA/TRIM BOARD	BM 2129-40 SHADOW GREY
B1	8" x 8" SPLITFACE CONCRETE BLOCK	NATURAL CONCRETE
B2	8" x 16" GROUND FACE CONCRETE	BLACK CHARCOAL
AZ	AWNING	ZINC

1	9 MAY 2024	ISSUED FOR DP RESUBMISSION
2	26 SEP 2024	DP RESUBMISSION

BOWSER ST. APARTMENT
1591 BOWSER STREET,
NORTH VANCOUVER, BC.

NORTH ELEVATION

DOUGLAS R. JOHNSON ARCHITECT LTD.
#374–901 WEST 3RD.ST.
NORTH VANCOUVER, BC V7P 3P9

As indicated

DP-1.09

ATTACHMENT B

The Corporation of the District of North Vancouver

Bylaw 8080

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

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

1. Citation

This bylaw may be cited as "District of North Vancouver Rezoning Bylaw 1317 (Bylaw 8080)".

2. Amendments

The following amendments are made to the "District of North Vancouver Zoning Bylaw 3210, 1965".

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

"Comprehensive Development Zone 83 CD83"

The CD83 Zone is applied to:
Lot 11, Block A, District Lot 825, Plan 7431
(PID: 010-618-007)

(B) Part 4B Comprehensive Development Zone Regulations by inserting the following:

" 4B83 Comprehensive Development Zone 83 CD83

4B83-1) Intent:

The purpose of the CD83 Zone is to establish specific land use and development regulations for a 16 unit apartment building.

4B83-2) Uses:

The following *principal uses* shall be permitted in the Comprehensive Development 83 Zone:

(a) Uses Permitted Without Conditions:

(i) Residential building, low rise apartment;

(b) Conditional Uses:

(i) Live-work use;

4B83-3) Conditions of Use:

The use of land, buildings and structures for live-work use is permitted subject to the following conditions:

(a) Live-work use is limited to the ground floor of the building;

(b) Businesses within a live-work use are limited to the following uses only, as defined in Part 2A of the Zoning Bylaw, 1965:

(i) Office use; and
(ii) Personal service use;

(c) The following uses are specifically prohibited in a live-work use:

(i) Dating service;
(ii) Exotic dancer business;
(iii) Gun shops;
(iv) Social escort business or other similar business; and
(v) Tattooing, piercing, branding or other similar service;

(d) A live-work use may not be used solely for business purposes;

(e) The business component of a live-work use must be conducted by a resident of the dwelling unit in which live-work use is permitted and not more than 3 persons may be engaged at one time in a business in a live-work use;

(f) All materials, equipment and products associated with a business in a live-work unit shall be stored within the building;

(g) No vibration, noise, heat, glare, odour, or electrical interference shall be detectable from outside the live-work premises and no excessive traffic or air pollution shall be generated by a business in a live-work use;

(h) No operations, displays or signs shall be visible from outside the premises of a live-work use with the exception of a sign name-plate not exceeding one square foot in area;

(i) No commodity may be sold in a live-work use except that which is permitted to be made in a live-work use;

4B83-4) Accessory Uses:

(a) *Accessory uses* are permitted and are limited to:

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

4B83-5) Density:

(a) The maximum permitted density in the CD83 Zone is limited to a floor space ratio (FSR) of 1.0;

(b) For the purposes of calculating floor space ratio, the area of underground parking garages, underground mechanical rooms, underground garbage and recycling collection areas, underground storage areas and, above ground electrical and mechanical rooms, is exempted.

4B83-6) Amenities:

Despite section 4B83-5, density in the CD83 Zone is increased to a maximum floor space ratio of 1.68, inclusive of any density bonus for energy performance, if the owner:

1. contributes $111,850 to the municipality to be used for any or all of the following amenities (with allocation to be determined by the municipality in its sole discretion): public art; park, trail, environmental or other public realm improvements; municipal or recreation service or facility improvements; and/or the affordable housing fund; and

2. enters into a Housing Agreement to ensure that all units in the building may be rental units;

4B83-7) Maximum Principal Building Size:

Not applicable

4B83-8) Setbacks:

Buildings and structures shall be set back from property lines to the principal building face in accordance with the following regulations:

a) North - 0m (0ft.);
b) East - 2.3m (7.5ft.);
c) South - 2.4m (7.9ft.);
d) West - 9.6m (31.5ft.).

4B83-9) Building Orientation:

Not applicable

4B83-10) Building Depth and Width:

Not applicable

4B83-11) Coverage:

Buildings, structures, parking spaces, loading spaces and driveways shall not occupy more than 74% of the lot area;

4B83-12) Height:

(a) For a building with a maximum FSR of 1.0, the building is limited to a maximum of two storeys and a maximum permitted height, as measured to the top of the roof parapet, of 8m (26.25ft.); or,

(b) For a building with a maximum FSR of 1.68 as contemplated in Section 4B83-6, the building is limited to a maximum of three storeys and a maximum permitted height, as measured to the top of the roof parapet, of 11m (36ft.);

4B83-13) Acoustic Requirements:

A development permit application shall require evidence in the form of a report and recommendations prepared by persons trained in acoustics and current techniques of noise measurements, demonstrating that the noise levels in those portions of the dwelling listed below shall not exceed the noise levels expressed in decibels set opposite such portions of the dwelling units:

Portion of Dwelling Unit	Noise Level (Decibels)
Bedrooms	35
Living and Dining rooms	40
Kitchen, Bathrooms and Hallways	45

4B83-14) Landscaping:

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

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

4B83-15) Subdivision Requirements:

Not Applicable

4B83-16) Additional Accessory Structure Regulations:

Not applicable.

4B83-17) Parking and Loading Regulations:

(a) A minimum of 22 parking spaces are required, inclusive of designated visitor parking and parking for persons with disabilities;

(b) A minimum of 1 parking space designated for persons with disabilities is required;

(c) A minimum of 2 parking spaces are required for designated visitor parking;

(d) All regular, small car and handicapped parking spaces shall meet the minimum width and length standards established in Part 10 of the Zoning Bylaw, exclusive of building support columns;

(e) All manoeuvring aisles shall be a minimum of 6.79m (22.3ft.) wide; and

(f) A minimum of 7 Class 2 bicycle parking spaces are required."

(C) The Zoning Map is amended in the case of the lands illustrated on the attached map (Schedule A) by rezoning the land from the Marine Drive Commercial Zone (C9) to Comprehensive Development Zone 83 (CD 83).

READ a first time

PUBLIC HEARING held

READ a second

READ a third time

Certified a true copy of Bylaw 8080 as at Third Reading

_____

Municipal Clerk

APPROVED by the Ministry of Transportation and Infrastructure on

ADOPTED

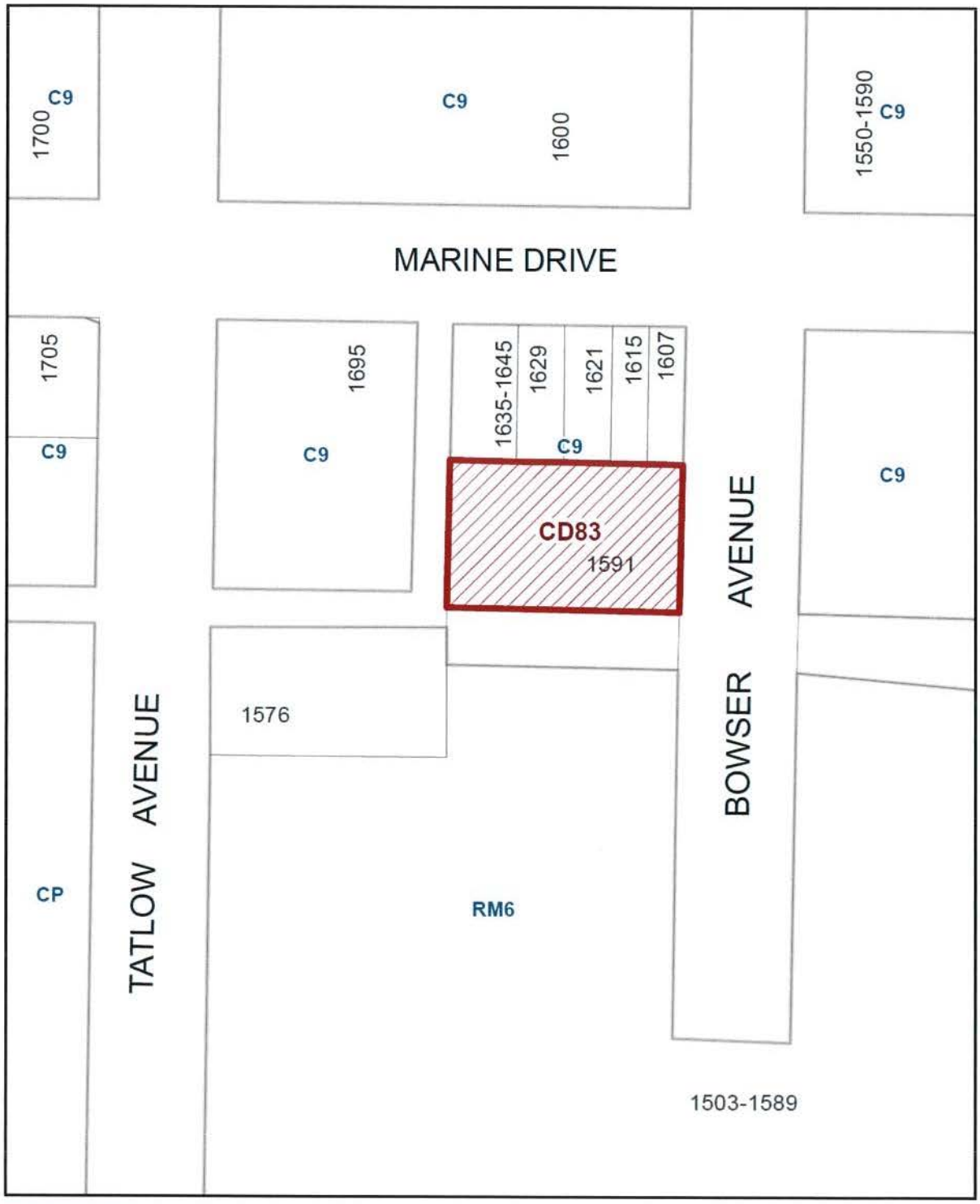
Mayor

Municipal Clerk

Certified a true copy

Municipal Clerk

BYLAW 8080 SCHEDULE A: ZONING MAP



Document: 2360915

ATTACHMENT C

The Corporation of the District of North Vancouver

Bylaw 8094

A bylaw to enter into a Housing Agreement (1591 Bowser Avenue)

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

1. **Citation**

   This bylaw may be cited as "Housing Agreement Bylaw 8094, 2014 (1591 Bowser Avenue)".

2. **Authorization to Enter into Agreement**

   The Council hereby authorizes a housing agreement between The Corporation of the District of North Vancouver and London Meridian Properties Inc., Inc. No. 587926, substantially in the form attached to this Bylaw as Schedule "A" with respect to the following lands: PID: 010-618-007, Lot 11, Block A, District Lot 825, Plan 7431.

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 8094

SECTION 219 COVENANT – HOUSING AGREEMENT

This agreement dated for reference the 1st day of November, 2014 is

BETWEEN:

LONDON MERIDIAN PROPERTIES INC., Inc. No. 587926
#1700 – 1075 West Georgia Street
Vancouver, BC V6E 3C9

(the "Owner")

AND:

THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER, a municipality incorporated under the *Local Government Act*, R.S.B.C. 1996, c.323 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 Lands;

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

C. Section 905 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. A covenant registrable under Section 219 of the *Land Title Act* may include provisions in respect of the use of land, the use of a building on or to be erected on lands; that land is to be built on in accordance with the covenant, is not to be built on except in accordance with that covenant or is not to be built on; that land is not to be subdivided unless in accordance with the covenant or is not to be subdivided.

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 Owner (the receipt and sufficiency of which is acknowledged by the Owner), the parties covenant and agree with each other as follows, as a housing agreement under Section 905 of the *Local Government Act*, and as a contract and a deed under seal between the parties and the parties hereto further covenant and agree that the Lands shall not be used or built on except in accordance with this Covenant as follows:

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) *"Proposed Development"* means the development on the Lands contemplated in the Development Permit containing not more than 16 Units;

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

(e) *"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 8094 and will remain in effect until terminated by the District.

3. RENTAL ACCOMODATION

3.01 Rental Disclosure Statement

No Unit in any building on the Lands that has been strata title subdivided under the *Strata Property Act* may be occupied unless the Owner has:

(a) before the first Unit in the said strata subdivision 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 designating all of the Units in the said strata subdivision as rental strata lots and imposing at least a ninety-nine (99) year rental period in relation to all of the Units pursuant to the *Strata Property Act* (or any successor or replacement legislation); and

(b) given a copy of the Rental Disclosure Statement to each prospective purchaser of any Unit in the said strata subdivision before the prospective purchaser enters into an agreement to purchase in respect of the Unit.

3.02 Rental Accommodation

Every Unit 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. The restrictions set out in this Agreement shall not be construed to prevent a Unit Owner, or a member of the Unit Owner's family, from using a Unit for personal accommodation.

3.03 Binding on Strata Corporation(s)

This agreement shall be binding upon all strata corporations created upon the strata title subdivision of the Lands or any buildings on the Lands pursuant to the *Strata Property Act*.

3.04 Strata Bylaw Invalid

Any strata corporation bylaw or rule which prevents, restricts or abridges the right to use any of the Units as rental accommodations shall have no force or effect.

3.05 No Bylaw

The strata corporation(s) shall not pass any bylaws or rules preventing, restricting or abridging the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation.

3.06 Vote

No Unit Owner, nor any tenant or mortgagee thereof, shall vote for any strata corporation bylaw or rule purporting to prevent, restrict or abridge the use of the Lands, the Proposed Development and the units contained therein from time to time as rental accommodation.

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 thirty (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.

4.02 Costs

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.

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 for the negligence 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 Proposed Development or any part thereof.

5.02 Release

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 Development or any part thereof which has been or hereafter may be given to the Owner by all or any of them.

5.03 Survival

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

6. GENERAL PROVISIONS

6.01 District's Power Unaffected

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.

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 or any future owner, occupier or user of any part of the Proposed Development including any Unit; and

(c) The District may at any time 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 905 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 in priority to all charges and encumbrances which are registered, or pending registration, against title to the Lands in the Land Title Office, save and except those as have been approved by the District or have been granted in favour of the District..

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, by prepaid courier, 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:

London Meridian Properties Inc.
#1700 – 1075 West Georgia Street
Vancouver, BC V6E 3C9

Attention:

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; if made by prepaid courier, on the day it was delivered; 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" are to be construed as imperative.

7.05 Statutes

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

7.06 Entire Agreement

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

(b) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8030.

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.

CONSENT AND PRIORITY AGREEMENT

GIVEN THAT:

A. London Meridian Properties Inc. (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 HSBC Bank Canada (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. CA359747 and CA359748 (together, the "Prior Charge");

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

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 Office Form C to which this Agreement is attached and which forms part of this Agreement.

- END OF DOCUMENT -

ATTACHMENT D

London Meridian Properties: 1591 Bowser Development Application

Public Input Meeting Summary Report

Event Date:	June 19, 2014
Time:	6:30pm – 8:30pm
Location:	1591 Bowser Avenue
Attendance:	12 members of the public
Comment Forms:	1 comment sheet and 6 emails were submitted.
Meeting Purpose:	1) To present development application materials to neighbours 2) To provide an opportunity for the public to ask questions about the development 3) To provide an opportunity for neighbours to comment on the proposal.

Notification:

Invitation Brochures

Invitations with fact and comment sheets were delivered to residents within 100 metres of the site.

Site Sign

A sign was erected on the site on the Bowser Avenue frontage to notify neighbours of the meeting.

Newspaper Ad

A newspaper ad was placed in the North Shore News on June 8 and June 11. Copies of the ads are included in Appendix A: Notification.

Attendance:

12 members of the public attended and signed in for the meeting. A copy of the sign-in sheet is provided in Appendix B.

The following District staff and project team members were in attendance:

District of North Vancouver:

- Doug Allan, Development Planner, District of North Vancouver

Project Team:

- Doug Johnson, MAIBC, Douglas R. Johnson Architect, Ltd.
- Karim Virani, Virani Real Estate Advisors
- Daniel Fung, Bunt & Associates

Facilitator:

- Steven Petersson, Petersson Planning Consulting

Most of the participants indicated that they lived in condominium buildings south and south-east of the site.

Overview:
The Public Information Meeting was designed to provide several methods for the public to engage in the process.

The evening began with an Open House, which lasted approximately 40 minutes, where participants could browse display boards and have informal discussion with the architect and transportation consultant.

The Open House was followed by a fifteen minute presentation by the architect and transportation consultant.

The presentation was followed by a thirty-minute dialogue that provided the public with an opportunity to ask questions and discuss the project. The facilitator noted public comments and questions on flip chart paper on the wall. Since most participants were engaged in the informal dialogue during the Open House, the question and answer session after the presentation was brief.

The key themes of the evening were parking and access.

Public Dialogue:
(Q = Question, A = Answer, C=Comment, and the number is to track the dialogue)

Q1 Will the building have restrictions on children or pets?
A1 No.

Q2 Will rentals be allowed?
A2 Yes. For new buildings, the DNV requires developers to enter a Housing Agreement that prohibits future strata councils from limiting rental units in the building.

Q3 Are those full balconies or "Romeo and Juliette" balconies?
A3 Those are full balconies, as per DNV standards.

Q4 What will the roof be like?
A4 It will be a flat roof with overhangs and stained cedar soffits.

Q5 If approved, how long will it take to construct?
A5 Approximately one year.

Q6 What is the building coverage?
A6 The building coverage is approximately 65%. The C-9 zone permits 85% total site coverage but does not regulate building coverage separately.

Q7 How much parking is proposed and required?
A7 According to the DNV Zoning Bylaw, 32 parking stalls are required for the 16 residential units. The proposal is to provide 23 secured underground parking stalls (including 4 designated visitor stalls).

C8 The ceiling height for the underground parking might be too short to allow high vehicles. Some parking stalls should be provided on the surface.
A8 The small site makes provision of surface parking stalls very challenging.

C9 The big issue on this project is the amount of parking.
A9 New parking rules are being drafted by the DNV, which will result in adjustments in required parking in the various town and village centres, including Marine Drive. On the basis of those rules, parking for apartment projects adjacent to Marine drive could be reduced to 1.1 spaces per unit plus 0.1 spaces per unit for visitor parking, for an overall rate of 1.2 spaces per unit. As submitted, this project provides parking on the basis of 1.43 spaces per unit, including visitor parking.

Q10 Could some of the visitor parking stalls be converted to residential parking stalls?
A10 For this project, the DNV requires four visitor parking stalls. If permitted by the DNV, we could consider converting the visitor stalls into residential stalls.

Q11 Does providing charging stations for electric vehicles really reduce demand for parking?
A11 The empirical studies demonstrate that this is so.

C12 How will this project affect adjacent property values?
A12 It is very unlikely that it will decrease property values. It will probably increase property values.

Q13 Are parking studies done on buildings after they have been constructed, to see how much parking is actually used and required? Has such a study been conducted on Marine Drive?
A13 Bunt & Associates does this type of research on projects they have worked on. Bunt's recommendations are based, in part, upon this research.

Q14 Why is parking access located on the west lane? This could have implications for adjacent development.
A14 Access to underground parking is located at the low part of the site.

C15 The access to parking as proposed would result in drivers taking a circuitous route to the parkade. Parking access could be provided on Bowser Avenue.
A15 Locating the parking access on Bowser Avenue would put the entrance to the garage too close to the lane and could present a safety issue.

C16 The lane is narrow for the volume of traffic.
A16 The south lane is 9m wide, which is 50% wider than the standard 6m lane.

C17 This project does not adhere to the vision for the C-9 zone, which contemplated a mid-block east-west lane.
A17 There is a mid-block lane with a jog in it. The lane will function similarly to today.

C18 It is important to preserve east-west lane access. Perhaps a lane between Philip and MacGuire could have speed bumps installed.

C19 Traffic congestion on Marine Drive is an issue.

Q20 Where will trades park? Where will moving vans and large vehicles park?
A20 Increasing underground garage height affects building height, excavation depth and the grade of the access ramp.

Comment Sheet and Email Summary
One comment sheet and 6 emails were submitted to the DNV after the meeting. Copies of the correspondence are attached as an Appendix C.

Below is a summary of the key themes communicated via comment sheets and emails after the meeting. They are clustered according to topic.

Architecture

- During the presentation, I did not see or hear anything that will cause major problems for Norgate or Illahee. This is the first time I remember a recently proposed Marine Drive development actually being lower than the District's guidelines and not applying for a height variance. We hope this is the start of a trend to observe the established OCP maximum height restriction. Although the drawings of the building have the District-approved flat roof and square appearance for the Marine Drive corridor, it seems to be less looming or overwhelming than the recent buildings. A greater variety of architecture and heights, such as the Village at Park Royal, is preferable to the sameness of all flat roofs. The material and colour choice seems to be good and is similar enough to those chosen for Illahee to fit into the neighbourhood.
- I am very pleased the proposed building has been brought down to three floors.

C-9 Zone: Lot Size & Density

- What was the District Planning department's intent when they came up with the 1 FSR and 1.75 FSR depending on the size of the lot [in the C-9 Zone]? I would guess the intent was to give incentive to have the smaller lots consolidated into a larger lot to permit the higher FSR. The project as proposed would have a severe impact on any future development of the properties to the North on Marine Drive as that property will have a commercial component.
- We request that any new development meet the current C-9 Zone put in place for this and the other properties on this complete block from Tatlow to Bowser so that a proper development that is fair to all the current owners and an enhancement to Marine Drive can be built; or revisit the C-9 Zone with the adjacent Community Association to consider revisions to the zone.
- Redevelopment of the entire block may be preferable for this area, as the applicant's building is arguably in better condition than the others.
- This 3 storey apartment building would work well as an "infill" type of project.
- If this proposal goes ahead, it will create a problem for future development of this block (Tatlow to Bowser). It will mean another small building, north, on Marine Drive.

Land Use

- As the current 1591 Bowser property is all commercial office space, it would appear not very practical to reduce the commercial office space available in the District at this time and converting this building to all residential with the explosion of all the other new residential properties in this area. We know of other current buildings currently with 100% office space in the Marine Drive corridor that are already approved to be redeveloped into 100% residential use.

Parking

- Parking is an issue.
- Consider resident parking only in the alleys
- Lots of cars park in the alley from MacGowan to Tatlow to catch the bus downtown
- I park in the back alley between MacGowan and Bowser
- The amount of parking spaces and enough room for service vehicles, moving trucks, etc. seems to be an issue. A related issue is yet another application for a variance to the OCP, in this case, nine parking spaces.
- I am not in favour of the 9 space parking variance the applicant is asking the DNV to consider. I quote from the information package provided: "Main floor units which could be used for live/work purposes." Not only is the developer asking for a variance on the number of parking spaces, they are stating that businesses are to be run within the units with decreased parking for clients of these businesses let alone the residents of the building. Regardless of the Metro Van parking study, people still drive cars.
- I question the applicability of the Metro Vancouver Apartment Parking Survey to this proposal, and note that the 15 communities surveyed did not include either West Vancouver or the DNV. Further, the study found that "Apartment renters generally have lower parking demands than do owners" and "Vehicle holdings and parking demand for apartment renters are much lower than for owners." Presumably the inclusion of rental units in the survey skewed the results insofar as their applicability to the subject proposal is concerned.
- I would strongly urge, given that the current supply of on-street parking does not meet the demand, that the requested variance in the required number of parking spaces for the building proposed for 1591 Bowser be denied.
- I do not think that there should be a variance of nine parking spaces. This is a very busy area and we do not need more people parking all day on the lane or on Bowser. The traffic consultant said that there was no problem with the bus service. He has not been at the bus stop around 3pm on a Saturday afternoon when the buses are full and go sailing by without stopping. I did not believe that his presentation was credible with the actual availability of buses.

Traffic

- Back lanes are very busy. Cars going west turn onto Philips and head down the alley to avoid bridge back-up traffic.
- Speeding down the alley – consider speed bumps in alleys
- Bowser has too much non-local traffic
- Is the north-south lane behind the proposed development necessary any longer, or should it be decommissioned as was the "highway" on the Save On Foods site? At present it seems mainly to be used for parking alongside the Mitsubishi dealership. Sale of the lane may generate extra

funds for the DNV which can then be used for local benefit. Otherwise, it is literally a waste of space.

- Should vehicles be going either onto, or turning off Marine Drive from this narrow lane, when they can more safely use Bewicke? Exiting onto Marine Drive mid-block is dangerous for both pedestrians and vehicles due to visibility. The proposed development could be redesigned, and an easier and safer parking access from Bowser or the lane to the south should be created. This should have the benefit of reducing vehicle accidents for residents, especially if they have children.
- Both architects told me that the number of cars on the road has stayed the same for the last ten years. If this is true, then why is Marine Drive so congested and North Shore residents so angry about it?
- Concern about increased traffic volumes in the east-west alley south of the development site
- The east-west alley south of the development must remain open at all times if construction is to occur and thereafter. There is no traffic light at the intersection of Bowser and Marine. Impossible to turn left and difficult to turn right due to lack of visibility due to parked cars on Marine in front of Capilano glass. Drivers are forced to use the alley (east and west) to access a light to cross or proceed along Marine Drive.
- I have a concern about the statement that the lane will take on a pedestrian character. While at first blush this is an attractive notion, it does raise a safety issue.
- Consider erecting stop signs in the lane where it intersects with Bowser.
- The lane is very important for getting to the Tatlow or Garden light to have access to Marine Drive. I do not think that there should be any interference with this very used access.
- There will be problems with access to the lane (from Bowser to Tatlow) with any construction and that will be very difficult.
- I don't think it is good planning to build a lot of smaller projects in place of a larger project. More buildings mean more entrances and exits for underground parking andor surface parking and resulting traffic circulation problems.

Conclusion

The purpose of this public meeting was to present to neighbours the proposed development concept, and provide an opportunity for neighbours to ask clarifying questions and comment on the proposal. 12 people signed in and participated in the meeting. Participants asked the development team and District planner a variety of specific questions. Most participants indicated that they lived in adjacent multi-family buildings south and south-east of the subject site.

The key themes raised at the meeting were parking and access. Residents expressed that they wish to see the east-west lane connectivity preserved. They also expressed concern about traffic volumes on Marine Drive and the proposed parking supply. The meeting length and format was sufficient to provide all participants an opportunity to learn more, ask questions, and make the comments they wished to provide that evening.

DOUGLAS R. JOHNSON ARCHITECT LTD.

374 – 901 West 3rd Ave North Vancouver, BC V7P 3P9
(604) 998-3381 FAX (604) 988-5561

May 12, 2014

District of North Vancouver
355 Wst Queens Rd.
North Vancouver, BC V7N 4N5

Attn: Doug Allan– Community Planner

Re. 1591-Bowser St. North Vancouver – Proposed Residential Project – Design Rationale

Dear Mr. Allan,

The proposed design for 1591 Bowser Ave. is a three storey residential building over a single level of underground parking. The site fronts onto Bowser and is about a half block off Marine Drive. There are two lanes, one adjacent to the south and one along the west property line. There is a modest grade change across the site with the north west corner the low spot.

Context

On this site is an existing 2 1/2 half storey commercial office building that will be demolished. It shares the block with a string of small one storey retail buildings that extend along Marine Drive. The key corner site has been the long time home of Capilano Glass and it is their intention to remain at that location. The buildings are not of high quality and some point the Marine Drive sites will redevelop. Across Bowser is the Pier One commercial retail building. It presents a two storey wall with little articulation.

To the south of 1591 are three storey wood frame townhouses. The units immediately across the west lane have their entries to the lane, minimal setback to the property line and small urban yards.

Context Design Response

This is a urban residential building supporting the vision for Marine Drive outlined in the Marine Drive Design Guidelines. Our site is located off Marine Drive and is transitioning from the Marine Drive commercial strip to the existing multi-residential to the south. The south lane has a mews feel with the existing townhouse presenting entry doors to the lane and a pedestrian friendly scale. This proposal would complement this street orientation by having suite entrances directly access the lane. The two storey brick façade with its strong in and

out rhythum and large windows provides a streetwall that wraps around the south façade and continues down the lane.

On Bowser and the south lane, the building is brought close to the property line and all the main floor units have entrances direct to the street. The ground floor suites will have the option of being live/work units and discreet business signage can be incorporated into the individual units' gate detail.

The building has a three storey massing with level 3 stepping strongly back from the floor below. The building terminates with a flat roof with large overhangs The massing provides a transition from the existing 3 storey townhouses south of the site to the future mixed-use building that will spread along Marine Drive.

The parkade entrance is located at the low point of the site on the north-west corner. Decks and patio areas screen the parkade entrance from the units. All parking is located underground. The parking stalls have been reviewed by Bunt and Associates in their report, to ensure that the number provided are adequate. The parking layout has also been adjusted to reflect recommendations provided by Bunt.

The residential units will have a loft feel with ten foot ceilings, open plans with flexible spaces and the use of moveable walls. A variety of units are provided including 5 bachelor units.

To the west, an enclosed landscaped courtyard can be directly accessed from the building. The generous decks on level 3 will have concrete planter boxes bringing landscape elements to the upper floor of the building.

The materials proposed are brick on the 2 storey street wall, hardi siding for the recessed third floor and the west façade. Clear cedar is proposed for large soffits and screening details. The windows and glazing are large and are detailed to reflect a residential character. The west stair projects out from the façade and is clad in galvalume siding, hinting at the transportation and resource industry heritage of the area.

Energy modeling has been completed on the building and it will meet Build Green Gold standards by using 30% less energy than outlined by Ashrae 90.1-2007.

Yours truly,

Douglas Johnson MAIBC

DOUGLAS R. JOHNSON ARCHITECT LTD.
374 – 901 West 3rd Ave North Vancouver, BC V7P 3P9
(604) 998-3381 FAX (604) 988-5561

May 12, 2014

District of North Vancouver
355 Wst Queens Rd.
North Vancouver, BC V7N 4N5

Attn: Doug Allan– Community Planner

Re. 1591-Bowser St. North Vancouver – Proposed Residential Project – Design Panel Comments

Dear Mr. Allan,

The preliminary design for 1591 Bowser Ave.was presented to the Design Panel in December 2012. The project has undergone considerable refinement since then.

Significant changes include:

- Revision to 3 storey building
- North Lane is not been incorporated into the site.
- The elevations and floor plans have been refined. The material choices reflect a more residential building and the façade has more rhythum and articulation.
- The FSR is lower and in general the building is not trying to do as much on the site.
- The surface parking has been removed at the rear of the site and the landscape courtyard has direct access from the building.
- A landscape design has been completed on the project.

Response to comments from Dec 2012 ADP:

- Access to the garbage/recycling area is direct from the building.
- The lobby is larger and is not part of the exiting from the building
- The ramp to the main entry is only 5% and will not require guards.
- Unit deck areas are improved with most being substantially larger than the min. 45 sm.
- Unit overlook of the parking ramp has been minimized with partio areas and decks providing visual buffers.
- The building massing has been improved. The smaller site, reduced FSR and the elimination of the 4th floor allows for a better transition to the townhouse units to the south. The third floor steps back from the second floor and there is a substantial roof

overhang that will create a deep shadow line. The 2 storey brick façade has more movement and articulation. The East façade treatment extends along the south lane exposure and extends the streetwall.

- The building canopies are detailed in zinc, offer weather protection to the windows and reflect the industrial roots of the neighbourhood.
- The overall look and feel of the building is much more residential in character.
- The south lane residential units have doors providing access out to the lane mirroring the relationship of the adjacent townhouses.
- The zero lot line wall on the north is patterned in a 4 x 8 module using Hardi Panel in three complimentary colors.

Yours truly,

Douglas Johnson MAIBC

BUILT GREEN® High Density (HD) Project Checklist

Items selected must be applied to every unit, except where noted otherwise (i.e.: central systems).

Section 1: 56 Section 2: 0 Section 3: 0 Section 4: 5 Section 5: 0 Section 6: 13 Section 7: 0 TOTAL POINTS: 74

Builder Name:

House Address:

I. OPERATIONAL SYSTEMS

This section awards points for construction methods and types of products that contribute toward lower energy consumption and/or renewable heating and electrical systems.

Minimum 30 (UNDER REVIEW)

1-1	All ductwork joints and penetrations sealed with low toxic mastic or aerosolized sealant system. Duct mastic is a preferred flexible sealant that can move with the expansion, contraction, and vibration of the duct system components. A high quality duct system greatly minimizes energy loss from ductwork. The additions to the system should be sized and designed to deliver the correct airflow to each room.	3	3
1-2	Install individual unit programmable thermostats capable of starting and stopping the system for at least 2 different daily schedules per week (2 pts. total for all units). A set back thermostat regulates the heating/cooling system to provide optimum comfort when the unit is occupied and to conserve energy when it is not. Builders are encouraged to install a central override system to ensure adequate temperatures for building durability (reference minimum temperatures recommended by CMHC)	2	2
1-3	Install high efficiency heating systems for all units and/or systems serving common areas (min. 90% AFUE gas furnace, min. 85% AFUE oil furnace, or min. 85% AFUE oil/gas boiler). High efficiency condensing furnaces and boilers reduce energy consumption and consequently fossil fuel reliance.	3	3
1-4	Calculate design heat loss and properly size HVAC equipment using CSA F280-M90 or ASHRAE/ACCA Standard 183, and/or implement a boiler management system to match the system operation to building loads and optimize controls for maximum energy savings. [illegible] longer periods which increases the efficiency and durability of the equipment due to less cycling on and off.	2	2
1-5a (new)	Install high efficiency cooling systems for all units and/or systems serving common areas (min. 14 SEER central A/C, or min. ENERGY STAR® window A/C). High efficiency A/C units reduce electricity consumption and associated pollution.		1
1-5	Centrally locate HVAC systems inside the building's heated envelope and reduce duct length. Roof top units are poorly insulated and waste heat is lost to the environment rather than added to the building. High efficiency heating systems with shorter distribution distances require less energy.	1	1
1-6	Install HVAC systems with variable speed motors (ECM). A variable speed fan motor is designed to vary its speed based on the building's heating and air conditioning requirements. Working in conjunction with the thermostat, it keeps the appropriate air temperature circulating through the building, reducing temperature variances in the home. It also provides greater air circulation and filtration, better temperature distribution, humidity control, higher efficiency and quiet performance.		3
1-7	Units contain multiple heating/cooling zones, thermostatically controlled zones (2 zones = 2pts., 3 zones = 3pts., 4 zones = 4pts.). Efficiency can be significantly improved by only heating or cooling when occupants are present and by only heating/cooling to the exact desired temperature. Different desired temperatures can be set in each room or space and an individual zone can be turned off when not occupied. This type of system results in a dramatic reduction of energy consumption and operating costs.	2	2 to 4
1-8	Install ground/water/solar heat pumps (10) or air-source heat pumps (7), either radiant or forced air, to supply majority of space heating and cooling loads. Heat pumps can significantly reduce primary energy use for building heating and cooling. The renewable component displaces the need for primary fuels, which, when burned, produce greenhouse gases and contribute to global warming. Please Note: Effectiveness of heat pumps is related to climate zone and energy costs. Please consult with specialist or engineer to confirm effectiveness.	7	10
1-9	Provide electricity (1 pt.) and/or natural gas (1 pt.) direct metering for each unit. Direct metering in a Multi Context may require significant additional expenses above and beyond prorated condominium energy fees and holds individuals responsible for energy use.		1 to 2
1-10	Install and balance an individually controlled active Heat Recovery Ventilator (HRV) and/or solar/geo fresh air pre-heating for each unit (4 pts.) and/or common area (2 pts.) and/or buildings exhaust air (3 pts.) HRVs exhaust return air out of the home while bringing in fresh air for ventilation. The process used to do this takes advantage of the heat in the exhaust air to preheat the incoming air, saving energy.	5	2 to 9
1-13	Install a district high efficiency domestic hot water heating system, with min. 85% AFUE boiler, or min. 0.67 EF gas storage water heater (3 pts.). Alternatively install an instantaneous "tankless" domestic hot water system in each unit (3 pts.). Hot water heater is direct vented with a closed combustion system, i.e. all air for combustion is taken directly from the outside. A direct system utilizes a coaxial vent pipe (pipe inside a pipe), drawing combustion air in through the outer pipe and exhausting the products of combustion through the inner pipe. A power vented heater exhausts air out of the building via a positive exhaust during main burner operation. Both systems eliminate the need for conventional chimneys or flue systems. A tankless water heater does not have a storage tank to keep heated all day or a pilot light; it burns gas only when you need hot water. This eliminates standby heat loss and its higher efficiency will save on utility costs.	3	3
1-13a	Install high efficiency pump drive motors for service water distribution with variable speed/flow capabilities.	1	1

(new)	Pumps with variable speed drive motors operative more efficiently and help reduce electricity consumption.		
1-14	Hot water storage tanks insulated by manufacturer to a minimum R-15. An insulation blanket will reduce the standby heat loss of the hot water in the tank.		2
1-15	Install solar/air/water/geo (solar fraction >50%) DHW Heating System to supply a minimum of 25% of the peak DHW heating load and 70% of the total DHW energy load. A substantial amount of energy is wasted heating water in a traditional oasis system. Using renewable sources will reduce the consumption of non-renewable energy and also reduce green house gas emissions.		2
1-16	Provide roof area (min. 10% area of total) designed for future solar collector (Make solar ready; with solar thermal or PV conduit installed). A roof area with an appropriate slope allows for the effective addition of future solar air, water heating or photovoltaics.		1
1-17	Install urban wind/photovoltaic electrical generation system which supplies (10%-2 pts., 20%-4 pts., 50%-8 pts., 100%-10 pts.) of design electrical load for the private area(s) of the building. This does not include electric heat. Urban wind and photovoltaics use renewable energy to generate electricity for the home, greatly reducing reliance on non-renewable energy sources and also reducing green house gas emissions.		2 to 10
1-18	Install photovoltaic electrical generation system which supplies 50% (1 pt.) or 100% (2 pts.) of electrical needs for the common areas. This does not include electric heat. Photovoltaics use the sun's energy to generate electricity for the home, greatly reducing reliance on non-renewable energy sources and also reducing green house gas emissions.		1 or 2
1-19	50% (2 pts.) or 100% (4 pts.) of electricity used during construction of the project is generated by wind power or equivalent green power certificate. This practice encourages and promotes the use of renewable, sustainable energy resources as well as reducing green house gas emissions.		2 or 4
1-20	50% (2 pts.) or 100% (4 pts.) of electricity used by building during first year of occupancy is generated by wind power or equivalent green power certificate (prepaid by builder). This practice encourages and promotes the use of renewable, sustainable energy resources as well as reducing green house gas emissions.		2 or 4
1-21	Install a central drain water heat recovery, with a minimum of 1 DWHR unit installed per 4 apartments (2 pt.) or per 2 apartments (3 pts.). Drain water heat recovery units enable an exchange of heat from greywater to the incoming water. This pre-heating reduces the amount of energy required for the hot water tank.		1 to 3
1-22	Fireplaces in all units are electric, or gas with sealed combustion and electronic ignition. Sealed combustion fireplaces involve a double-walled special vent supplied by the manufacturer that normally vents through a sidewall in a horizontal position. The inner surface removes the flue gases and the outer container provides for passage of combustion air.		2
1-23	Install fireplace fan kit to circulate warm air into room on all fireplaces. A fan kit allows the heat generated by a fireplace to be transferred into the home more effectively.		2
1-24	All windows in the project are ENERGY STAR® labeled. ENERGY STAR labeled windows save energy by insulating better than standard windows, making the home more comfortable all year round, reducing outside noise and can result in less condensation forming on the windows in cold weather.	2	2
1-25	All Electric ranges use below 480 kWh/yr based on EnerGuide rating system. EnerGuide label often reduces fuel consumption by approximately 20%.		1
1-26	Refrigerators(1 pt.), dishwashers (1 pt.), clothes washers (1 pt.) and/or combo washer dryer (2 pts.) are all ENERGY STAR® labeled products. An ENERGY STAR label for refrigerators indicates the product has met strict requirements to reduce energy consumption.	4	1 to 4
1-27	All clothes dryers have an energy performance auto sense dry setting which utilizes a humidity sensor for energy efficiency. Sensor saves energy by shutting dryer off when clothes are dry rather than leaving it on for a specified time.	1	1
1-27a (new)	Install ENERGY STAR® labeled bathroom exhaust fans for each unit An ENERGY STAR label for a bathroom exhaust fan indicates the product has met strict requirements to reduce energy consumption.	1	1
1-28	Other building appliances supplied at the time of sale (i.e.. TV, LCDs, security systems) are energy efficient/ENERGY STAR® rated. An ENERGY STAR label indicates the product has met strict requirements to reduce energy consumption.		1
1-29	Exposed Exterior Accessibility Ramps heated with renewable energy or waste heat. This practice encourages and promotes the use of renewable, sustainable energy resources as well as reducing green house gas emissions.		2
1-30	Install properly supported ceiling fan wired rough-in for each unit. Intended to allow for future temperature equalization.		1
1-31	Install interior motion sensor light switches in over 25% (1 pt.), 50% (2 pts.) or 75% (3 pts.) of hallways/corridors and stairwells. Motion sensor switches prevent lights from staying on in rooms that are unoccupied. This helps reduce electricity consumption.	3	1 to 3
1-32	Install lighting with an automation control system capable of unified automation control of lighting loads for all common areas. Lighting and automation control systems prevent lights from staying on in rooms without occupants, thereby reducing electricity consumption.	2	2
1-33	Install automatic lighting system (2 pts.) and/or ventilation system (2 pts.), which are triggered by movement or CO levels, for garages/ parkade. Automating will allow better control and energy efficiency.	4	2 to 4
1-34	Exterior Lighting follows IESNA illuminance requirements for recommended practice manual: Lighting for Exterior Environments. This addresses light pollution issues. The Illuminating Engineering Society of North America can be found online at ies.org and the "Lighting for Exterior Environments" guide (IESNA RP-33-99) can be purchased there.	2	2

1-35	Common Area lit with high efficiency (non-incandescent) lamps. Incandescent light bulbs lose much of their energy as heat rather than light and therefore are not as energy efficient as many of the other options available.	1	1
1-36	Minimum 25% (1 pt.), 50% (2 pts.) or 100% (4 pts.) of light fixtures are L.E.D., fluorescent or have compact fluorescent light bulbs installed in each unit. Fluorescent, compact fluorescent and L.E.D bulbs use 50% less energy than standard bulbs and last up to ten times longer.	4	1, 2 or 4
1-37	Minimum 50% of recessed lights in the entire building use halogen bulbs. Halogen bulbs are slightly more energy efficient, last longer and provide a more effective task light than conventional bulbs.		1
1-38	All EXIT signs are photo luminescent or LED. Photo luminescent exit signs use no power as the light is supplied by a phosphorous chemical that absorbs light until needed and then emits it.	2	2
1-39	Air tight, insulation contact-rated recessed lights are used in all insulated ceilings, or insulated ceilings have no recessed lights. Prevent heated air from exhausting through ceiling. Air tight light fixtures lead to a more airtight, energy efficient home.	1	1
	TOTAL SECTION POINTS (min. 30 required):	56	

II. BUILDING MATERIALS

This section deals with building components that make up the structure of the home. Items involve alternatives to using large dimensional lumber, products with a recycled component, utilizing wood products that come from sustainable managed forests and reducing the overall amount of lumber used.

Minimum 9 (UNDER REVIEW)

2-1	Insulated Concrete Forming system (ICF's) used below grade (2 pts.) and/or above grade (2 pts.). Insulating Concrete Forms (ICFs) are hollow building elements made of plastic foam that are assembled, often like building blocks, into the shape of a building's exterior walls. The ICFs are filled with reinforced concrete to create structural walls. Unlike traditional forms, the ICFs are left in place to provide insulation and a surface for finishes.		2 to 4
2-2	Minimum of R-7.5 insulation installed under entire basement/foundation slab under conditioned space. Insulation installed under the basement slab will reduce the downward heat transfer into the ground below the slab, especially when hydronic in-slab heating is installed. Insulation under the slab can reduce temperature swings in the heated space and respond quicker to new changes in thermostat settings.		2
2-3	Attached garage, parking and/or loading dock overhead doors are insulated with R8 to R12 (1 pt.) or greater than R12 (2 pts.). An insulated overhead garage door will reduce heat loss.		1 or 2
2-4	Attached garage/parking walls and ceiling are insulated to NBC minimum (R12 for walls, R34 for ceilings). A fully insulated garage acts as a buffer zone, reducing heat loss.		1
2-5	Non-solvent based damp proofing (seasonal application). Water based damp proofing products use water as a thinner. Oil based damp proofing give off a number of volatile organic compounds (VOCs) as the solvent evaporates after application. These VOCs can be a strong irritant and can add to air pollution.		1
2-6	Paint Parkade semi gloss white to reduce number of required lighting fixtures. Using high reflectance white paint allows for fewer lights to be used in the parkade area.		1
2-7	Steel studs made from a recycled steel (min. 75%) are used to replace wood studs (min.15%). Recycling steel reduces landfill waste and saves on wood consumption.		1
2-8	Use Optimum Value Engineering (OVE) to reduce wood use in framing: - Exterior and interior wall stud spacing at 24" on-center (2 points) or 19.2" on-center (1 pt.). - Elimination of headers at non-bearing interior and exterior walls. (1 pt.) - Use of header hangers instead of jack studs. (1 pt.) - Elimination of cripples on hung windows. (1 pt.) - Elimination of double plates, use single plates with connectors by lining up roof framing with wall & floor framing (1 pt.) - Use of two stud corner framing with drywall clips or scrap lumber for drywall backing instead of studs. (1 pt.) For more details on Optimum Value Engineering (OVE) framing principles see www.buildingscience.com		1 to 7
2-9	Walls and roof designed as 24" module to reduce waste. A 24" module takes into account the size of sheets of OSB or plywood, stud spacing, carpet size etc.		2
2-10	Use of insulated headers (either manufactured or site built open insulated single headers) with minimum insulation value of R10. Headers can either be insulated on site or can be a pre-manufactured product (often insulated with a foamed plastic).		1
2-11	Install manufactured insulated rim/band joist or build on site by setting back joists to allow rigid insulation filler of a minimum R10. Rim and band joists can either be insulated on site or can be pre-manufactured (often insulated with a foamed plastic).		2
2-12	Structural insulated panel system (SIPS) used for walls (3 pts.) and/or for roofs (2 pts.). Reduces thermal migration and controls air leakage – keeps heating and cooling costs to a minimum compared to a conventionally framed wall.		2 to 5
2-13	All insulation used in the project is third-party certified to contain a minimum recycled content: 40% (1 pt.) or 50% (2 pts.). Recycled content means less landfill waste and raw material use. Also, according the North American Insulation Manufacturer's Association, insulation with recycled content takes less energy to produce than using all raw materials.		1 or 2
2-14	Insulation levels meet or exceed the MNECB (may include Roof-R28, Walls R14, Floor R14).		1

Model New Energy Code minimum, will help to keep heating and cooling costs to a minimum compared to a conventionally framed wall.

2-15	Replace exterior wood sheathing with installed insulating sheathing. Using rigid insulation instead of wood for exterior sheathing conserves forest resources, reduces thermal migration and controls air leakage; it also keeps heating and cooling costs to a minimum compared to a conventional wall.		2
2-16	Deck (1pt.), balcony surfaces (1pt.), and/or veranda structure (1 pt.) made from a third-party certified sustainable harvested wood source or third-party certified sustainable concrete. The issue of sustainable forest management (SFM) is considered to be of such importance by the Canadian forest industry that, in 1993, a group of 22 organizations representing virtually all of the industry came together to form the Canadian Sustainable Forestry Certification Coalition. The coalition registers several different certification standards that each have their strengths and weaknesses. For more information, see www.sfms.com. Concrete produced from aggregates derived from a pit or quarry with a valid reclamation plan approved by Material and Resources Canada or the governing provincial body.		1 to 3
2-17	Dimensional lumber from a third-party certified sustainable harvested source used for floor framing (1 pt.), wall framing (2 pts.), and/or roof framing (1 pt.). Saves old growth forests by using trees from a second generation forest.		1 to 4
2-18	Environmentally engineered flooring system (i.e.. Uses reclaimed/recycled/rapidly renewable wood waste, fly ash concrete (1pt-30%), recycled steel (1pt-90%)). Use of Engineered floor system saves old growth forest by using components from second generation forests and the use of recycled materials.		1
2-19	Environmentally engineered products for all load bearing beams (i.e.. Uses reclaimed/recycled/rapidly renewable wood waste, fly ash concrete (30%), recycled steel (90%)). Engineered products include wood products, concrete and recycled steel.		2
2-20	Environmentally engineered products for all exterior window and door headers (i.e.. Uses reclaimed/recycled/rapidly renewable wood waste, fly ash concrete (30%), recycled steel (90%)). Engineered products include wood products, concrete and recycled steel.		1
2-21	Engineered stud material for 10% of stud wall framing. Use of Engineered lumber product saves old growth forest by using components from second generation forests and recycled materials.		1
2-22	Engineered and/or finger-jointed plate material. Use of recycled materials saves old growth forest.		1
2-23	Finger-jointed studs for 90% of non-structural stud wall framing. Use of recycled materials saves old growth forest.		2
2-25	Recycled content exterior wall sheathing (min. 50% pre or post consumer). Recycled content reduces landfill waste and the use of new materials.		2
2-27	100% Recycled content rainscreen attachment system. Use of recycled content polypropylene, steel or aluminum rainscreen strapping may replace the traditional use of treated wood strapping on rainscreen systems.		2
2-28	Advanced sealing package, non-HCFC expanding foam around window, door openings and all exterior wall penetrations (2 pts.). All sill plates sealed with foam gaskets or a continuous bead of acoustical sealant (1 pt.). Controls air leakage and keeps heating and cooling costs to a minimum.		1 to 3
2-29	Builder has installed a green roof over 50% (3 pts.), 75% (5 pts.) or 100% of total roof area (7 pts.). Green roofs are defined as a system of plants, growing medium, and roof/waterproof membrane that acts as a whole to maximize the available environmental benefits of improving air temperature (reduced heat island effect), air pollution, storm water management and green space. Extensive, or 2-6" thickness typically requires 30-40 lbs/ft² structural support, while intensive roofs (8"+) require significant structural support.		3, 5 or 7
2-30	Builder has incorporated exterior horizontal and/or vertical shading devices for glazing (2 pts.), or exterior operational shading devices (4 pts.). Shading windows from solar heat gain is a key design strategy for passive cooling and to reduce cooling loads on active HVAC systems in multi unit res. Light shelves and/or louvers can be optimized to allow for winter solar gain while reducing overheating during the summer.		2 or 4
2-31	All decks or balconies are thermally broken from the envelope by R10 (1 pt.), or fully separated (3 pts.).		1 or 3
	TOTAL SECTION POINTS (min. 9 required):	**0**	

III. EXTERIOR and INTERIOR FINISHES

This section focuses on the finish materials used both inside and outside of the project. The items listed include using longer lasting products, products with recycled content and products that are harvested from third party certified managed forests.
Minimum 9 (UNDER REVIEW)

3-1	Exterior doors with a minimum of 15% recycled, recovered, or third party sustainably harvested content. Recycled or recovered content ensures we keep our landfill use to a minimum.		1
3-2	All exterior doors manufactured from fiberglass. Fiberglass doors insulate better than steel doors or wood doors, have a longer lifespan, do not warp, twist or crack, and therefore reduce landfill use.		1
3-3	Exterior window frames contain a minimum of 10% recycled, recovered, or third party sustainably harvested content. Reusing materials such as plastics reduces landfill usage, which may not be biodegradable.		1
3-4	Exterior window frames are made from third-party certified sustainable harvested wood.		2

Uses trees from a forest managed system that prevents clear cutting trees and replants trees to replace from which they've been harvested

3-5	Concrete used in home has a minimum supplementary cementing material of 25% (1 pt.) and/or 40% (2 pts.) and is within the scope of proper engineering practices. For every one tonne of Portland cement generated, eighth-tenths of a ton of carbon dioxide is produced. Supplementary cementitious products include fly ash, blast furnace slag as well as metakaolin		1 to 2
3-6	Natural cementitious stone/stucco/brick or fiber cement siding – complete or combination thereof for 100% of exterior cladding. Battens are included in cladding. Strong, long lasting, fireproof material		4
3-7	Exterior trim and finish is made of recycled content (50% min.) material, durable and fire rated; trim (1 pt.) and/or wall finish (4 pts.). Fiber cement fascia and soffit, made with recycled content from internal waste and Portland cement, is a strong, long lasting and fire-proof material		1 to 5
3-8	Exterior trim (3 pts.) and /or siding materials (4 pts.) have recycled and/or recovered-content (min. 50%). Recycled and/or recovered-content trim materials reduce the amount of new material used in production by gluing up bits scraps into large pieces, which conserves natural resources and reduces landfill usage		3 to 4
3-9	Exterior trim materials are manufactured from OSB . Trim materials, manufactured from OSB uses a laminating process to make larger pieces from smaller pieces of strands of wood. The process saves old growth forests by using trees from forest managed systems that prevents clear cutting trees, and replants trees in areas from which they have been harvested		1
3-10	All exterior trim is clad with pre-finished metal (1 pt. over top wood backings, 2 pts. without wood backings). Trim clad with pre-finished metal is a durable long lasting product that requires no maintenance, reduces waste in landfill, due to long life of product		1 to 2
3-11	Deck or balcony surfaces made from recycled materials: 50% (1 pt.), 75% (2 pts.), 100% (3 pts.), and/or from low maintenance materials (2 pts.) (Deck surfaces should not need maintenance of any kind, including painting, for a minimum of 5 years). Substituting recycled material outdoors avoids the use of pressure treated and high mildew resistant wood that may otherwise be harvested from disappearing old growth or rain forests. Material which lasts longer and reduces landfill usage, tends to require little to no maintenance, saving replacement costs and reducing energy spent.		1,2,3 or 5
3-12	Install 25-year (2 pts.), 30-year (3 pts.), 35-year (4 pts.), 40-year (5 pts.), or 50-year (6 pts.) roofing material -- with manufacturer's warranty. A longer warranted roof system saves money in replacement costs, and reduces the use of landfills due to the longevity of the product		2, 3, 4, 5 or 6
3-13	Minimum 25% recycled-content roofing material. Recycled content roof material reduces the use of new resources, and waste in landfills		3
3-13a (new)	Use roofing material with a high solar reflectance index (SRI) of ≥78 (for roof slopes ≤ 2:12), or ≥29 (for roof slopes > 2:12). Roofs with a high solar reflectance help cool the building during the summer by reducing the heat island effect		1
3-14	Interior doors made with recycled or recovered content (min.15%-1 pt.), or from third-party certified sustainably harvested sources (2 pts.). Recycled or recovered content ensures we keep our landfill use to a minimum		1 to 2
3-16	Domestic wood from reused/recovered or re-milled sources – 500 square foot minimum for flooring or all cabinets or all millwork. Reused, recovered, or re-milled resources eliminate the need for new resources, saves energy, transportation costs, and forestry from depletion		6
3-17	All carpet padding made from natural or recycled textile, or tire waste. Natural or recycled-content carpet padding is a good use of reusable resources. Rebond still qualifies		2
3-18	Install carpet that has a minimum of 50% recycled content. Recycled-content carpet is a good use of renewable resources, lessens off gases, and improves air quality		2
3-19	100% recycled or recovered content underlayment or use of concrete finishes to enable the flooring to remain concrete. Concrete finishes such as stamped or stained concrete etc.		1
3-20	Install a minimum of 300 square feet per unit of laminate flooring. Laminate flooring is made up of sustainable raw materials		2
3-21	Bamboo, cork or hardwood flooring used in the project (min. 300 square feet per unit installed). Products must be third-party certified to be from managed forests or from certified sustainable sources. Cork flooring comes from stripping the bark off cork oak, which regenerates itself. The cork tiles are moisture, rot and mold resistant providing a floor that can last over 30 years. Bamboo flooring is a good use of natural resources because it is fast growing, durable and flexible		3
3-22	All ceramic tile installed in the project has a minimum of 25% recycled-content. Reduces landfill usage		2
3-23	MDF casing and baseboard used throughout the project. MDF casing is created from sawdust and glues, utilizing all wood waste to create usable product		1
3-24	Finger-jointed casings, baseboards and jambs used throughout the project. Finger-jointed casing and baseboards maximize wood usage, buy using short pieces of wood glued together to create longer pieces. The process saves old growth forests by using trees from forest managed systems that prevents clear cutting trees, and replants trees in areas from which they have been harvested		1
3-25	Solid hardwood trim from third party certified sustainable harvested sources approved for millwork (2 pts.) and/or cabinets (2 pts.). This process saves old growth forests by using trees from forest managed systems that prevents clear cutting trees, and replants trees in areas from which they have been harvested		2 to 4
3-26	Paints or finishes with minimum of 20% recycled content. Paints or finishes made form recycled content are environmentally friendly because recycling paint reduces the hazardous waste in landfills		1

3-27	Natural granite, concrete, recycled glass or stone countertops in 100% of the kitchens (2 pts.) and all other countertop areas (1 pt.). Natural product is more durable, easy to clean and maintain and is resistant to heat and scoring.		1 to 3
3-28	100% agricultural waste or 100% recycled wood particle board used for shelving. Products such as wheat board are made from agricultural waste.		2
3-29	PVD finish on all door hardware (1 pt.) PVD finish on all faucets (1 pt.). Physical Vapor Disposition (PVD) provides a more durable product, no toxic wastes are produced making it		1 to 2
	TOTAL SECTION POINTS (min. 9 required):	**0**	

IV. INDOOR AIR QUALITY

This section focuses on the quality of the air within the finished project. Products listed here include materials that are low in VOC's, products made from all natural materials as well as various air cleaning and ventilation systems.
Minimum 13 (UNDER REVIEW)

4-1	Install pleated media filter (1 pt.) or an electrostatic air cleaner (2 pts.) or an electronic air cleaner (3 pts.) or a HEPA filtration system (6 pts.) or an ultraviolet air purifier (2 pts.) in conjunction with the HVAC system. Pleated air filters are made with material that has been pleated or folded to provide more surface area. These pleated air filters are often the most efficient of all the media air filter types and are a whole house air filter. By increasing the surface area for collecting dust, airflow through the pleated air filter is less restricted. The electrostatic air cleaner is a permanent washable air filter that traps and removes airborne particles from the air before being circulated through the furnace and into the home. An Electronic Air Cleaner offers a superior level of filtration by using advanced 3-stage filtration technology to trap and filter airborne particles like dust, cat dander and smoke. It works by placing an electric charge on airborne particles and then collecting the charged pollutants like a magnet. The air cleaner cells can be washed in your dishwasher or sink. HEPA stands for High Efficiency Particle Arresting. HEPA filtration offers the highest particulate removal available - 99.97% of particles that pass through the system including dust, cat dander, certain bacteria, pollen, and mold. The	**1**	1,2, 3 or 6
4-2	Install power drum humidifier (1pt.) or a drip type humidifier (2 pts.) in conjunction with the HVAC system. Proper humidity provides a more comfortable living environment at a lower temperature, so you can turn down your thermostat for energy savings. Controlling humidity also means moisturizing dry air to prevent damage to hardwood floors and woodwork. Power drum humidifiers direct the heated air through a water laden evaporator sleeve which absorbs moisture and then returns to the heating system for distribution throughout the home.		2
4-4	Install in-line ventilation fan with programmable timer (separate switch from lighting) in each unit. A programmable timer ensures necessary, regular, automatic mechanical ventilation of the housing unit.		1
4-5	Install passive Heat Recovery Ventilator (HRV-2 pts.) or an active Heat Recovery Ventilator/ Energy Recovery Ventilator (HRV or ERV- 4pts.) in each unit . A Heat Recovery Ventilator (HRV) is an air exchanger that exhausts humid, stale, polluted air out of the housing unit and draws in fresh, clean outdoor air. Invisible pollutants produced by common household substances, plus dust and excess humidity that get trapped in today's houses, can increase your risk of chronic respiratory illness and your home's risk of serious structural damage. A passive HRV unit does not have its own internal fan and is 100% furnace assisted. It works by tying the exhaust side of the unit to the supply air plenum which forces air to exhaust from the housing unit and at the same time, fresh air enters from outside through the unit and into the cold air return duct work. Much like the HRV the ERV recovers heat, it also recuperates the energy trapped in moisture; this greatly improves the overall recovery efficiency. In dry climates and humidified homes the ERV limits the amount of moisture expelled from the home. In humid climates and air conditioned homes, when it is more humid outside than inside, the ERV limits the amount of moisture coming into the housing unit.		2 to 4
4-6	Install thermostat that indicates the need for the air filter to be changed or cleaned. This feature displays filter maintenance reminders on the thermostat. Regular furnace maintenance is required to keep your mechanical equipment running efficiently and problem free as well as ensuring a healthy indoor air environment.		1
4-6 a	Install bathroom exhaust fan controls in each unit using either an occupancy sensor, automatic humidistat controller, automatic timer, or continuously operating exhaust fan.	**1**	1
(new)	Bathroom exhaust fan controls increase occupant comfort by further controlling indoor moisture and odour levels.		
4-6 b	Install timer switches or occupancy sensors on all local exhaust fans outside of individual units (i.e. laundry, recreation, storage areas, etc.).		1
(new)	Operating of local exhaust fans only when necessary using controls helps reduce heat loss of interior air to outside, and also reduces electrical consumption by reducing duration of fan operation.		
4-6 c	For indoor pool areas, install a designated dehumidification system designed by a consulting engineer or qualified contractor to match the water and air temperatures maintained in the area.		1
(new)	Dehumidification systems serving pool areas eliminate the need to exhaust large quantities of indoor air, therefore reducing heat loss.		
4-6 d	For all permanent entryways leading from outdoors, install an entryway system of at least 10 feet in length to captures dirt and particulates (i.e. grates/grills/slotted systems, or roll-out mats that are maintained weekly by a service organization).		2
(new)	Entryway systems that capture dirt and particulates from outdoors help reduce occupants exposure to indoor airborne contaminants.		
4-7	All combustion space and water heating equipment located within building are sealed with no possibility of backdraft. [illegible] especially helpful in well sealed buildings. These types of appliances do not negatively affect indoor air quality.	**3**	3
4-8	Install hardwired carbon monoxide detector within each unit, if combustion spillage susceptible appliances are used in the building. Carbon monoxide detectors warn against high levels of toxic carbon monoxide.		1
4-9	Seal all permanent ductwork upon installation, removing seals once all phases of construction are complete (1 pt.), and/or power vacuum all HVAC ducting prior to occupancy (1 pt.).		2

This process helps eliminate pollutants that drop into the HVAC ducting during the construction process from being circulated into the housing unit.

No.	Item	Points claimed	Points available
4-9 a (new)	Flush out each unit with fresh air for at least 48 hours after all construction phases and prior to occupancy by opening all exterior windows and interior doors and running ventilation system. Flushing out units with fresh air after construction helps reduce occupants' exposure to indoor airborne contaminants from dust, VOCs and other particulates that have accumulated during construction.		2
4-11	All insulation in the project is third-party certified as low or zero formaldehyde. Formaldehyde may cause eye, nose, and throat irritation, headaches, loss of coordination, nausea, damage to liver, kidney, and central nervous system.		2
4-12	Third-party certified low formaldehyde sub floor sheathing. Formaldehyde is colorless gaseous organic compound, water soluble, with a characteristic pungent and stifling smell. Building material low in or free of formaldehyde glues are used in the floor underlayment, cabinetry and elsewhere to protect the indoor air quality.		3
4-13	Third-party certified low formaldehyde underlayment is used in the project. (ANSI A208.1 – 2009 concentration ≤0.21 ppm). Low formaldehyde (phenol) and formaldehyde-free binders (PMDI) are available and becoming more common. FSC certified OSB is becoming more common, reducing environmental impacts on air, water, social quality.		1
4-14	Low formaldehyde particle board/MDF used for cabinets (ANSI A208.2 – 2009 concentration ≤ 0.21 ppm). Uses formaldehyde-free fibreboard can be used in the same way as conventional fibreboard, but with the added caution of greater potential for water damage.		1
4-15	Low formaldehyde particle board/MDF used for shelving (ANSI A208.2 – 2009 concentration ≤ 0.21 ppm).		1
4-16	Zero formaldehyde particle board/MDF used for cabinets (2 pts.) and/or for shelving (2 pts.). Cabinets made from formaldehyde free particleboard or MDF eliminate the Volatile Organic Compounds (VOC) that off gas into the home, resulting in healthier indoor air quality.		2 to 4
4-17	All interior wire shelving is factory powder coated. Vinyl coating on conventional shelving units off gas VOC toxins.		2
4-18	Water-based urethane finishes used on all site-finished wood floors. Water-Based Epoxy: Generally referred to as "epoxy-modified finish," water based epoxy finish differs from its solvent based counterpart in that the epoxy resin is itself the catalyst for an acrylic or urethane resin.		2
4-19	All wood or laminate flooring in the project is factory finished. Installing a pre-finished floor eliminates the time, the dust and the odors associated with the on site sanding and finishing of an unfinished product.		2
4-20	Water-based Lacquer or paints are used on all site built and installed millwork, including doors, casing and baseboards. Water based interior finish products reduces VOC off-gassing which improves indoor air quality.		3
4-21	Interior paints are used that have low VOC content (2 pts.--Standards are < 150 grams/liter of VOCs) and/or interior paint is used that has no VOC's in base paint--prior to tint (3 pts.). Volatile Organic Compounds (VOC) are a class of chemical compounds that can cause short or long-term health problems. A high level of VOCs in paints/finishes off gas and can have detrimental effects to a building's indoor air quality and occupant health. Any paint with VOC's in the range of 5 grams/litre or less can be called "Zero VOC", according to an EPA standard. Some manufacturers may claim "Zero-VOCs", but these paints may still use colorants, biocides and fungicides with some VOC's. Adding a color tint usually brings the VOC level up to 10 grams/liter, which is still quite low.		2 to 5
4-22	Carpet and Rug Institute (CRI) IAQ label on all carpet used in units (2 pts.) and/or on all underlay used in units (1 pt.). To identify carpet products that are truly low VOC, CRI has established a labeling program. The green and white logo displayed on carpet [illegible] an independent laboratory and has met the criteria for very low emissions. The adhesives used to install carpets and the latex rubber by some manufacturers to adhere face fibers to backing materials generate volatile organic compounds (VOCs). Carpets also cover large surfaces within an interior environment and can provide "sinks" for the absorption of VOCs from other sources.		1 to 3
4-23	Natural wool carpet in all living areas. Natural wool carpets are durable and use less secondary backing materials and chemicals. Off gassing is typically caused by the secondary backings and chemical additives in synthetic carpets, for controlling mildew, fungus, fire and rot.		2
4-24	All vinyl sheet flooring is installed with low VOC adhesives (1 pt.--Low VOC = standard is < 60 grams per litre), and/or is replaced by hard surface flooring (2pts.), and/or is replaced by natural linoleum (1pt.). Low VOC adhesive or backing minimizes the amount of VOC off-gassing, therefore improving IAQ.		1 to 4
4-26	All ceramic tiles are installed with low VOC adhesives and plasticizer-free grout. (Low VOC = standard is less than 65 grams per litre). Most adhesives are still based on SB latex, which releases large quantities of volatile organic compounds (VOCs). The volatile solvents are used to emulsify (or liquefy) the resin that acts as the bonding agent. However, water-based adhesives emit far less VOCs than their conventional solvent based counterparts. There are three types of low-VOC formulas: water-based (latex and acrylics); reactive (silicone and polyurethane); and exempt solvent-based (VOC compliant solvents). While all three technologies yield low- or zero-VOC caulks, sealants, and adhesives, their performance is slightly different.		1
4-28	All carpet in units are replaced by hard surface flooring. Hard surface flooring is generally more durable and improves the IAQ within a building. Carpets collect dust, dust mites and other allergens which when disturbed become airborne particulates, directly affecting the health of the occupants.		4

TOTAL SECTION POINTS (min. 13 required): 5

V. WASTE MANAGEMENT

This section deals with the handling of waste materials on the construction site and encourages recycling.
Minimum 6 (UNDER REVIEW)

5-1	Comprehensive recycling program for building site including education, site signage and bins. A comprehensive recycling program that is strictly followed significantly reduces the amount of waste ending up in landfill. Currently it is estimated that up to 50% of landfill waste is construction related.		2
5-2	Collection of waste materials from site by a waste management company that is a current member of a provincial recycling council or equivalent association and verifies that a minimum of 10% of the materials collected from the construction site have been recycled. Not only does this reduce overall waste of product, it ensures that as much product as possible is being utilized for the production of future resources.		4
5-3	Suppliers and Trades recycle their own waste. (1 pt. per trade, max. 4 pts.). Trades being responsible for recycling and removal of waste not only reduces landfill waste, but also promotes a cleaner and safer working environment.		1 to 4
5-4	Minimum 25% (2 pts.) or 50% (4 pts.) by weight of waste materials collected from construction site is diverted from waste stream. Trades being responsible for recycling and removal of waste not only reduces landfill waste, but also promotes a cleaner and safer working environment.		2 or 4
5-5	Use of recycled materials derived from local construction sites (1 pt. for each different product used, max of 3 pts.). Products recycled from the construction site, such as mulched wood cut offs or mulched gypsum are often useable as either clay/ soil water retention additives or for organic burning.		1 to 3
5-6	Trees and natural features on site protected during construction. The protection of existing trees and other natural features such as streams, ponds and other vegetation reduces environmental impact and ecosystem impact. Many of these features can be protected simply by following good waste management procedures.		1
5-7	Shared transportation benefits: provide one parking stall for a car-sharing vehicle (1 pt.), and/or a car sharing vehicle as one component of condominium association (3 pts.) and/or bicycle storage on site (1 pt.). Providing a vehicle to share allows occupants to live without their own vehicle and using the shared vehicle when needed. Provision of covered storage facilities for securing bicycles on site encourages the use of alternative transportation.		1 to 5
5-8	Metal or engineered durable form systems used for concrete foundation walls. The use of metal forming systems reduces the requirement of lumber, a limited resource.		1
5-9	Reusable bracing is used for framing. The use of reusable bracing for framing reduces the requirement of lumber, a limited resource.		1
5-10	Install built-in recycling center with two or more bins in each unit (2 pts.) and/or provide composter to each unit (1 additional pt.). By installing built-in recycling centers, which can be as simple as labeled containers (paper, cardboard, cans, plastics etc.). Occupants are more likely to utilize the pre-existing facilities and thus contribute to the reduction in landfill waste. Providing a composter promotes a reduction in wastes heading to the landfill by giving occupants an option for organic waste such as food leftovers.		2 to 3
5-11	Provide a central recycling center for the housing project (1 pt.--min. of paper, glass and tin recycling) and/or install trash compactor for unit or building (1 pt.). Providing a recycling center will promote recycling among the occupants. Installing a trash compactor, while not actually reducing the mass of waste, does help by reducing it's volume, which over time can make a significant difference to landfill levels.		1 to 2
	TOTAL SECTION POINTS (min. 6 required):	**0**	

VI. WATER CONSERVATION

This section encourages a reduction in the amount of water used in the home or in individual units within multi story buildings.
Minimum 6 (UNDER REVIEW)

6-1	CSA approved single flush toilet averaging 1.6 GPF or less installed in all bathrooms. Lower flow toilets can save a substantial amount of water over time.	**2**	2
6-2	Install a dual flush or 1.2 GPF toilet in one or more bathrooms in each unit (2 pts. for one bathroom, 3 pts. for all) These toilets offer a choice between two water levels for every flush: 1.6 GPF (6 LPF) or 0.8 GPF (3 LPF).	**3**	2 or 3
6-3	Install waterless urinals in men's public facilities. The Average public urinal uses approximately 400 litres of water/day or 3.8+ litres per flush. Waterless urinals are more sanitary, reduce maintenance, installation costs and are only marginally more expensive to purchase.		1
6-4	Insulate the first three feet of the water lines on the hot water tank with flexible pipe insulation where units contain independent DHW system (1 pt.) and/or insulate all hot water lines to all locations (2 pts.). Minimizing the heat loss in the water line will decrease the initial water wasted by delivering hot water faster. Minimizing the heat loss in the water line will decrease the initial water wasted by delivering hot water faster.		1
6-5	Install hot water recirculation line. Having the hot water re-circulated from the hot water source to the fixture points will decrease the initial water wasted by delivery the hot water faster.	**3**	3
6-6	Install low flow faucet aerators on all bathroom and kitchen sinks (1 pt.) and/or install hands free lavatory or kitchen faucets in each unit (4 pts.). Low flow faucets may be included if flow rate is a maximum of 3.8 L/ minute on bathroom sinks and/or 6.8 L/minute on kitchen sinks. Battery powered electronic sensor minimizes the spread of germs and saves water.	**1**	1 to 5

6-7	Supply front loading clothes washer in each unit. Front loading clothes washers conserve water by design as they are only required to fill the washing compartment 1/3 full to effectively wash clothes. Additionally they use up to 75% less environmentally damaging laundry detergent AND they also conserve electrical or gas energy by significantly reducing drying time for clothes with a more thorough spin cycle.	3	3
6-8	Install water saving dishwasher that uses less than 26.0 L/water per load in each unit. Water saving dishwasher uses technology to reduce both the amount of water required as well as electrical energy requirements. The EnerGuide appliance directory put out by Natural Resources Canada has a comprehensive listing of all manufacturers and models of dishwashers and other appliances with water usage and energy efficiency ratings.	1	1
6-9	Install permeable paving materials for driveways and walkways (min. 70% of hardscape area). Permeable paving materials allow rainwater to flow back into the ground instead of into storm sewers.		1
6-9 a (new)	Design all impermeable hardscape surfaces to direct rainwater to an on-site infiltration feature (i.e. vegetated swale, rain-garden, cistern, etc.) Designing for on-site infiltration allows rainwater to flow back into the ground instead of into storm sewers.		1
6-10	Install a water meter in every unit. Installing a water meter in each unit makes the occupants more aware of and responsible for water use.		3
6-11	Install Efficient Irrigation Technology that has head-to-head coverage (1 pt.), a central shut-off valve (1 pt.), a sub meter (1 pt.), uses drip irrigation for at least 50% of planting bed area (1 pts.), has a pressure regulating device to reduce (1 pt.), high efficiency nozzles with a distribution uniformity of ≥ 0.7 (1pt.), and/or motion sensor/rain delay controller (1 pt.). Max. 3 points can be claimed. Water efficient irrigation systems that include sensors, regulators, micro drip feed systems etc. help reduce the demand on the municipal water system.		1 to 3
6-12	Provide a list of drought tolerant plants and a copy of the local municipality water usage guide to building owner with closing package. Most municipalities provide a guide that gives the water requirements of various plants and grasses. When properly designed, landscaping choices can significantly contribute to water conservation.		1
6-13	Reduce lawn/turf to 50% of landscaped area. Lawns require a large amount of water to maintain. By reducing the amount of lawn, water use can also be reduced.		1
6-14	Builder captures rainwater for use in atrium, patio garden feature, landscaping and/or indoor water use. Using rainwater helps with stormwater management and also reduces demand on the municipal water system.		1
6-15	Greywater is collected, treated and reused throughout the project for landscaping and/or indoor water use. Reusing greywater helps reduce demand on the municipal water system.		5
	TOTAL SECTION POINTS (min. 6 required):	**13**	

VII. BUSINESS PRATICE

This section deals more with manufacturers and builders office and business practices
Minimum 8 (UNDER REVIEW)

7-1	Products used for the project are manufactured within 800 km. (1 pt. for each product to a max. of 5 products). Products made closer to the location of use will have less embodied energy. Basically this means that the shorter the transportation distance the less energy used in moving the product. Less energy used means fewer emissions.		1 to 5
7-2	Builder provides BUILT GREEN building owner manual and/or educational walkthrough and/or Green systems manual for building managers. Building owner education is an important component to any high performance building. If the technology is not used correctly, it will diminish the efficiency.		2
7-3	Builders office and show homes purchase a minimum of 50% (1 pt.) up to 100% (2 pts.) solar, wind or renewable energy. Wind Energy is a cleaner way to provide energy. Lower emissions benefit the environment.		1 to 2
7-4	Manufacturers and/or suppliers purchase 50% or more solar, wind or renewable electricity. Wind Energy is a cleaner way to provide energy. Lower emissions benefit the environment.		1
7-5	Builder supplies a minimum of 8" of topsoil as finish grading throughout site. Compared to subsoil materials, topsoils usually have higher aggregate stability, lower bulk density, and more favourable pore size distributions which leads to higher hydraulic conductivity, water-holding capacity, and aeration porosity.		2
7-6	Development site provides community amenity space for not for profit community services. Floor area made available to the City for not-for-profit community use. (i.e. Assemblies, offices, educational facilities etc.).		2
7-7	Development site provides for Publicly Accessible Private Space . i.e.: Atriums, open courtyards etc. which are part of the residential project but have links to/for public access.		1
7-8	Development includes a diversity of housing types including 20% live/work units (2pts.), 25% mixed use (2 pts.) facilities and/or 20% with separate basement suite units (2pts.) This type of development encourages neighborhoods where people can live, work, shop etc. without having to drive.		2 to 6
7-9	Builder has written environmental policy which defines their commitment (which must include an office recycling program and energy efficient lighting). A statement of commitment helps to emphasize priority and ultimately define a corporate culture.		1
7-10	Manufacturer and/or supplier has a written environmental policy which defines their commitment (this must include an office recycling program and energy efficient lighting). (1 pt. per supplier/manufacturer, max. of 2 pts.). Doing business with others committed to the environment helps to promote the ideals of being earth friendly.		1 to 2

No.	Item	Points
7-11	Builder has written an environmental policy which prioritizes milestones for future net zero housing developments. The next step toward easing our reliance on non-renewable energy is net zero housing. Net zero houses produce as much energy as they consume using renewable sources such as solar, thermal, wind, geoexchange etc.	1
7-12	Make provision Truck Management Plan, to avoid high congestion areas during construction. A truck management plan would minimize the impact of trucks in the construction neighborhood. Features include scheduled arrivals/departures, reuse of materials to reduce truck traffic, communication with community and specific hours of work designated.	1
7-13	Delivery Area wheel washed/ treated during construction. Wheel wash area will cut down on dust pollution in the neighborhoods where construction is taking place.	1
7-14	Builder's company vehicles are hybrid or bio-diesel vehicles (1 pt. per vehicle to max. of 3 pts.). A commitment to the environment shouldn't stop at construction. Using a hybrid vehicle produces lower harmful emissions. Diesel construction vehicles converted to bio-diesel reduce fuel consumption by up to 75%	1
7-15	Builder uses radiantly supplied cold weather construction practice. Propane heaters under tarps are often inefficient; this results in a great deal of wasted energy while reducing the quality of workmanship. Alternatives may include manufacturing components indoors.	1
7-16	Environmental certification for builder's place of business (building, office etc.). Many commercial buildings have been rated with various energy efficiency standards. Does your company work within an ENERGY STAR or LEED certified office building?	3
7-17	Builder agrees to construct and label a min. of 50% of all projects to the BUILT GREEN standard per calendar year. (3 pts. for 50% or 5 pts. for 100%). A commitment to the environment from the builder can expand energy efficiency exposure to a large number of home owners and other home builders. Every BUILT GREEN project that is built is a reduction in material use, a reduction of green house gas emissions, less waste and better efficiency.	3 or 5
7-18	Contracted trades and/or suppliers have successfully taken BUILT GREEN Builder Training. (1 pt. per company, max 3 pts.). Using trades or suppliers who have successfully taken Built Green Builder Training means that there is common understanding about what needs to be done and how it will be accomplished, streamlining the process.	1 to 3

TOTAL SECTION POINTS (min. 8 required):	**0**
TOTAL CHECKLIST POINTS	**74**

AGENDA INFORMATION		Dept. Manager	GM/ Director	CAO
☐ Information Report	Date:			

The District of North Vancouver
REPORT TO COUNCIL

June 3, 2014
File: 3060-20/20.14

AUTHOR: Doug Allan, Community Planner

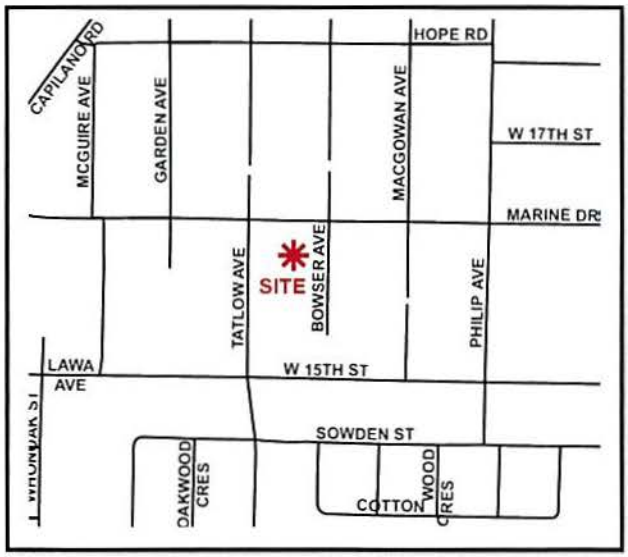
SUBJECT: **PUBLIC INFORMATION MEETING - DETAILED APPLICATION FOR A 3 STOREY APARTMENT PROJECT AT 1591 BOWSER AVENUE**

RECOMMENDATION:

It is recommended that this report be received for information.

SUMMARY:

Douglas R. Johnson, Architect, on behalf of the owner, London Meridian Properties Inc., is holding a facilitated public information meeting on a Detailed Application for a 3 storey apartment project at 1591 Bowser Avenue.



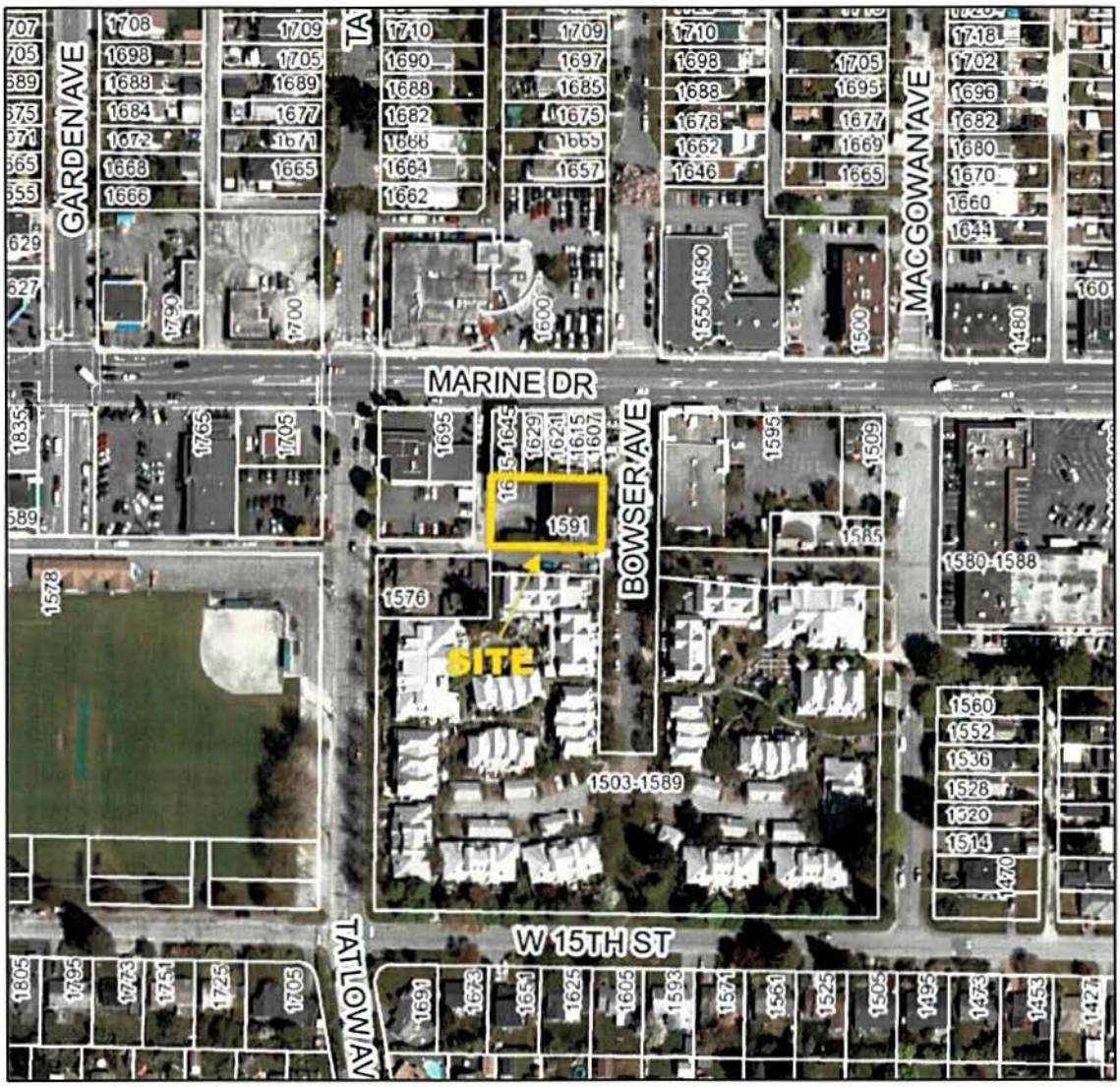
PUBLIC INFORMATION MEETING DETAILS:

Date:	June 19, 2014
Time:	6:30p.m. - 8:30p.m. Presentation: 7:15p.m.
Location:	Lower Floor, 1591 Bowser Avenue

SITE AND SURROUNDING AREA:

The development site consists of one commercial property currently occupied by a 2½ storey office building, located on the west side of Bowser Avenue at the lane, south of Marine Drive as shown on the following aerial photograph.

Surrounding development consists of developed commercial lots to the north; a car dealership to the west, a retail building to the east and a townhouse project to the south. The site and surrounding commercial properties are zoned C9 Marine Drive Commercial Zone and the townhouses are zoned RM3.



OCP CONTEXT:

The site is designated in the Official Community Plan as Commercial Residential Mixed Use Level 1 which is *'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.'*.

The OCP also designates the property as Development Permit Areas for:

- the regulation of the Form and Character of Commercial and Multi-Family Development; and
- Energy and Water Conservation and Greenhouse Gas Emission Reduction.

The application will be reviewed against the applicable general design guidelines and the Marine Drive Design Guidelines in the OCP.

PROJECT DESCRIPTION:

As submitted, the proposal involves the development of a 3 storey, 16 unit apartment building with underground parking. The building is approximately 18,188ft.^{2} in size and is 10.36m (34ft.) in height.

The residential units consist of 5 studios; 3 one bedroom units; 6 two bedroom units and 2 three bedroom units which range in size from 645ft.^{2} to 1496ft.^{2} in size. The applicant proposes that the 6 main floor units could be developed as live/work units. The density (FSR), as proposed, is 1.65.

A landscaped courtyard is provided at grade on the west side of the site.

The Zoning Bylaw requires a total of 32 parking spaces, inclusive of visitor parking and the project as submitted, includes 23 spaces underground spaces, including visitor parking (1.43 spaces/unit), necessitating consideration of a 9 space variance. In support of the variance, the applicant has provided a parking study but a trip reduction strategy will be required if the project is to proceed. In addition, the project includes 7 bicycle parking spaces in a storage room in the underground parkade for the project residents. Access to the underground parking is provided off the lane to the west.

The following images illustrate the east and south elevations, respectively.

The following image is a 3 dimensional view of the south and east elevations.

PUBLIC NOTIFICATION:

Notification of the meeting is being sent to area residents within a minimum of 100m of the site and the Norgate Park Community Association. A sign will be erected on the site and a copy of the meeting notification package and site sign are attached.

Respectfully submitted,

Doug Allan,
Community Planner

Attachments:

A - Public Information Meeting Brochure
B - Fact/Comment Sheet

C - Public Information Meeting Sign

Respectfully submitted,

Doug Allan
Community Planner

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 & Environment	____	❑ ITS	____	❑ Recreation Com.	____
❑ Economic Development	____	❑ Solicitor	____	❑ Museum & Arch.	____
❑ Human resources	____	❑ GIS	____	❑ Other:	____

PUBLIC INFORMATION MEETING

Proposal:
3 Storey Apartment Project

PROPOSED*

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

Thursday, June 19, 2014
6:30 pm - 8:30 pm
(Presentation at 7:15 pm)

Lower Floor
1591 Bowser Avenue

Contact: Douglas R. Johnson, Architect
604-998-3381

DNV Staff: 604-990-2357

www.dnv.org

While the building is a 3 storey structure, the 3rd floor steps back from the second floor on the east and south elevations. The building is intended to act as a transition between the future redevelopment on Marine Drive and the townhouses to the south.

Public Information Meeting

A redevelopment is being proposed for 1591 Bowser Avenue to construct a three storey residential building. You are invited to a meeting to discuss the project.

Where:

Lower Floor 1591 Bowser Avenue,
North Vancouver BC

When:

Date: Thursday June 19th
Time: 6:30 PM

The Meeting Agenda:

6:30 - 7:00 PM Open House

7:00 - 7:30 PM Presentation by Consultant Team

7:30 - 8:30 PM Question and Answer Session

NOTE: This is not a Public Hearing.

District Council will formally consider the proposal at a future date. We welcome the community's feedback. Please contact us to learn more about the proposal.

The application proposes to rezone the site from C9 Marine Drive Commercial Zoning to a Comprehensive Development zone to permit a 16 – unit apartment building on three floors, The units range in size from 645 square feet to 1495 square feet. Parking is provided in an underground parking structure.

Information packages are being distributed to residents within a 100 meter radius of the site.

For more information please call

Doug Johnson - at 604-990-2357

Doug Allan – The Community Planning Dept. at 604-990-2357

The Proposal:

London Meridian Properties Inc. proposes to redevelop the site at 1591 Bowser Avenue to allow the construction of a 3 storey apartment building with underground parking.

Implementation will require rezoning to a new Comprehensive Development Zone and issuance of a Development Permit.

Summary

The project consists of:

- A 3 storey building with 16 apartment units offering a mix of suite sizes, ranging between 645 and 1496 sq. ft. in size.
- Main floor units which could be used for live/work purposes.
- A Floor Space Ratio (FSR) of 1.65 in keeping with the Official Community Plan.
- 23 underground parking spaces with access from the west lane, which will require consideration of a 9 space variance.
- High quality materials including brick, hardi-siding and architectural metal.
- A design based on BuiltGreen® 'Gold' equivalency.

London Meridian Properties: 1591 Bowser Development Application

Public Input Meeting Summary Report

Event Date:	June 19, 2014
Time:	6:30pm – 8:30pm
Location:	1591 Bowser Avenue
Attendance:	12 members of the public
Comment Forms:	1 comment sheet and 6 emails were submitted.
Meeting Purpose:	1) To present development application materials to neighbours 2) To provide an opportunity for the public to ask questions about the development 3) To provide an opportunity for neighbours to comment on the proposal.

Notification:

Invitation Brochures

Invitations with fact and comment sheets were delivered to residents within 100 metres of the site.

Site Sign

A sign was erected on the site on the Bowser Avenue frontage to notify neighbours of the meeting.

Newspaper Ad

A newspaper ad was placed in the North Shore News on June 8 and June 11. Copies of the ads are included in Appendix A: Notification.

Attendance:

12 members of the public attended and signed in for the meeting. A copy of the sign-in sheet is provided in Appendix B.

The following District staff and project team members were in attendance:

District of North Vancouver:

- Doug Allan, Development Planner, District of North Vancouver

Project Team:

- Doug Johnson, MAIBC, Douglas R. Johnson Architect, Ltd.
- Karim Virani, Virani Real Estate Advisors
- Daniel Fung, Bunt & Associates

Facilitator:

- Steven Petersson, Petersson Planning Consulting

Most of the participants indicated that they lived in condominium buildings south and south-east of the site.

Overview:
The Public Information Meeting was designed to provide several methods for the public to engage in the process.

The evening began with an Open House, which lasted approximately 40 minutes, where participants could browse display boards and have informal discussion with the architect and transportation consultant.

The Open House was followed by a fifteen minute presentation by the architect and transportation consultant.

The presentation was followed by a thirty-minute dialogue that provided the public with an opportunity to ask questions and discuss the project. The facilitator noted public comments and questions on flip chart paper on the wall. Since most participants were engaged in the informal dialogue during the Open House, the question and answer session after the presentation was brief.

The key themes of the evening were parking and access.

Public Dialogue:
(Q = Question, A = Answer, C=Comment, and the number is to track the dialogue)

Q1 Will the building have restrictions on children or pets?
A1 No.

Q2 Will rentals be allowed?
A2 Yes. For new buildings, the DNV requires developers to enter a Housing Agreement that prohibits future strata councils from limiting rental units in the building.

Q3 Are those full balconies or "Romeo and Juliette" balconies?
A3 Those are full balconies, as per DNV standards.

Q4 What will the roof be like?
A4 It will be a flat roof with overhangs and stained cedar soffits.

Q5 If approved, how long will it take to construct?
A5 Approximately one year.

Q6 What is the building coverage?
A6 The building coverage is approximately 65%. The C-9 zone permits 85% total site coverage but does not regulate building coverage separately.

Q7 How much parking is proposed and required?
A7 According to the DNV Zoning Bylaw, 32 parking stalls are required for the 16 residential units. The proposal is to provide 23 secured underground parking stalls (including 4 designated visitor stalls).

C8 The ceiling height for the underground parking might be too short to allow high vehicles. Some parking stalls should be provided on the surface.
A8 The small site makes provision of surface parking stalls very challenging.

C9 The big issue on this project is the amount of parking.
A9 New parking rules are being drafted by the DNV, which will result in adjustments in required parking in the various town and village centres, including Marine Drive. On the basis of those rules, parking for apartment projects adjacent to Marine drive could be reduced to 1.1 spaces per unit plus 0.1 spaces per unit for visitor parking, for an overall rate of 1.2 spaces per unit. As submitted, this project provides parking on the basis of 1.43 spaces per unit, including visitor parking.

Q10 Could some of the visitor parking stalls be converted to residential parking stalls?
A10 For this project, the DNV requires four visitor parking stalls. If permitted by the DNV, we could consider converting the visitor stalls into residential stalls.

Q11 Does providing charging stations for electric vehicles really reduce demand for parking?
A11 The empirical studies demonstrate that this is so.

C12 How will this project affect adjacent property values?
A12 It is very unlikely that it will decrease property values. It will probably increase property values.

Q13 Are parking studies done on buildings after they have been constructed, to see how much parking is actually used and required? Has such a study been conducted on Marine Drive?
A13 Bunt & Associates does this type of research on projects they have worked on. Bunt's recommendations are based, in part, upon this research.

Q14 Why is parking access located on the west lane? This could have implications for adjacent development.
A14 Access to underground parking is located at the low part of the site.

C15 The access to parking as proposed would result in drivers taking a circuitous route to the parkade. Parking access could be provided on Bowser Avenue.
A15 Locating the parking access on Bowser Avenue would put the entrance to the garage too close to the lane and could present a safety issue.

C16 The lane is narrow for the volume of traffic.
A16 The south lane is 9m wide, which is 50% wider than the standard 6m lane.

C17 This project does not adhere to the vision for the C-9 zone, which contemplated a mid-block east-west lane.
A17 There is a mid-block lane with a jog in it. The lane will function similarly to today.

C18 It is important to preserve east-west lane access. Perhaps a lane between Philip and MacGuire could have speed bumps installed.

C19 Traffic congestion on Marine Drive is an issue.

Q20 Where will trades park? Where will moving vans and large vehicles park?
A20 Increasing underground garage height affects building height, excavation depth and the grade of the access ramp.

Comment Sheet and Email Summary
One comment sheet and 6 emails were submitted to the DNV after the meeting. Copies of the correspondence are attached as an Appendix C.

Below is a summary of the key themes communicated via comment sheets and emails after the meeting. They are clustered according to topic.

Architecture

- During the presentation, I did not see or hear anything that will cause major problems for Norgate or Illahee. This is the first time I remember a recently proposed Marine Drive development actually being lower than the District's guidelines and not applying for a height variance. We hope this is the start of a trend to observe the established OCP maximum height restriction. Although the drawings of the building have the District-approved flat roof and square appearance for the Marine Drive corridor, it seems to be less looming or overwhelming than the recent buildings. A greater variety of architecture and heights, such as the Village at Park Royal, is preferable to the sameness of all flat roofs. The material and colour choice seems to be good and is similar enough to those chosen for Illahee to fit into the neighbourhood.
- I am very pleased the proposed building has been brought down to three floors.

C-9 Zone: Lot Size & Density

- What was the District Planning department's intent when they came up with the 1 FSR and 1.75 FSR depending on the size of the lot [in the C-9 Zone]? I would guess the intent was to give incentive to have the smaller lots consolidated into a larger lot to permit the higher FSR. The project as proposed would have a severe impact on any future development of the properties to the North on Marine Drive as that property will have a commercial component.
- We request that any new development meet the current C-9 Zone put in place for this and the other properties on this complete block from Tatlow to Bowser so that a proper development that is fair to all the current owners and an enhancement to Marine Drive can be built; or revisit the C-9 Zone with the adjacent Community Association to consider revisions to the zone.
- Redevelopment of the entire block may be preferable for this area, as the applicant's building is arguably in better condition than the others.
- This 3 storey apartment building would work well as an "infill" type of project.
- If this proposal goes ahead, it will create a problem for future development of this block (Tatlow to Bowser). It will mean another small building, north, on Marine Drive.

Land Use

- As the current 1591 Bowser property is all commercial office space, it would appear not very practical to reduce the commercial office space available in the District at this time and converting this building to all residential with the explosion of all the other new residential properties in this area. We know of other current buildings currently with 100% office space in the Marine Drive corridor that are already approved to be redeveloped into 100% residential use.

Parking

- Parking is an issue.
- Consider resident parking only in the alleys
- Lots of cars park in the alley from MacGowan to Tatlow to catch the bus downtown
- I park in the back alley between MacGowan and Bowser
- The amount of parking spaces and enough room for service vehicles, moving trucks, etc. seems to be an issue. A related issue is yet another application for a variance to the OCP, in this case, nine parking spaces.
- I am not in favour of the 9 space parking variance the applicant is asking the DNV to consider. I quote from the information package provided: "Main floor units which could be used for live/work purposes." Not only is the developer asking for a variance on the number of parking spaces, they are stating that businesses are to be run within the units with decreased parking for clients of these businesses let alone the residents of the building. Regardless of the Metro Van parking study, people still drive cars.
- I question the applicability of the Metro Vancouver Apartment Parking Survey to this proposal, and note that the 15 communities surveyed did not include either West Vancouver or the DNV. Further, the study found that "Apartment renters generally have lower parking demands than do owners" and "Vehicle holdings and parking demand for apartment renters are much lower than for owners." Presumably the inclusion of rental units in the survey skewed the results insofar as their applicability to the subject proposal is concerned.
- I would strongly urge, given that the current supply of on-street parking does not meet the demand, that the requested variance in the required number of parking spaces for the building proposed for 1591 Bowser be denied.
- I do not think that there should be a variance of nine parking spaces. This is a very busy area and we do not need more people parking all day on the lane or on Bowser. The traffic consultant said that there was no problem with the bus service. He has not been at the bus stop around 3pm on a Saturday afternoon when the buses are full and go sailing by without stopping. I did not believe that his presentation was credible with the actual availability of buses.

Traffic

- Back lanes are very busy. Cars going west turn onto Philips and head down the alley to avoid bridge back-up traffic.
- Speeding down the alley – consider speed bumps in alleys
- Bowser has too much non-local traffic
- Is the north-south lane behind the proposed development necessary any longer, or should it be decommissioned as was the "highway" on the Save On Foods site? At present it seems mainly to be used for parking alongside the Mitsubishi dealership. Sale of the lane may generate extra

funds for the DNV which can then be used for local benefit. Otherwise, it is literally a waste of space.

- Should vehicles be going either onto, or turning off Marine Drive from this narrow lane, when they can more safely use Bewicke? Exiting onto Marine Drive mid-block is dangerous for both pedestrians and vehicles due to visibility. The proposed development could be redesigned, and an easier and safer parking access from Bowser or the lane to the south should be created. This should have the benefit of reducing vehicle accidents for residents, especially if they have children.
- Both architects told me that the number of cars on the road has stayed the same for the last ten years. If this is true, then why is Marine Drive so congested and North Shore residents so angry about it?
- Concern about increased traffic volumes in the east-west alley south of the development site
- The east-west alley south of the development must remain open at all times if construction is to occur and thereafter. There is no traffic light at the intersection of Bowser and Marine. Impossible to turn left and difficult to turn right due to lack of visibility due to parked cars on Marine in front of Capilano glass. Drivers are forced to use the alley (east and west) to access a light to cross or proceed along Marine Drive.
- I have a concern about the statement that the lane will take on a pedestrian character. While at first blush this is an attractive notion, it does raise a safety issue.
- Consider erecting stop signs in the lane where it intersects with Bowser.
- The lane is very important for getting to the Tatlow or Garden light to have access to Marine Drive. I do not think that there should be any interference with this very used access.
- There will be problems with access to the lane (from Bowser to Tatlow) with any construction and that will be very difficult.
- I don't think it is good planning to build a lot of smaller projects in place of a larger project. More buildings mean more entrances and exits for underground parking andor surface parking and resulting traffic circulation problems.

Conclusion

The purpose of this public meeting was to present to neighbours the proposed development concept, and provide an opportunity for neighbours to ask clarifying questions and comment on the proposal. 12 people signed in and participated in the meeting. Participants asked the development team and District planner a variety of specific questions. Most participants indicated that they lived in adjacent multi-family buildings south and south-east of the subject site.

The key themes raised at the meeting were parking and access. Residents expressed that they wish to see the east-west lane connectivity preserved. They also expressed concern about traffic volumes on Marine Drive and the proposed parking supply. The meeting length and format was sufficient to provide all participants an opportunity to learn more, ask questions, and make the comments they wished to provide that evening.

Appendix A: Notification

Newspaper Advertisement

Public Information Meeting

A redevelopment is being proposed for 1591 Bowser Avenue to construct a three storey residential building. You are invited to a meeting to discuss the project.

Date : Thursday June 19th
Time : 6:30 PM
Location of meeting : Lower Floor 1591 Bowser Avenue, North Vancouver BC

The applicant proposes to rezone the site from C9 commercial zoning to a comprehensive development zone to permit a 16-unit apartment building on three floors. The units range in size from 645 square feet to 1495 square feet. Parking is provided in an underground parking structure.

Information packages are being distributed to residents within a 100 meter radius of the site. If you would like to receive a copy or if you would like more information contact Doug Allan of the Community Planning Department at 604-990-2357 or Doug Johnson of Douglas R. Johnson Architect Ltd. at 604-998-3381 or bring your questions and comments to the meeting.

***This is not a Public Hearing. DNV Council will receive a report from staff on issues raised at the meeting and will formally consider the proposal at a later date.**

TASTE

Mezcal centre-stage at cocktail competition

Over the years, I have learned to treat certain spirits (from single malt whisky to absinthe and more) with a degree of respect.

It was only a matter of time before mezcal was added to the list, a fact reconfirmed at last week's Vancouver International Tequila Expo.

Evidence of the surge in interest in tequila in general and in mezcal specifically was confirmed by the near sell-out crowd who attended, and who were, as far I could tell, from just about every walk of life.

The tequila sip-in has been a success since day one. But I suspect it was this year's focus on mezcal that helped propel things to the next level. At the heart of the tasting room, a dedicated island of producers was tantamount to a mezcal lover's paradise, with a score of offerings on hand.

This year's cocktail competition also highlighted mezcal, with 12 of Vancouver's top bartenders offering their take on this sometimes challenging elixir, which handled with the respect it deserves (beyond just sipping it neat) can materialize into some pretty impressive concoctions. Cocktail competitions run the full gamut, from persnickety scored international contests (where you'd better be wearing not just a jacket, but the right jacket) to more laid-back shake-downs, where a little attitude and in-your-face originality can pay dividends.

Vancouver's Tequila Expo falls very much into the latter category, with a wide-ranging parade of characters and concoctions on display. Buoyed by unmistakable camaraderie and good-natured bantering between competitors, there's almost a circus atmosphere that belies the serious business at hand: a cut-throat, winner-takes-all contest to see who'll head off on an all-expenses paid tour of Oaxaca, from where most mezcal comes.

Tim Pawsey
Notable Potables

The spirit used for this contest was the eminently sippable, smooth and smoky (and, as it turned out, very cocktail friendly) Peloton de la Muerte Mezcal Joven, made from 100 per cent Agave Espadin for Mezcales de Leyenda. (It's worth tracking down as an intro, for a relatively affordable $49.95, before you "graduate" to the other Leyenda Mezcales.)

Too bad there's neither time nor space to mention them all here, but suffice it to say there was no shortage of talent. Whether you find yourself in Bambudda, The Shameful Tikki Room, Pidgin or at The Blackbird, you'll have no problem tracking down a respectable mezcal-based offering.

Popping out from the crowd (and off for the trip of a lifetime) was Kevin Brownlee from West Restaurant. His thoughtfully hatched "La Malinche" (named after the prominent 16th Nahua/Aztec intermediary) combined elements (such as strawberry, black pepper liqueur, lime, jalepeno, and cacao-infused reposado Tequila) that performed an impressive dance of heat and sweet.

Vancouver Rowing Club's Jason Laidlow grabbed second place with his "Paloma Picasso," which married bright flavours of red grapefruit juice with the richness and depth of 30-year-old sherry, underpinned by the mezcal (complete with edible silver foil garnish, a nod to Mexico's long history of silver mining).

Amber Bruce (Cuchillo) completed the close-finishing top three with her La Sombremesa, for which she developed her own Cafe de Olla cold brew, in an intriguing molé and mildly chili-tweaked sipper.

Belly's Best

Intrigue Pinot Gris 2013

Sports a pretty salmon note with aromas of pear and citrus before a textured but elegant palate of focused lime and firm berry notes wrapped in smart acidity. One of the best B.C. Gris this year ($16.90, 91 points), available online or from the winery.

Tim Pawsey writes about wine for numerous publications and online as the Hired Belly at hiredbelly.com. Contact: info@hiredbelly.com.

Cocktails featuring Peloton de la Muerte Mezcal Joven compete at a recent competition. PHOTOS TIM PAWSEY

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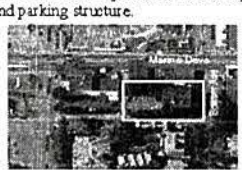

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HOME

Apple and Google vie for consumers

Canada now has three main digital entertainment competitors

In my last column I noted how the arrival of Google's online music store in Canada signalled the growth of Google Play as a viable iTunes competitor in Canada.

As soon as I put that column to bed, Google expanded its digital offerings again in Canada by adding television program purchases to Google Play's video store.

That means Canadians, starved for consumer choice in online entertainment compared to Americans, can get movies, TV, music, books and newspapers from Google. That means Canada now has three main competitors for comprehensive digital-based entertainment: Apple, Google and Microsoft.

Barry Link
Practical Geek

Apple of our eye

Apple remains in the lead for content. iTunes offers music, movies, TV and books and iPhones and iPads can access a universe of news apps. Looking specifically at TV, the market which Google just entered, iTunes has a larger selection than either Google Play or Microsoft's Xbox Video store. Its selections are nicely laid out and curated. Prices are market standard.

iTunes' music offerings are excellent but iTunes does not offer a streaming subscription service yet in Canada as it does in the United States. I don't have any experience with its ebooks, but the selection looks reasonable.

Google Play, which was nonexistent only a few years ago, is in solid second place for Canadians. Its video offerings are not as extensive as iTunes but it has all the mainstream releases, good prices and curation is on level with Apple.

Its music store looks very good, with good pricing, and offers a subscription streaming music service for $10 a month, or $8 a month if you sign up before the end of June, with a reported access to 25 million songs.

Its Newsstand is a standalone platform combining newspapers and magazines in one central app, which some people might prefer to individual apps for their news reading. I've used Google's books platform on Android and like it, although I prefer my Kobo for reading.

Microsoft takes third place for content. Its movie selections are comparable to Google Play, but as with Google its TV selections lag behind iTunes. Its once stupidly high prices for videos have been lowered to be in line with iTunes (a lesson that competition is important).

Microsoft has no ebooks platform and no equivalent to Newsstand, although Windows 8 devices, from computers to phones, have well-designed apps for news, travel, health and food – all curated, drawn from various sources and free.

Where Microsoft excels in Canada is its Xbox Music store, which offers a $10 a month music streaming service with the same claim to 25 million songs. I'm a subscriber.

Playing with Google

Few people are purist in their choices and most households freely mix and match services and devices. Given the dominant market share of Windows computers, it's likely most iPad or iPhone users have a Windows PC. There's a fair chance they have an Android phone. And instead of Apple, Microsoft or Google, they get their music from Rdio, Slacker or Songza. Or they use all of these sources at different times, which is the way it should be.

That means aside from content, the consumer-friendly provider is available across as many devices and platforms as possible and here Google takes the prize. Its video, music and books apps are found on both Android and iPhone and iPad and available to PC and Mac users through the web. Apple, which makes money by getting consumers to buy devices, limits content to Apple devices and iTunes on PC and Mac. (The exception is music downloads, which can be played anywhere.) Even Microsoft, lagging in content, is working hard to

See Tablets page **20**

NORTH VANCOUVER DISTRICT

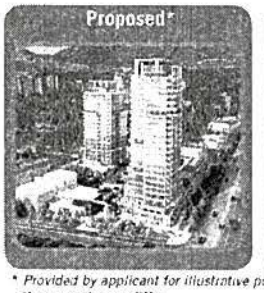
PUBLIC HEARING

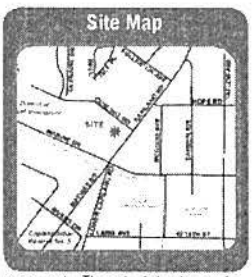
2010 Marine Drive
Grouse Inn Site

What: Public Hearing for the proposed redevelopment of the Grouse Inn site and adjacent former gas station site. The proposal includes two residential towers, a restaurant, commercial building, and gateway plaza.

When: 7 pm, Tuesday, June 17, 2014

Where: **Council Chambers, North Vancouver District Hall, 355 W. Queens Road**





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

What changes? This proposal requires an amendment to the Zoning Bylaw.

When can I speak? We welcome your input **Tuesday, June 17, 2014 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 before the conclusion of the Hearing.

Need more info? Relevant background materials and copies of the bylaw are available for review at the Municipal Clerk's Office, Monday to Friday 8 am to 4:30 pm or online at dnv.org/public_hearing.

Questions? Tamsin Guppy, Community Planner, tguppy@dnv.org or 604-990-2387.

facebook.com/NVanDistrict

dnv.org

@NVanDistrict

Public Information Meeting

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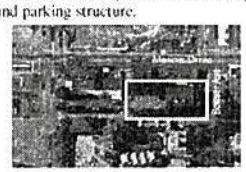

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Appendix B: Sign-In Sheet

1591 Bowser Avenue Public ~~Hearing~~ Information Meeting — June 19/14

Name	Number	Email	Address
Ian Macmillan	—		1751 W 15TH ST
Gary Tiwana			2168 MARINE DR W VAN
Heide Klein		[illegible]	102, 1538 Bowser
Elizabeth [illegible]			1578 Bowser Ave.
Cynthia Lo			
[illegible]			
Monica [illegible]			
[illegible] Davidson		[illegible]	1270 Tatlow Ave.
Kara Moore			
Alyssa Virani			
[illegible]			1225 ALDERWOOD PLACE
PAUL TUBB		[illegible]	1070 W. KEITH RD

Appendix C: Emailed Comments and Comment Sheets

Email Comment 1:

From: Mona Morrison
Sent: Thursday, July 03, 2014 10:01 PM
To: Doug Allan
Subject: 1591 Bowser - London Meridian Properties Inc. proposed building

I was at the information meeting held recently on the site of the redevelopment and heard the presentations by the architect and the traffic consultant. I wish to repeat some of the concerns that I still have.

1. I do not think that there should be a variance of nine parking spaces. This is a very busy area and we do not need more people parking all day on the lane or on Bowser. The traffic consultant said that there was no problem with the bus service. He has not been at the bus stop around 3:00 on a Saturday afternoon when the buses are full and go sailing by without stopping. I did not believe that his presentation was credible with the actual availability of buses.

2. The lane is very important for getting to the Tatlow or Garden light to have access to Marine Drive. I do not think that there should be any interference with this very used access.

3. There will be problems with access to the lane noted above (from Bowser to Tatlow) with any construction and that will be very difficult.

Thank you for the opportunity to participate and hope that we are actually listened to.

M. Morrison

From: Doug Allan
Sent: Friday, July 04, 2014 7:17 AM
To: 'Mona Morrison'
Subject: RE: 1591 Bowser - London Meridian Properties Inc. proposed building

Mona, thanks for your comments. They'll be retained as part of our file record and a copy will be sent to the applicant.

I noticed when I was coming to the Public Info Meeting that the entrance to the underground parking on Tatlow Avenue has been apparently, permanently blocked off and I've since heard the McGowan entrance has also been blocked and both of these accesses would have led to Marine Drive intersections with traffic signals. This now forces all of the vehicles coming into and out of the project to use Bowser where there is no signal and forces traffic to use the lane to get to either signal. I'm wondering if you have any idea why the Strata Council? Owner? Opted to close those access points.

Also, I recall you mentioned at the beginning of the meeting that you'd sent in an email to the District but hadn't had the courtesy of any acknowledgement. I checked back into my email and I can confirm

that your email did not come to me but if you can resend that email to me, I can follow up with whomever it was sent to.

Thanks again for your comments.

Doug

Email Comment 2:

RE: 1591 BOWSER
DEVELOPMENT PROPOSAL
London Meridian Properties Inc.

This 3 storey apartment building would work well as an "infill" type of project.

If this proposal goes ahead, it will create a problem for future development of this block (Tatlow to Bowser). It will mean another small building, north, on Marine Drive.

I don't think it is good planning to build a lot of smaller projects in place of a larger project. More buildings mean more entrances and exits for underground parking andor surface parking and resulting traffic circulation problems.

Irene Davidson
1270 Tatlow Avenue

Email Comment 3:

From: Laurie Charlesworth
Sent: Thursday, July 03, 2014 8:58 PM
To: Doug Allan
Subject: Proposal: 1591 Bowser Ave

Hi, Doug,

I attended the information session on June 19, and would first like to say that I am very pleased the proposed building has been brought down to three floors. I am, however, equally concerned about the requested parking space variance.

As you will have seen, parking in the east-west lane and on Bowser itself is at a premium, and I think it is unrealistic of the developer to think that 19 spaces will be adequate for a 25-bedroom (including the 5 bachelor units) building. Indeed, if each unit had one car, and the three-bedroom and only 1/2 of the two-bedrooms had a second car, the proposed parking would be inadequate.

I question the applicability of the Metro Vancouver Apartment Parking Survey to this proposal, and note that the 15 communities surveyed did not include either West Vancouver or the District of North Vancouver. Further, the study found that "Apartment renters generally have lower parking demands than do owners" and "Vehicle holdings and parking demand for apartment renters are much lower than for owners"- presumably the inclusion of rental units in the survey skewed the results insofar as their applicability to the subject proposal is concerned.

I also have a concern about the statement that the lane will take on a pedestrian character. While at first blush this is an attractive notion, it does raise a safety issue. Vehicles travel quickly through the lane and near-misses where it intersects Bowser are common; it is difficult to imagine how, particularly with it's bumper-to-bumper parking, the land could be transformed into a more pedestrian-friendly thoroughfare. Additionally, because there is no traffic light at Marine and Bowser, residents wishing to travel West on Marine typically turn left into the western part of the lane and use it to access one of the cross-streets where a light is available at Marine.

It appears a development of some sort, with its attendant increased traffic, on this site is a foregone conclusion; I would ask that consideration be given to the erection of stop signs in the lane where it intersects with Bowser. I would also strongly urge, given that the current supply of on-street parking does not meet the demand, that the requested variance in the required number of parking spaces for the building proposed for 1591 Bowser be denied.

Thank you for the opportunity to voice my concerns.

Laurie Charlesworth

101-1513 Bowser

Email Comment 4:

From: Rose Moore
Sent: Thursday, July 03, 2014 6:56 PM
To: Doug Allan
Subject: Proposed development 1591 Bowser Ave

Mr Allan,

I write in regards to the proposed re-development by London Meridian Properties at 1591 Bowser Ave. I am an owner in the complex immediately south of the proposed redevelopment. My points of concern:

1. I am not in favor of the 9 space parking variance the applicant is asking the district to consider. I quote from the information package provided "Main floor units which could be used for live/work purposes." Not only is the developer asking for a variance on the number of parking spaces, but they are stating businesses are to be run within the units with decreased parking for clients of these businesses let alone the residents of the building. Regardless of the Metro Van parking study people still drive cars.

2. Increased traffic on the east west alley south of Marine. This is already a busy alley, vehicles driving too fast(are traffic calming speed bumbs necessary?) mixed with pedestrians. There have been many near misses at Bowser and the alley.

3. Further to above(2) this east west alley must be open AT ALL TIMES if construction is to occur and thereafter. There is no traffic light at the intersection of Bowser and Marine. Impossible to turn left and difficult to turn right due to lack of visibility due to parked cars on Marine in front of Capilano glass. Drivers are forced to use the alley(east and west) to access a light to cross or proceed along Marine Drive.

Regards,

R. Moore

1580 Bowser Ave.

Email Comment 5:

During the presentation, I did not see or hear anything that will cause major problems for Norgate or Illahee. This is the first time I remember a recently proposed Marine Dr. development actually being lower than the district guidelines and not applying for a height variance. We hope this is the start of a trend to observe the established OCP maximum height restriction. Although the drawings of the building have the district-approved flat roof and square appearance for the Marine Drive corridor, it seems to be less looming or overwhelming than the recent buildings. A greater variety of architecture and heights, such as the Village at Park Royal, is preferable to the sameness of all flat roofs. The material and colour choice seems to be good and is similar enough to those chosen for Illahee to fit into the neighbourhood.

However, there are several issues to be considered:

- redevelopment of the entire block may be preferable for this area, as the applicant's building is arguably in better condition than the others. We are aware that the DNV would prefer to redevelop the block as a whole, but is unable to do so at present
- is the north/ south lane behind the proposed development necessary any longer, or should it be decommissioned as was the "highway" on the Save On Foods site? At present it seems mainly to be used for parking alongside the Mitsubishi dealership. Sale of the land may generate extra funds for the DNV which can then be used for local benefit. Otherwise, it is literally, a waste of space.
- should vehicles be going either onto, or turning off Marine Dr. from this narrow lane, when they can more safely use Bewicke? Exiting onto Marine Dr mid-block is dangerous for both pedestrians and vehicles due to visibility. The proposed development could be redesigned, and an easier and safer parking access from Bowser or the lane to the south, should be

created. This should have the benefit of reducing vehicle accidents for residents, especially if they have children.

- both architects told me that the number of cars on the road has stayed the same for the last ten years. If this is true, then why is Marine Dr. so congested and North Shore residents so angry about it? The amount of parking spaces and enough room for service vehicles, moving trucks, etc, seems to be an issue. A related issue is yet another application for a variance to the OCP, in this case, nine parking spaces.

Ian Macmillan

1751 West 15th

Email Comment 6:

From: David Knee
Sent: Friday, June 06, 2014 9:20 AM
To: Doug Allan
Subject: Illahee

Hi Doug

Could you please tell me what the FSR of Illahee is?

Do you have an electronic version of the public meeting notice for 1591 Bowser? If you do could you please send it to me.

Thanks

David

On Mon, Jun 9, 2014 at 2:26 PM, Doug Allan wrote:

David, Illahee was developed under the RM6 zoning which allows for 1 unit for each 1800sq.ft. of lot area with an FSR of 0.55.

I've attached a copy of the brochure and fact/comment sheet for your reference.

doug

1591 Bowser development proposal

HI Doug

Having attended the presentation for this project it raises one very pertinent question.

What was the Districts Planning departments intent when they came up with the 1 FSR and 1.75 FSR depending on the size of the lot?

I would guess the intent was to give incentive to have the smaller lots consolidates into a larger lot to permit the higher FSR.

The project as proposed would have a severe impact on any future developments of the properties to the North on Marine drive as that property will have a commercial component.

As the current 1591 Bowser property is all commercial office space it would appear not very practical to reduce the commercial office space available in the District at this time and converting this building to all residential with the explosion of all the other new residential properties in this area.

We know of other current buildings currently with 100% office space in the Marine drive corridor that are already approved to be re-developed into100% residential use.

We request that any new development meet the current C9 pre zoning put in place for this and the other properties on this complete block from Tatlow to Bowser so that a proper development that is fair to all the current owners and an enhancement to Marine drive can be built

Or the C9 zoning is revisited with adjacent Community Association to consider revisions to the zoning.

Thanks

David

COMMENT SHEET
The District of North Vancouver

PROPOSAL: London Meridian Properties Inc.
1591 Bowser Avenue
Detailed Application rezoning and development permit for a 3 storey apartment building

To help us determine neighbourhood opinions, please provide us with any input you have on this project (feel free to attach additional sheets):

- Parking will be an issue.
  consider recident parking in alleys only
  → lots of cars park in alley from McGowan to Tatlow to catch the Bus downtown.

- Traffic flow
- back lanes are very busy. CARS coming west turn onto Philips & head down the alley to avoid bridge back up traffic.
- Speeding down alley → consider speed bumps in alleys

Your Name Elizabeth Street Address 1518 Bowser → I park in the back alley between McGowan/Bowser too much non local traffic.

Please return, by mail, fax, or email by July 3, 2014 to:

Doug Allan
Tel: 604 990-2357
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
FAX: 604-984-9683 or Email: dallan@dnv.org

DOUGLAS R. JOHNSON ARCHITECT LTD.

374 – 901 West 3rd Ave North Vancouver, BC V7P 3P9
(604) 998-3381 FAX. (604) 988-5561

Oct 1, 2014

District of North Vancouver
355 Wst Queens Rd.
North Vancouver, BC V7N 4N5

Attn: Doug Allan– Community Planner

Re. 1591-Bowser St. North Vancouver – Staff Comment Letter Response

Dear Mr. Allan,

The following is a summary of our response to the staff comments in you September 12 2014 Summary:

1. Planning
   a) Urban Design
      1. Guardrails. The 3rd floor guardrail is exactly the same design as the rest of the building. In elevations they may look different because the parapet is blocking a portion of the guard.
      2. The glazing on the west stair has been significantily increased.
      3. The roof system of the west stair is now extends directly out from the main roof.
      4. Hedging is now used to define the grade level patios.
      5. The siding on the 3rd level is now a vibrant blue. Please see the color elevations and supplied material board.
      6. Solar screening has been added to the west windows that are not protected with overhangs.
      7. The main entry has been redesigned. It is now framed with a steel/glass canopy that ties into brick columns. The main entry door is now centered in the frame.
      8. A color material board is enclosed with this letter.
      9. Enclosed are letters addressing "Form & Character"; "Lower Capilano/Marine Drive Village Centre Guidelines and the "Guidelines for Multi-Family Housing."
      10. Shawn Martin Consulting is supplying energy /green consulting on the project. Modelling of the building has been done (report enclosed) and the Built Green HD checklist has been completed with proposed measures to achieve a score of 153 points which is well above the Built Green Gold standard.

b) Policy Planning
    1. 25% - 4 units have been identified to meet Level 2 Adaptable Design Guidelines.

Transportation
1. The Bunt parking report has been revised and is enclosed.
2. 20% of the parking stalls have been identified to be wired for Level 1 plugs. For electric cars.
3. A sight line analysis is enclosed by Bunt & Associates.
4. Auto Turn analysis is provided by Bunt & Associates.

Engineering
1. Creus Engineering is addressing the Engineering mark-ups and comments.

Parks
1. The garbage structure has been moved to the underground parkade. This allows additional planting.
2. We are proposing to have a small sidewalk from the curb to the edge of the SRW to provide separation of pedestrians from the lane. The area over the SRW is kept green to provide a landscape buffer to the building.

Environment Services
1. Survey is provided. Note there are no significant trees on this site.
2. M2 Landscape Architects has provided a written response ot the Sustainable Landscape Design Guideline.

Building Department
1. Signed and sealed site survey provided.
2. Existing and finished grades have been provided at the corners of the building.
3. Building section with floor to floor heights is provided.
4. Site plan with setbacks noted is provided.
5. The building and site coverages have been provided.
6. The parking layout has been revised. All of the Part 10 dimensions for parking lots are met except the east west driving aisle. It is 22'-4" not 23'-0" The lot dimensions do not accommodate the 23'-0" The Bunt report notes that the 22'-4" dimension does provide for adequate manovering space.

Fire
1. Comments noted and will be incorporated into the building permit drawings.
2. Updated site plan in dwg has been sent to wilsonb
3. Project name will be identified on the Building Permit drawings.

Public Art
1. We are exploring on the appropriate Art Opportunity. The project will be providing either: a) On site public art on the Bowser street elevation. Or b) contributing to public art funds for a project on Norgate Field. A meeting will be set up with Lori Phillips the Public Art Officer.

Green Energy Strategy
1. The Built Gree HD Checklist has been revised and the project is achieving 153 points.

Community Amenity Contribution
1. The CAC estimated charge of $107,402.69 is acknowledged.

Development Cost Charges
1. DCCS of an estimated $126,517 Sewage and Drainage DCC of $8680 is acknowledged.

Public Input

Advisory Design Panel

1. Letter addressing issues raised by the ADP is enclosed.

Neighbourhood Input

2. Transportation Demand Management Plan is address by Bunt and Associates in their revised report.

Yours truly,

Douglas Johnson MAIBC

DOUGLAS R. JOHNSON ARCHITECT LTD.

374 – 901 West 3rd Ave North Vancouver, BC V7P 3P9
(604) 998-3381 FAX (604) 988-5561

September 29, 2014

District of North Vancouver
355 Wst Queens Rd.
North Vancouver, BC V7N 4N5

Attn: Doug Allan– Community Planner

Re. 1591-Bowser St. North Vancouver – Form & Character

Dear Mr. Allan,

The following is a summary of our response to the Form & Character (your attachment 1) guidelines & Guidelines for Multi-Family Housing (your attachment 3):

1. Accessibility
   - The main entry is barrier free
   - the main entry door and and the door to the outdoor amenity area will have a automatic operators
   - The H/C parking stall in the underground parking has barrier free access to the elevator and the elevator provides access to all floors of the building.
   - The garbage room is provided with an accessible door.
   - The public areas of the building and three suites (25% of the units) will be designed to Adaptable Design Guideline Enhanced Level Two.
2. Connectivity
   - All the ground floor units have direct access to the street or south lane.
   - The scale of the entry doors, landscaping and patio areas is pedestrian friendly.
3. Design Excellence
   - The building is three stories with the 3rd storey stepping substantially back from the floor below. The 3 storey massing anticipates future 4 storey buildings facing Marine and this site will provide a transition to the existing townhouses to the south.
   - The building use classic timeless building materials, brick, architectural metal and clapboard in a modern contemporary building.
   - The large deck areas on level three accommodate planting pots that will bring green landscaping to the upper level of the building.
   - Most of the windows are protected with roof canopies or solar screens. The building has been energy modeled and Built Green Gold standards are proposed.

- The site is compact but the public amenity areas and the building street faces have been beautifully landscape by M2 Landscape Architects.
- The color palette and materials reflect natural materials.
- A number of the Built Green checklist items involve recycled and locally sourced materials.
- The entrance to the underground parkade in off the lane at the lowest point of the site.

4. Good Neighbour
    - The building is only 3 stories in height, similar to the existing townhomes to the south.
    - The ground floor units present doors, windows and patio areas in a similar scale and presentation to the existing units to the south. The design will complete the "mews like quality" of the south lane.
    - The building massing anticipates higher four storey buildings along Marine drive and will act as a transition to the existing buildings to the south.
5. Placemaking
    - The scale, massing and classic materials used provide for a design that intergrates in the existing neighbourhood fabric with a building that will age gracefully.
    - An intimate public courtyard in the European tradition is provided to the west of the building.
    - The landscaping has been carefully chosen to match the character and scale of the building.
6. Safety and Security
    - Eyes on the street are provided on all exposures.
    - The main entry detailing identifies the access. The parkade entrance is at the logical entry point on the north west corner of the site.
    - The building outdoor amenity area is secure and enclosed. Private patio areas are raised from the public areas and defined by hedging.
7. Site Planning Elements
    - The landscape design is being coordinated with the Energy Consultant's recommendations, the mechanical design and the architectural design.
    - 4.5 sm min of accessible outdoor space is provided from every unit. For most units it is well above this number.
    - Barrier free outdoor amenity space is provided with a building courtyard access directly from the main floor.
    - Barrier free access is provided directly to the main entrance
8. Building Form and Architectural Elements
    - The building design is different in detailing and material choice from the adjacent buildings.
    - The scale of the building is in keeping with the adjacent neighbor and will act as a transition to future development.
    - The building setbacks are similar to adjacent buildings.
    - A modest ramp provides access to the main entry.
    - The west, east and south elevations have well articulated interesting facades that avoid blank walls. The north wall is on the property line and cannot have openings. Spit face block in varying widths and colors provide textural and color interest.

- Endwalls of the firewall return the patterning of the concrete masonry.
- The exterior materials are substantial and long lasting including brick, architectural metal and cement fibre siding.
- The color pallete is earth tone based with a strong blue on the 3rd floor used for visual interest.
- The main lobby is framed in a transparent glass storefront.
- Balconies and recessed into the façade or are integrated into the roof structure. Guards are aluminum and glass.
- Glass canopy provides weather protection to the main entry
- Main floor units typically sit higher than the adjacent public street. Layered landscaping is utilized.

Yours truly,

Douglas Johnson MAIBC

DOUGLAS R. JOHNSON ARCHITECT LTD.

374 – 901 West 3rd Ave North Vancouver, BC V7P 3P9
(604) 998-3381 FAX. (604) 988-5561

September 29, 2014

District of North Vancouver
355 Wst Queens Rd.
North Vancouver, BC V7N 4N5

Attn: Doug Allan– Community Planner

Re. 1591-Bowser St. North Vancouver – Lower Capilano/Marine Drive Village Centre

Dear Mr. Allan,

The following is a summary of our response to the Lower Capilano/Marine Drive Village Centre Design Guidelines (attachment 2):

The Bowser street site is located off of Marine Drive and most of the guidelines are focused on Marine Drive projects.

1. Streetscape Guidelines
   - The private landscaping is designed to integrate with the street trees and public realm landscaping.
   - Signage on the building will be integrated into the building's architectural elements. The building address will be individual metal letters installed on the entry column. Signage for any live work units will be small descreet metal plaques installed into entry columns at each unit or on the building beside the exterior entry door.
2. Building Siting
   - The building is pulled close to the street on Bowser and the lane to the south creating a two storey street wall that extends along Bowser and down the lane.
   - The streetwall is articulated with recesses, windows, entry canopies an architectural weather protection.
3. Proportion and Scale
   - Windows and entries provide a rhythum to the façade creating interest and avoiding a monolithic appearance.
   - The building presents a two storey streetwall to the townhouses to the south and steps up to a third storey. The building will make a scale transition from the anticipated 4 storey buildings on Marine Drive.
4. Architectural Character

- The building detailing is simple, clean an uses strong materials with a sense of permanence.
- The roofs are flat with substantial overhangs providing sun and weather protection.
- Primary building materials are Masonry both brick and concrete. Weather protection details use glass, steel and architectural metal.
- The building has been energy modeled and will achieve Built Green Gold standards.

5. Parking Areas
    - All the parking is located in an underground parking structure.

Yours truly,

Douglas Johnson MAIBC

DOUGLAS R. JOHNSON ARCHITECT LTD.

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(604) 998-3381 FAX (604) 988-5561

Sep 29, 2014

District of North Vancouver
355 Wst Queens Rd.
North Vancouver, BC V7N 4N5

Attn: Doug Allan– Community Planner

Re. 1591-Bowser St. North Vancouver – Proposed Residential Project – Design Panel Comments

Dear Mr. Allan,

The following is a summary of the design changes to address the comments of the June 12 2014 ADP.

Comment – Consideration of simplification of the building envelope.

Response – the south elevation has been simplified with the 2nd floor lining up with the main floor to simplify the detailing. The rear courtyard detailing has been simplified and improved.

Comment – Review of common amenity area with regard to relationships to private outdoor spaces and accessibility of the amenity area overall.

Response – The private spaces are raised and buffered from the public space by low hedging. The garbage area has been relocated underground expanding the outdoor area. The entire area is accessible from the building with no stairs.

The north exit stair from the parkade comes up the amenity area the exit is provided through the west gate to the sidewalk along the south lane.

Comment – Review of North Wall including transition of materials , durability and detailing.

Response - The Hardi panel detailing has been removed. The wall is now split face concrete block in two alternating colors. This allows for simplier detailing with a more robust long lasting material.

Comment – More and Varied plantings for the lane and pathway.

Response – M2 has revised the area. We are limited with the scale and variety of material by the SRW that extends along the south property line.

Comment – possible code issu with balconies on north property line.

Response – The split face block extends out past the balconies to correct the issue.

Comment – CPTED issue for deeply recessed entries?

Response – Stairs cannot be built on the SRW to the south. The grade change from the lane to the building requires stairs and a landing is required at the top of the stairs. The recesses are mostly part of individual units and have glass French doors so that they will be visually monitored from the units. Lighting in the recessed can also help.

Comment – Improve Main Entry design.

Response – the detailing of the main entry has been improved to provide more of a visual presense.

Comment – Shading on West Windows.

Response – solar shades have been added to the unprotected windows on the west elevation.

Yours truly,

Douglas Johnson MAIBC

1591 Bowser Street
North Vancouver, BC

Energy Modeling Report
For Development Permit Submission

Prepared for:
Karim Varani C/O
Douglas Johnson Architect Ltd

Prepared by:
Shaun Martin
Principal
Shaun Martin Consulting

Issued: 14 May, 2014

ENERGY DESIGN NARRATIVE

This report has been prepared for Development Permit submission.

1591 Bowser Street is a three storey multi-family residential project that includes a one level below grade parkade. As an energy target the project target is to meet a minimum Builtgreen Gold standard, which requires energy consumption to be 30% below Ashrae 90.1-2007. The project will meet all requirements of the BC Building Code, Section 10, which requires that the design meet Ashrae 90.1-2010.

Because this report is being prepared at a preliminary stage in the design, certain assumptions have been made for modelling purposes. Lighting and building envelope meet but do not exceed Ashrae 90.1-2010 baseline levels. All mandatory requirements of Ashrae 90.1-2010 are met in the design.

The mechanical system has not yet been designed. The energy model is assumes heating and domestic hot water for the building will employ centralized condensing boilers. Space heating is to be primarily provided by in-suite air handlers. Only passive cooling utilizing natural ventilation is to be provided. The air-side system for corridors is assumed to be a packaged rooftop heat pump. The parkade is assumed to be open to outdoor air (i.e. the gate is not solid panel).

The modeling results demonstrate that this proposed design will meet the Building Code requirement, Ashrae 90.1-2010, and exceed Ashrae 90.1-2007 by 30.0%

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ENERGY MEASURES

1. Low flow lavatory faucets, and showerheads, and kitchen faucets. These fixtures will contain flow restrictors to reduce water consumption by 43.72%.
2. Domestic hot water is provided by centralized condensing tankless water heaters rated at 94% thermal efficiency.
3. Insulation levels – match the Ashrae 90.1 – 2010 prescriptive requirements, except for exterior above grade walls and roof, which are R20 and R30 respectively.
4. Lighting - match the Ashrae 90.1 – 2010 prescriptive requirements. Lighting controls match also match these requirements.
5. Natural ventilation - Operable windows are planned for each of the residential suites to provide passive cooling.
6. Exterior lighting - reduced power.
7. Fenestration U-values – match Ashrae 90.1 – 2010 prescriptive requirements.
8. In-suite space heating and cooling is provided variable refrigerant flow (VRF) in-suite air handling units. Corridors, stairs, etc, are similarly heated and cooled by a packaged rooftop unit, with supplemental electric baseboards.
9. Ventilation heat recovery for outside air supply. Bathroom ducts return to roof.

BUILTGREEN CANADA RESULTS

	Baseline		Proposed	
Electric Consumption	MJ	$	MJ	$
Space Cool	37,606	891	8,266	184
Heat Reject.	-	-	-	-
Refrigeration	-		-	-
Space Heat	210,700		227,723	5,075
HP Supplemental	35,995		6,935	155
Hot Water	-		-	-
Ventilation Fans	110,199	2,612	69,296	1,544
Pumps & Aux.	7,435	176	-	-
Ext. Lighting	22,083	523	16,562	369
Misc. Equip.	217,145	5,147	217,145	4,839
Appliances (saving)	-		(9,907)	(221)
Lighting	246,997	5,855	112,442	2,506
Total	888,161	21,052	648,462	14,452
Gas Consumption	MJ		MJ	
Hot Water	239,075	2,126	129,720	1,154
Misc. Equip.	35,799		35,799	
Total	274,874	2,444	165,519	1,472
Combined total	**1,163,034**	**$23,496**	**813,981**	**$15,924**

Savings			**Energy**	**Cost**
			30.0%	**32.2%**
	Baseline		Proposed	
Metrics	11,367	m^2	11,367	m2
Natural Gas	0.024	GJ/m2	0.015	GJ/m2
Electricity	21.7	kWh/m^2	15.8	kWh/m2
Combined Total	**28.4**	kWh/m^2	**19.9**	kWh/m^2
Natural Gas	0.22	$/m^2$	0.13	$/m^2$
Electricity	1.85	$/m^2$	1.27	$/m^2$
	$2.07	$/m^2$	$1.40	$/m2

The project will comply with the mandatory provisions of the Ashrae 90.1-2010 standard.

ENERGY MODEL PARAMETERS

The following describes the differences between the baseline and proposed design models.

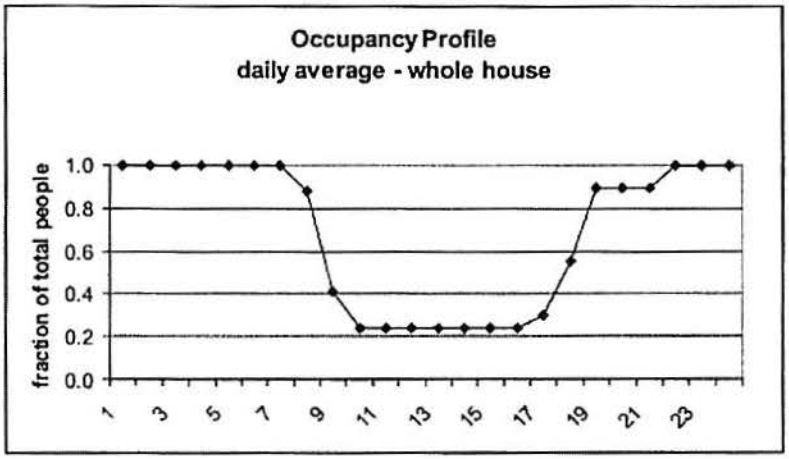
ITEM NO.	DESCRIPTION	NOTES AND VALUES
1.	Energy modeling software used	eQuest version 3.65, DOE 2.2
2.	Energy standard	ASHRAE 90.1-2007 for energy performance analysis purposes, to prove compliance with BuiltGreen Gold requirements.
3.	Energy rates used.	Electricity – BC Hydro rate 1121 Multi-unit Residential Demand Charge: none Energy Charge: Block 1: 16 units x 675 kWh/month = 10800 kWh at $0.069 Block 2: all additional at $0.1034 Natural Gas – Fortis Rate 2 Cost per Therm: $ 0.938265 ($8.893 / GJ) Fixed charges are excluded.
4.	Area of building (m2).	Simulation model floor area -

	ft2	Conditioned area ft2
Parkade	9667	639
Level 1	6443	6443
Level 2	6492	6492
Level 3	5058	5058
TOTAL	27661	18632

Drawings indicate an area of 27623 ft2.
Measured approximately to mid-point of walls.

5.	Operating Schedules	The model uses default residential and non-residential schedules for lighting, plug load equipment, refrigeration, cooking and domestic hot water usage from the simulation software. Occupancy is based on the following schedule (source: Building America):

ITEM NO.	DESCRIPTION	NOTES AND VALUES



Residential fan systems are assumed to be on from 5PM to 9AM, otherwise cycling to maintain temperature.

6. Outdoor design criteria

Simulation weather File: Vancouver, CWEC

7. Indoor design criteria

Cooling Set Point Temperature
23°C from 5 PM – 9 AM, 26°C setback

Heating Set Point Temperature
22°C from 5AM – 10AM and 5 PM – 11 PM, 19°C setback

No humidity control.

Domestic hot water 60° C

8. Areas and Window to wall ratio

As modeled:

	FT2
GLAZING	9,158
ALL WALLS	76,044
WINDOW-TO-WALL RATIO	12.0%
ROOF	21,555
UNDERGROUND	22,536
BUILDING	120,136

9. Internal loads

Occupancy counts are from ASHRAE 62.1-2010 tables, and equal 42 people for the building.

ITEM NO.	DESCRIPTION	NOTES AND VALUES

Appliance and plug loads were taken from Building America data 2010 tables and formulas. Ashrae 2013 Fundamentals Handbook references the 2004 version.

Appliance and Miscellaneous Loads

	3BD	2BD	1BD	Bach	Elev.	Bldg Total
Range Hood	9	9	9	9		
Refrigerator	434	434	434	434		
Clothes Washer	78	65	52	39		
Electric Dryer*	807	673	538	404		
Dishwasher	175	146	117	88		
Gas Range	80	67	53	53		
Miscellaneous	2925	2593	2213	1877		
Total / Unit	4508	3986	3415	2903		
# Units	2	6	4	4		
Total kWh	9016	23917	13662	11612	1900	60107
Gas Range	28.7	23.9	19.1	14.3		
# Units	2	6	4	4		
Total therms	57.4	143.4	76.4	57.2		334.4

Source: Building America 2010 data, from the B10 new construction spreadsheet.
*Electric dryer has been de-rated 25%, BA2010 suggests this is appropriate for new construction.

Savings

kWh	Per unit	Building Total
Refrigerator	106	1696
Clothes Washer	24	384
Dryer	0	
Dishwasher	42	672
Total / Unit	182	
# Units	16	
Total kWh	2752	**2752**

10. Lighting

Lighting load values match match the Ashrae 90.1 – 2010 prescriptive requirements. Lighting controls match also match these requirements. Dwelling units are an exception under section 9 of the standard (the baseline and proposed are modeled at the same levels). Stairwell lighting must be controlled so that lighting power can be reduced by at least 50% within 30 minutes of the stairwell space becoming unoccupied. Parking garages

ITEM NO. DESCRIPTION NOTES AND VALUES

must comply with the standard's automatic shutoff requirements but also be controlled so that lighting power can be reduced by at least 30% when there is no activity detected for no longer than 30 minutes.

Space	Floor	Activity	Area ft2	Lighting W/ft2
P1 Vestibule	P	Corridor	226	0.66
P1 Stair#2	P	Corridor	181	0.66
P1 Mech Elec	P	Storage (Conditioned)	233	0.95
P1 Parking3	P	Storage (Unconditioned)	2545	0.19
P1 Parking1	P	Storage (Unconditioned)	3421	0.19
P1 Parking2	P	Storage (Unconditioned)	3063	0.19
L1 106	1	Residential (Multifamily)	1263	0.38
L1 105	1	Residential (Multifamily)	1258	0.38
L1 101	1	Residential (Multifamily)	796	0.38
L1 102	1	Residential (Multifamily)	642	0.38
L1 103	1	Residential (Multifamily)	696	0.38
L1 104	1	Residential (Multifamily)	774	0.38
L1 Stair2	1	Corridor	225	0.66
L1 Stair3	1	Corridor	127	0.66
L1 Corridor	1	Corridor	665	0.66
L2 206	2	Residential (Multifamily)	1482	0.38
L2 205	2	Residential (Multifamily)	1258	0.38
L2 201	2	Residential (Multifamily)	798	0.38
L2 202	2	Residential (Multifamily)	642	0.38
L2 203	2	Residential (Multifamily)	694	0.38
L2 204	2	Residential (Multifamily)	1038	0.38
L2 Stair2	2	Corridor	150	0.66
L2 Stair3	2	Corridor	129	0.66
L2 Corridor	2	Corridor	302	0.66
L3 304	3	Residential (Multifamily)	1090	0.38
L3 303	3	Residential (Multifamily)	1254	0.38
L3 Stair2	3	Corridor	149	0.66
L3 Stair3	3	Corridor	128	0.66
L3 Corridor	3	Corridor	326	0.66
L3 301	3	Residential (Multifamily)	1067	0.38
L3 302	3	Residential (Multifamily)	1045	0.38

Exterior lighting

Lighting power was estimated at 1.8 kW for the baseline building and 1.44 kW for the proposed building (20% reduction).

ITEM NO.	DESCRIPTION	NOTES AND VALUES

Parking Areas
Lighting schedule assumes occupancy sensors as required by Ashrae 90.1-2010.

11. Window performance

Double clear glazing, 3mm/12.7mm/3mm.
U 0.30 (center of glass)
SC 0.86 SHGC 0.74 Tvis 0.74
Vinyl frames
Air gas filled.
Low-e on surface 3, emissivity 0.2

12. Opaque wall and roof insulation values.

The roof was set to R30 vs an R20 baseline, and the exterior walls were set to R20 vs an R 15.6 baseline. All other U-values were set to match the Ashrae 90.1-2010 prescriptive requirement, which can be summarized as follows:

CONSTRUCTION	Residential U-Value	Non-residential U-Value	Comment
Below Grade Wall	NA	0.88	No requirement, for semi-heated spaces.
Below Grade Slab	NA	0.5	No requirement, for semi-heated spaces.
Exterior Wall	0.05	0.05	Baseline U0.64
Roof	0.033	0.033	Baseline U0.048
Exposed Slab	0.064	0.074	Exterior exposed to outside air (via parkade).
Slab Edge	0.064	0.064	
Interior Wall	0.402	0.402	
Interior Floor	0.402	0.402	
Opaque Door	NA	0.119	Swinging

13. Heating

Heating for residential spaces is provided by a variable refrigerant flow (VRF) system.

Heating for non-residential spaces (corridors, stairs, lobby, etc) is provided by a packaged rooftop heat pump with supplemental heating by electric baseboard.

HSPF set to 7.7 (COP = 2.25464), same as baseline, table 6.8.1B. VRF performance curves used in residential units.

Avg COP = (HSPF * 1055 J/BTU) / (3600 J/watt-hour) = 0.2928 HSPF.

14. Cooling

Cooling for residential spaces is provided by a variable refrigerant flow (VRF) system.

Cooling for non-residential spaces (corridors, stairs, lobby, etc) is provided by the packaged rooftop heat pump.

SEER set to 13 (COP = 3.81), same as baseline, table 6.8.1B. VRF performance curves used in residential units.

COP = EER / 3.41214

ITEM NO.	DESCRIPTION	NOTES AND VALUES

15. Air Systems

In-suite supply air circulation is provided by the indoor terminal unit of the VRF system. Ventilation (outside) air at Ashrae 62.1 required amounts of conditioned will be supplied from the packaged rooftop heat pump. The corridor air handling unit will operate 24/7/365. The rooftop air handler will minimally supply the Ashrae 62.1 required amount of conditioned outside air, but will contain an economizer to permit 100% flow for free cooling.

The parkade is assumed to be open to outdoor air (i.e. the gate is not solid panel). An exhaust fan will be installed for CO removal.

Humidity control is not included in the model.

Ashrae 90.1-2007 Baseline system

Residential is the predominant condition therefore each thermal block in the building is simulated with System 2, Packaged Terminal Heat Pump, with a constant volume fan, electric auxiliary heat (limited to 40F and below). Heat recovery is not required in the baseline, supply air is less than 5000 cfm.

16. Domestic Hot Water

Flow rates for the baseline and design are based on the LEED NC 2009 template values. A flow rate reduction of 39.4% has been calculated, equivalent to 3 points for LEED credit WEc3.

Baseline

Flow Fixture	Daily Uses	Flow Rate [LPM]	Duration [sec]	Occupant users	Sewage Generation [L/day]
Residential Lavatory	3	8.3	60	42	1046
Residential Shower	1	9.5	480	42	3192
Residential Kitchen Sink	3	8.3	60	42	1046

Total uses by all occupants	294
Total Daily Volume [L]	5,284
Annual Work Days	365
Annual Volume [L]	1,928,514

Design

Flow Fixture	Daily Uses	Flow Rate [LPM]	Duration [sec]	Occupant users	Sewage Generation [L/day]
Low-flow Residential Lavatory	3	1.9	60	42	239
Low-flow Residential Shower	1	5.7	480	42	1,915
Low-flow Residential Kitchen Sink	3	6.5	60	42	819

ITEM NO.	DESCRIPTION	NOTES AND VALUES

Total uses by all occupants	294
Total Daily Volume [L]	2974
Annual Work Days	365
Total Annual Volume [L]	1,085,346

Savings due to flow reduction is estimated to be 43.72%.

Domestic water heating is via condensing tankless water heaters rated at or above 94% efficiency.

Final Comment

Some of the energy measures are not optimized in the model because of the stage we are at in the design. Where this was necessary, conservative assumptions have been used.

ATTACHMENT 10

SCHEDULE 1
Site Profile

Version 4.0

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 (**P**arcel **ID**entifiers – 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 (**P**arcel **I**dentification **N**umbers – 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 sitc@gov.bc.ca. For questions on site profiles, please send a message to siteprofiles@gov.bc.ca.

PID numbers and associated legal descriptions. *Attach an additional sheet if necessary.*

PID	Legal Description
	LOT 11 BLOCK A DIST. LOT 825 PLAN 7491

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.*

PIN	Land Description

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.*

_____ _____ _____ _____ _____

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

Schedule 2 Reference	Description
E1	appliance, equipment or engine repair, reconditioning, cleaning or salvage
F10	solvent manufacturing or wholesale bulk storage

Please print legibly. Attach an additional sheet if necessary

Schedule 2 Reference	Description
	OFFICE BUILDING

IV	AREAS OF POTENTIAL CONCERN		
	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):	**YES**	**NO**
A.	Petroleum, solvent or other polluting substance spills to the environment greater than 100 litres?		✓
B.	Residue left after removal of piled materials such as chemicals, coal, ore, smelter slag, air quality control system baghouse dust?		✓
C.	Discarded barrels, drums or tanks?		✓
D.	Contamination resulting from migration of substances from other properties?		

V	FILL MATERIALS		
	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):	**YES**	**NO**
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?		✓
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?		✓
C.	Dredged sediments, or sediments and debris materials originating from locations adjacent to foreshore industrial activities, or municipal sanitary or stormwater discharges?		✓

VI	WASTE DISPOSAL		
	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):	**YES**	**NO**
A.	Materials such as household garbage, mixed municipal refuse, or demolition debris?		✓
B.	Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?		✓
C.	Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?		✓
D.	Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?		✓
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?		✓

VII	TANKS OR CONTAINERS USED OR STORED, OTHER THAN TANKS USED FOR RESIDENTIAL HEATING FUEL		
	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)**:**	**YES**	**NO**
A.	Underground fuel or chemical storage tanks other than storage tanks for compressed gases?		✓
B.	Above ground fuel or chemical storage tanks other than storage tanks for compressed gases?		✓

VIII	HAZARDOUS WASTES OR HAZARDOUS SUBSTANCES		
	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)**:**	**YES**	**NO**
A.	PCB-containing electrical transformers or capacitors either at grade, attached above ground to poles, located within buildings, or stored?		✓
B.	Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?		✓
C.	Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?		✓

IX	LEGAL OR REGULATORY ACTIONS OR CONSTRAINTS		
	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)**:**	**YES**	**NO**
A.	Government orders or other notifications pertaining to environmental conditions or quality of soil, water, groundwater or other environmental media?		✓
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?		✓
C.	Government notifications relating to past or recurring environmental violations at the site or any facility located on the site?		✓

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):

XI SIGNATURES			
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.			
Signature of person completing site profile		2014-05-12 Date completed: (YY-MM-DD)	
XII OFFICIAL USE			
Local Government Authority			
Reason for submission *(Please check one or more of the following)* **Soil removal ☐** **Subdivision application ☐ Zoning application ☑ Development permit ☑ Variance permit ☐ Demolition permit ☐**			
Date received:	Local Government contact : Name_____ Agency_____ Address_____ _____ Telephone _____ Fax_____	Date submitted to Site Registrar:	Date forwarded to Director of Waste Management:
Director of Waste Management			
Reason for submission *(Please check one or more of the following)* **Under Order ☐ Site decommissioning ☐ Foreclosure ☐**			
Date received:	Assessed by: Name_____ Region_____ Telephone _____ Fax_____ If site profile entered, SITE ID #_____	Investigation Required? **YES NO**	Decision date:
Site Registrar			
Date received:	Entered onto Site Registry by:	SITE ID #:	Entry date:

December 10, 2014
4986.01

Karim Varani / Varani International Properties Ltd.
c/o Douglas Johnston Architects Ltd.
221 Pemberton Ave
North Vancouver, BC V7P 2R4

Dear Karim:

Re: 1591 Bowser Street Development Transportation Review

1. PROJECT UNDERSTANDING

A proposed development is located along Bowser Street, south of Marine Drive in the District of North Vancouver. The development is planned to be a residential development with 16 (strata) residential units. With the proposed development, a parking review has been conducted and the results are summarized in this letter report. Specifically, this letter report studies whether:

- the site adequately supplies for the parking requirements and that no spillover condition is created on the area streets; and
- vehicles can adequately operating with the to-date parking layout and circulation design as well as the driveway access.

2. RECEIVED INFORMATION

The parking review was prepared based on drawings provided by Douglas Johnston Architects Ltd. The drawings provided were revised August 15, 2013. This version of the drawings is attached to the end of this letter as record.

In addition, the drawings provided the following residential breakdown:

Table 1 - Residential Breakdown

No.	Unit Type	Gross Floor Area (Sq. Ft.)
1	1 bedroom	792.8
2	1 bedroom	795
3	Bachelor	645.5
4	Bachelor	644.9
5	Bachelor	684.2
6	Bachelor	675
7	Bachelor	797.1
8	2 bedroom	1277.4
9	2 bedroom	1274
10	2 bedroom	1278.1
11	3 bedroom	1254.7
12	1 bedroom	1072.5
13	3 bedroom	1496.1
14	2 bedroom	1111.7
15	2 bedroom	1068.7
16	2 bedroom	1062.4

3. PARKING SUPPLY REVIEW

Based on the provided drawings, it is shown that there are 22 parking stalls currently supplied. In order to quantify the existing parking supply requirement adequacy, the District of North Vancouver Parking Supply Bylaw and the Metro Vancouver Apartment Parking Study are referenced. The following sections outline supply requirements based on each document.

3.1 District of North Vancouver Parking Policy

Based on the District's Administrative and Operation Police - Reduced Parking Rates for MF Residential Parking, the required minimum parking ratio is 1.1 spaces per unit plus 0.1 spaces per residential visitor for multi-family residential developments within 400 metres of a Frequent Transit Development Area. Based on these policy rates, the current residential breakdown will **require 20 parking stalls where 2 stalls are for visitors and 18 are for residents.**

Based on a direct comparison of currently supplied stalls to those required based on the District of North Vancouver, the proposed design shows a surplus of 5 stalls.

The District also requires that 20% of the parking spaces (5 of the 22 spaces) provide an appropriate mix of Level 1 and Level 2 charging stations for electric vehicles, with wiring for Level 1 plugs. These charging stations are planned to be provided by this development.

3.2 Metro Vancouver Apartment Parking Study

The Metro Vancouver Parking Study is a comprehensive examination of parking supply and demand within the metropolitan area. The study also examined parking supply and demand of sites near transit, which is applicable in this analysis case.

According to the Study, various rental parking demand rates are provided. This development fits in the Frequent Transit Network (FTN) / Bus Only category where the proposed site is within 400m of Translink's FTN via a bus route.

Based on this category, the following demand rate per the research study:

Table 2 - Metro Vancouver Apartment Parking Study Demand Rates - FTN Bus Only

Unit Type	Vehicles per Household
1 Bedroom Strata	1.09
2 Bedroom Strata	1.35
3 Bedroom Strata	1.40

Note that as the information provided do not include a demand rate for Bachelor units, we have assumed to the Bachelor units to demand the same parking space requirement as the 1 Bedroom units.

With the proposed development breakdown and the demand rates, the total resident parking demand is expected to be in the order of 20 vehicles. This is consistent with the parking requirements based on the District's policy for multi-family residential developments within 400 metres of a Frequent Transit Development Area.

Aside from resident parking, the rates provided above do not include visitor parking requirements. The Study notes, with a small sample size, that the demand for visitor parking is in the range of 0 to 0.06 stalls per unit. For conservative purpose, we apply a 0.1 stall per unit equating to a requirement of 2 visitor spaces.

Based on the conservative calculation of the stall demand based on this document, a supply of 22 spaces is adequate.

3.3 Parking Circulation / Layout / Access

A circulation analysis was prepared for the underground area. In general, we based our analysis on the District of North Vancouver Zoning Bylaw Part 10 whilst using a TAC standard passenger vehicle as a normal sized vehicle and a Ford Taurus as a "small cars only" vehicle during circulation analysis using AutoTurn.

3.3.1 AutoTurn Circulation Analysis

Based on the results of our circulation analysis, we found the following.

i) A test vehicle would adequately be able to enter and manoeuvre around the parking aisles (see **Exhibit** 1).

ii) Based on the TAC standard passenger vehicle, all parking stalls can be accessed. To improve accessibility for the spaces close to the far end of the parkade, stalls 8, 16, and 17 were made slightly wider, with stall 8 designated as disabled parking. Stall 17 would require some manoeuvring; as such, we recommend that Stall 17 be designated for small vehicles only. The vehicle sweep analyses are shown in **Exhibits 2** and **3**.

iii) Both a "tower" fire truck and a solid waste utility truck can navigate to and from Bowser Avenue and from the south lane onto the east lane. The analysis is shown in **Exhibits 4** through **7**.

3.3.2 Small Cars Stalls Provided

Based on the parking bylaw, it was indicated that there should be no more than 35% "small cars only" stalls. With a total of 22 stalls, the total number of "small cars only" stall provided is adequate.

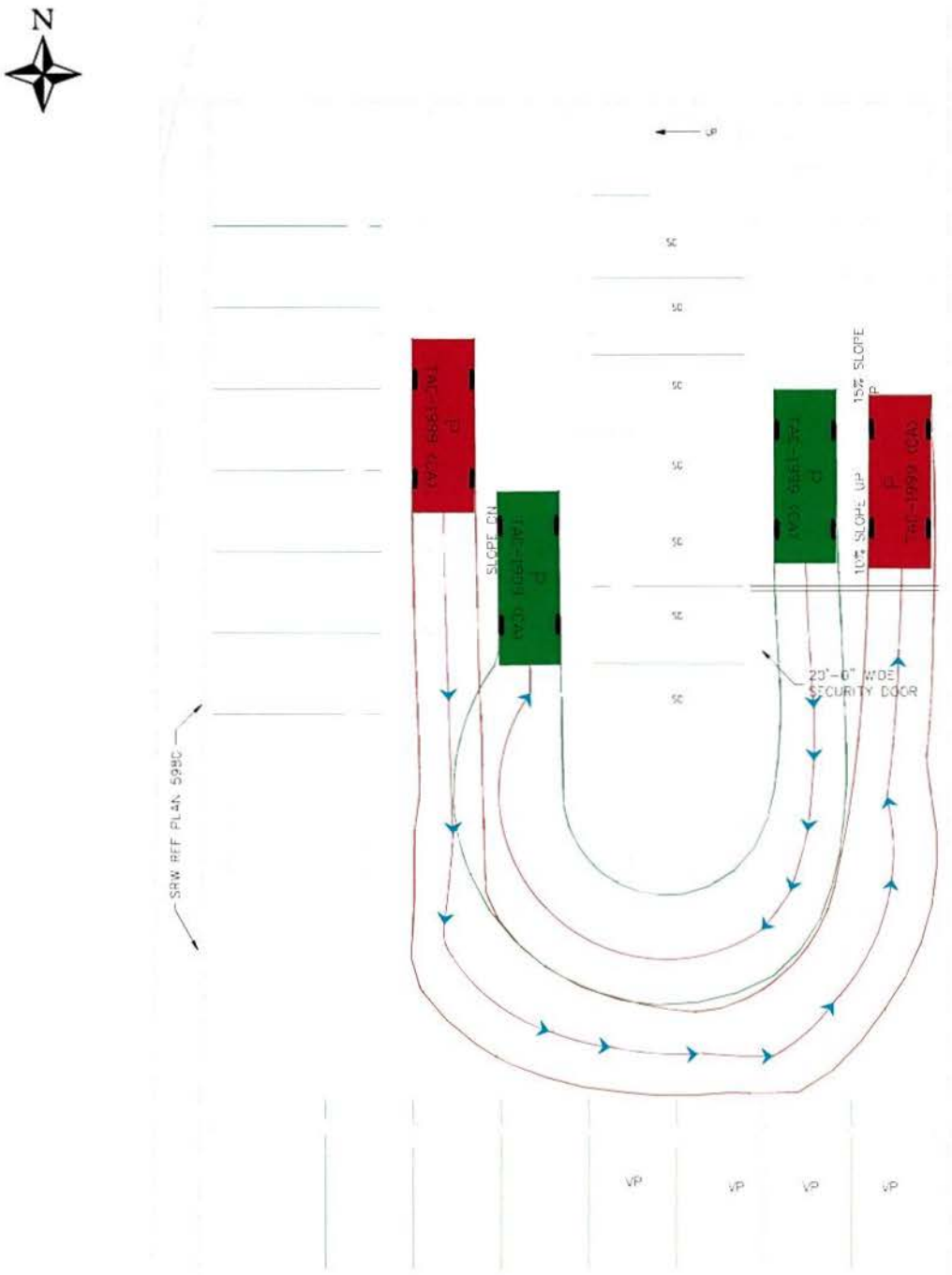


Exhibit 1
Vehicle Movement Paths

1591 Bowser Street
4986.01

bunt & associates

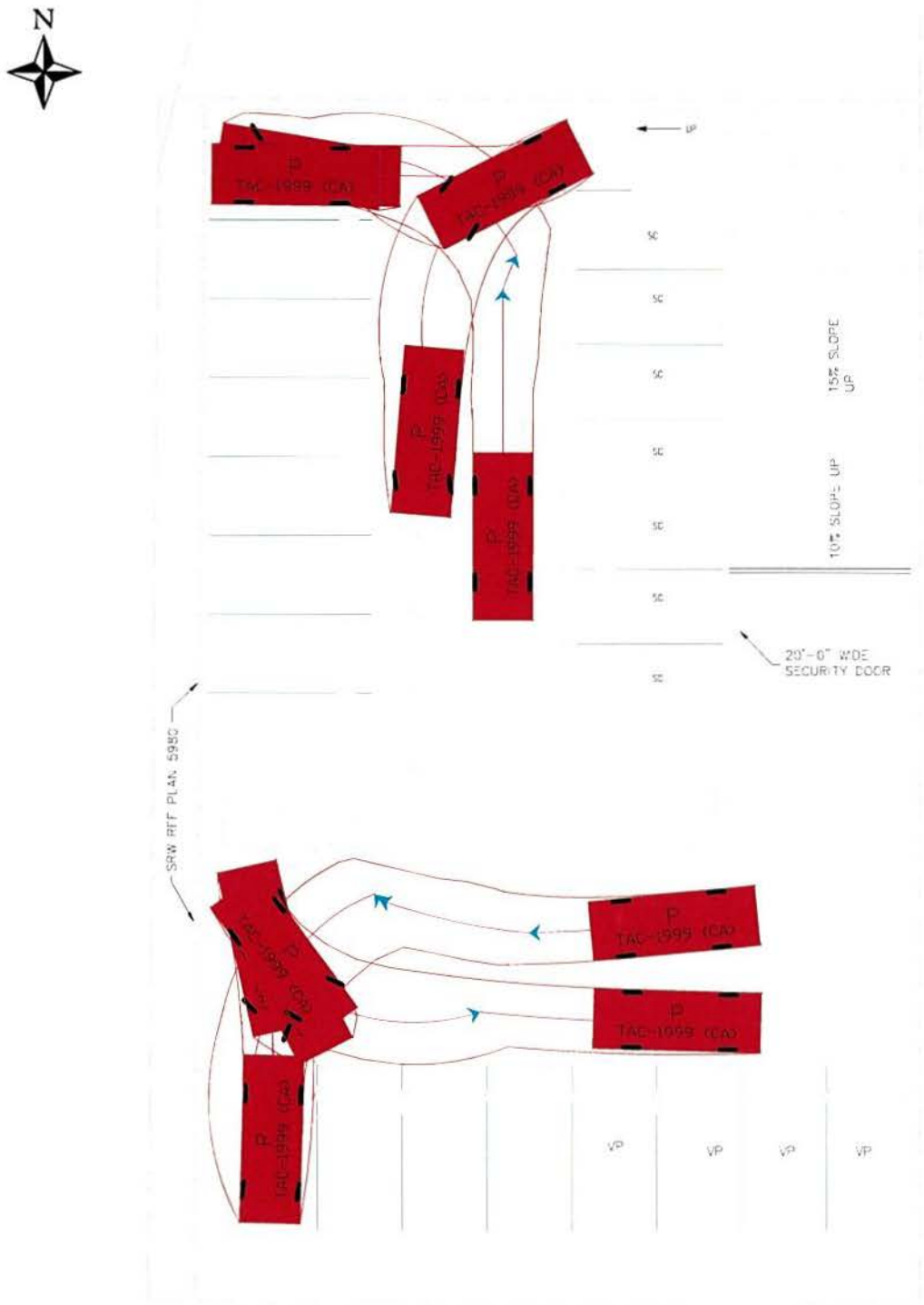


Exhibit 2
Parking

1591 Bowser Street
4986.01

bunt & associates

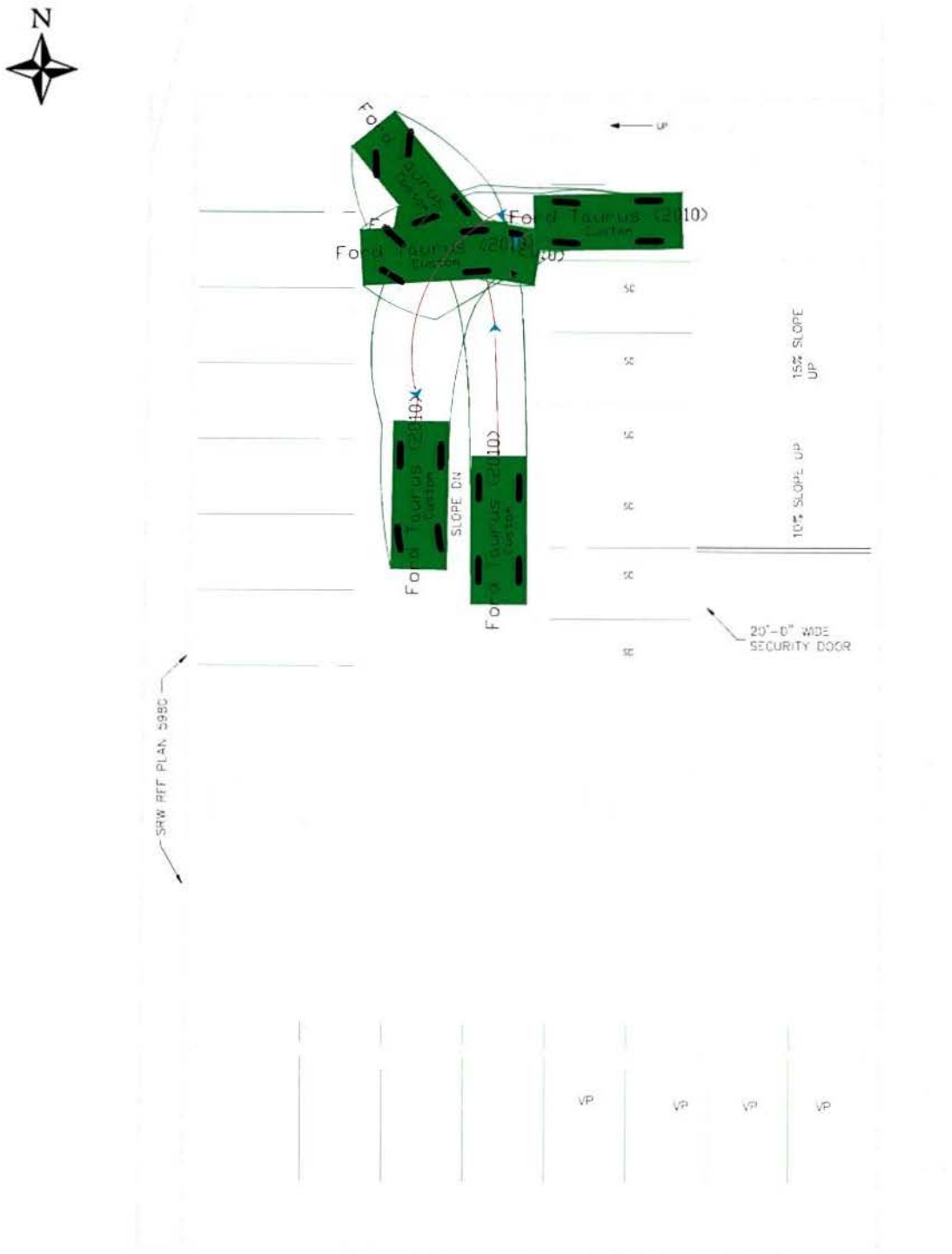


Exhibit 3
Parking (Small Car)

1591 Bowser Street
4986.01

bunt & associates

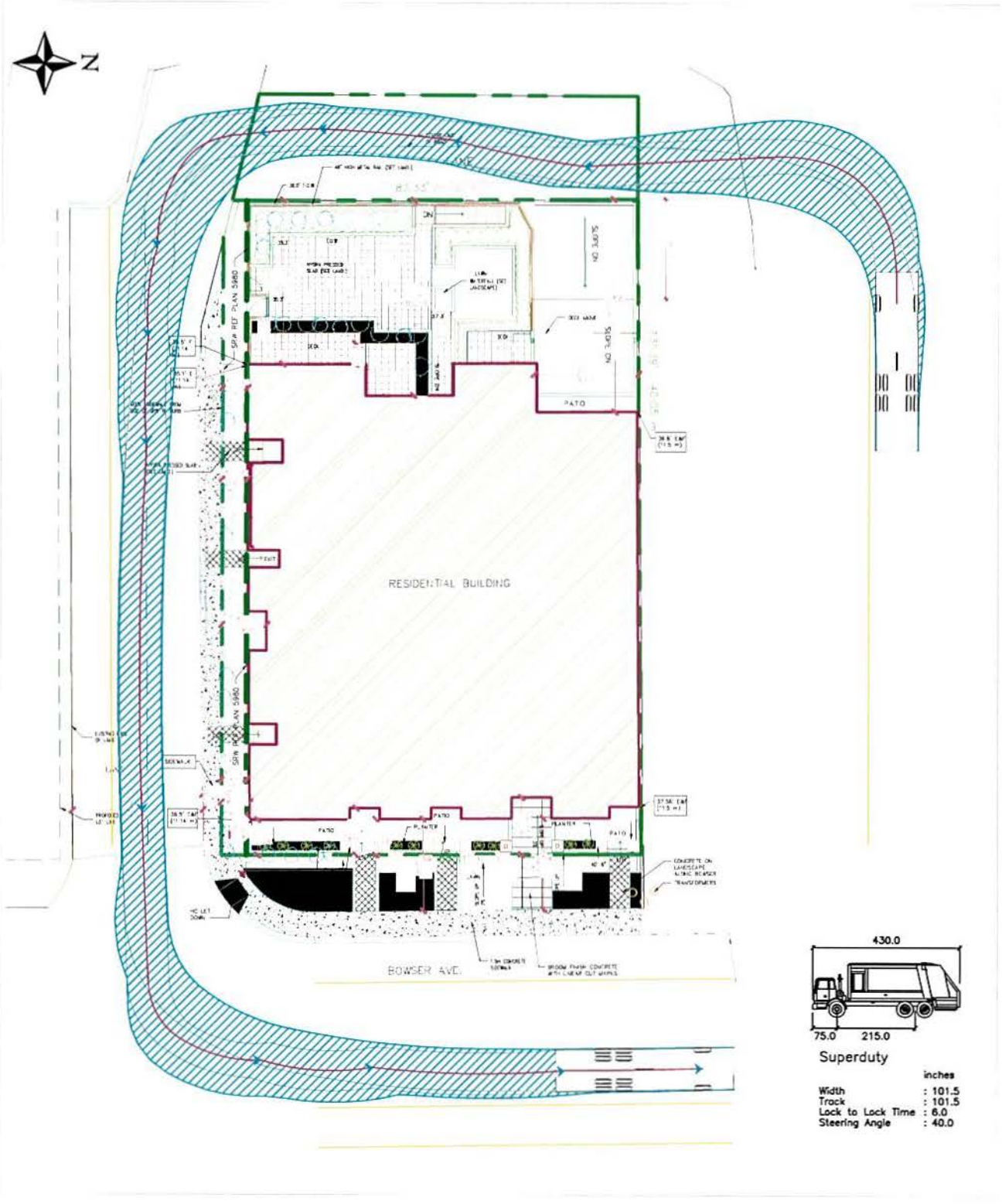


Exhibit 4

Turn Path Review - Garbage Truck

1591 Bowser Street - Update
4986.02

bunt & associates

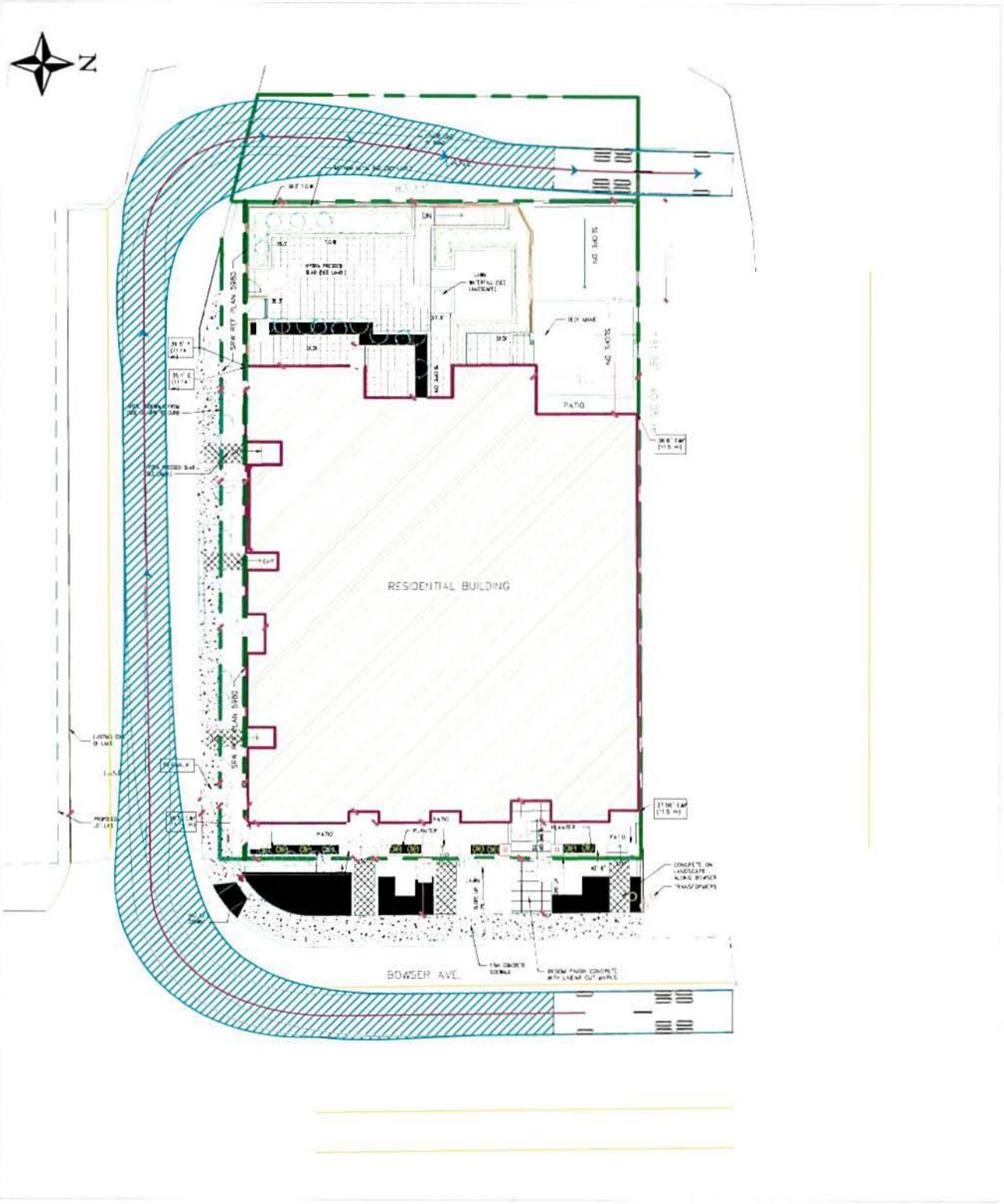


Exhibit 5

Turn Path Review - Garbage Truck

1591 Bowser Street - Update
4986.02

bunt & associates

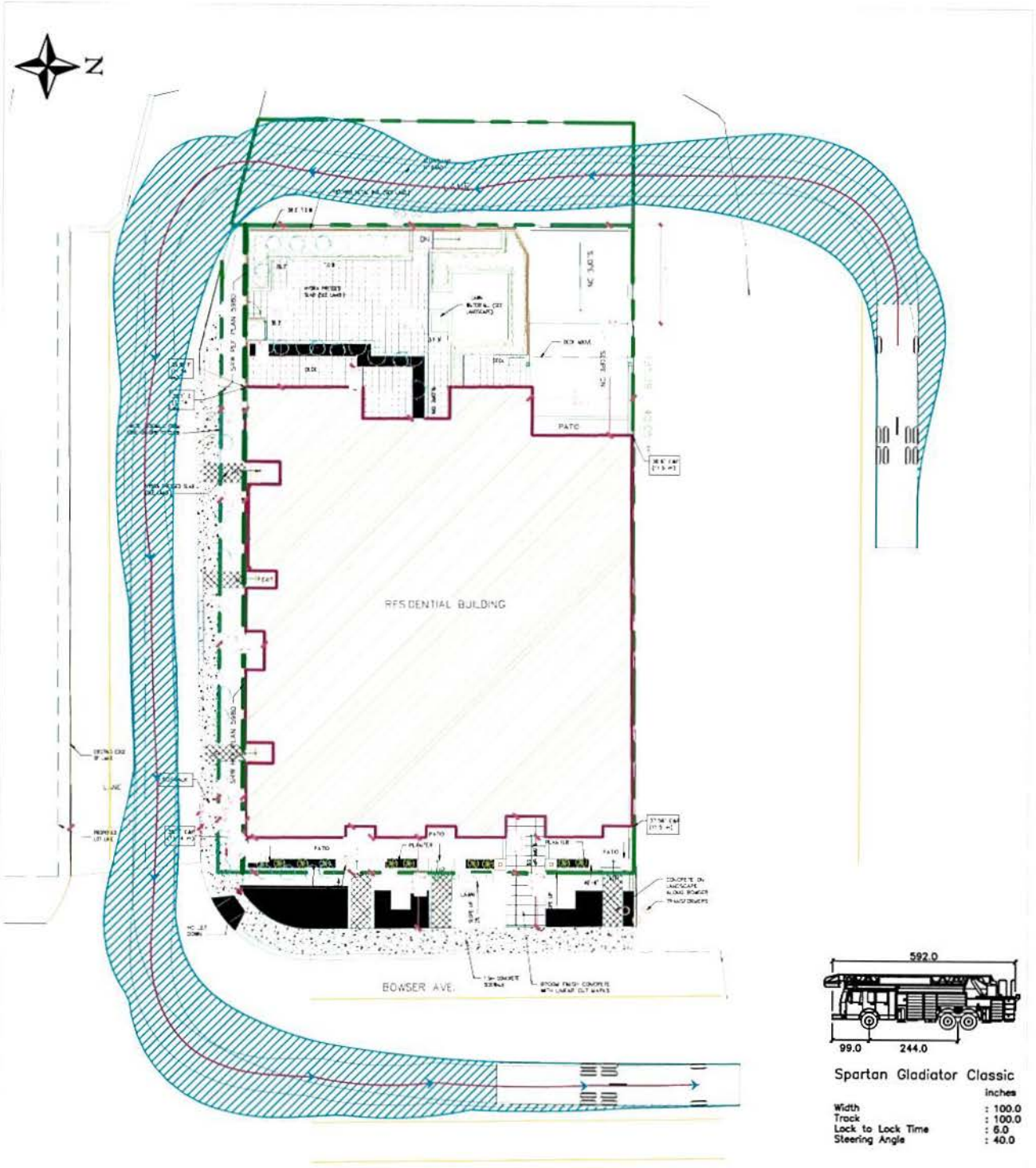


Exhibit 6

Turn Path Review - Fire Truck

1591 Bowser Street - Update
4986.02

bunt & associates

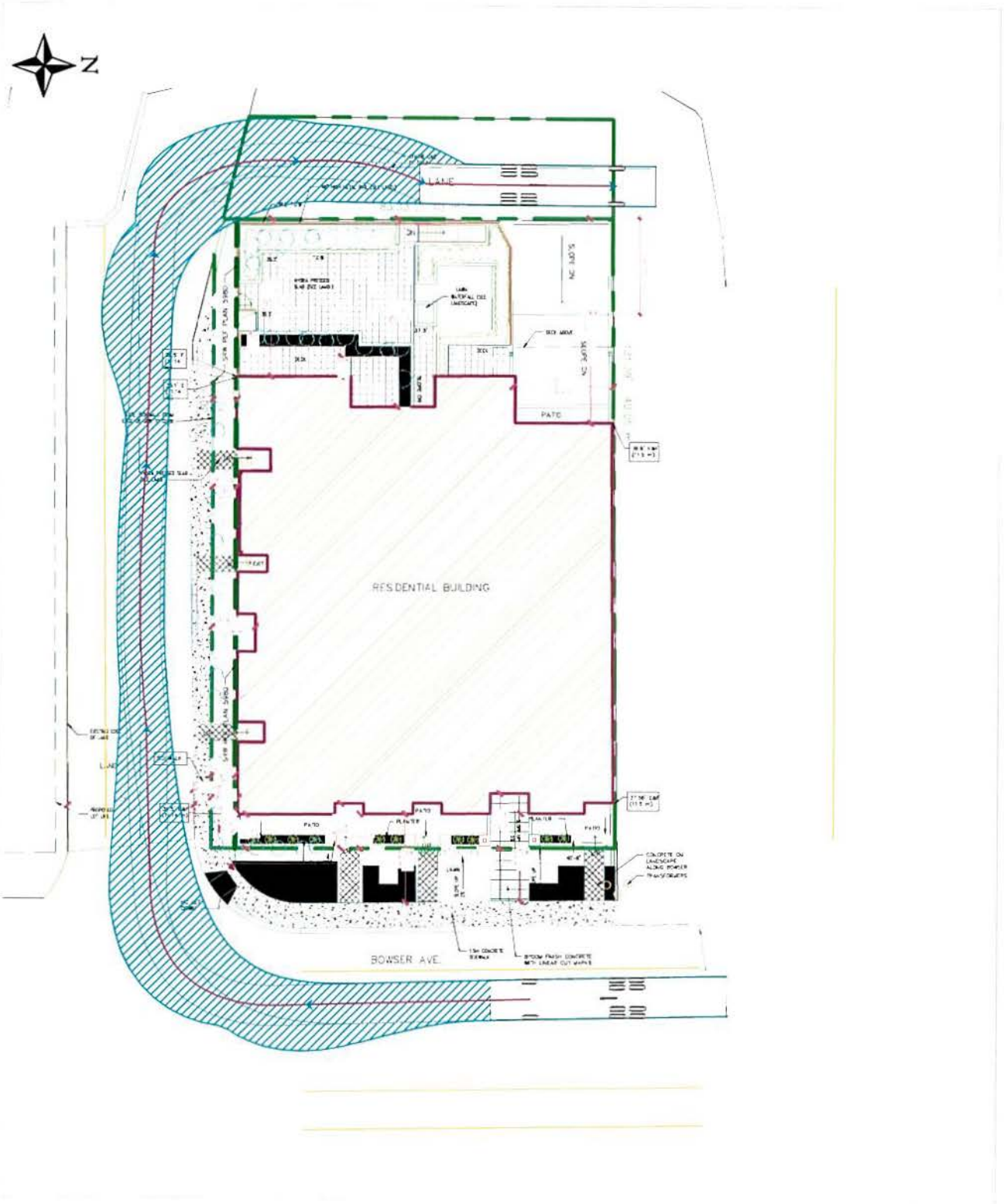


Exhibit 7

Turn Path Review - Fire Truck

1591 Bowser Street - Update
4986.02

bunt & associates

3.3.3 Parking Spaces Dimensions and Aisle Widths

According to the District of North Vancouver Parking Bylaw, the parking facility dimensions as shown in **Table 3** are acceptable.

Table 3 - Parking Facilities Specifications

Parking Type	Width (ft)	Length (ft)	Clear Height (ft)
Standard Space	8.83	18.7	6.9
Small Car Space	8.5	16.1	6.9
Disabled Space	12.1	18.7	6.9

The current north-south parking aisle width is 22 feet - 4 inches. The current requirement for the District is 23 feet based on Section 1005.6 of the Zoning Bylaw. It is suggested that this requirement be met; however, the analysis indicates that vehicles can manoeuvre adequately. It is suggested that the lengths of stalls be adjusted to comply with the above table specifications as well.

3.3.4 Sightline Review

A sightline review to document the visibility for pedestrians and vehicles exiting the underground parking and the corner of the lanes was undertaken. The summary of the sightline analysis is summarized in **Table 4** using the methods for calculating the safe stopping sight distance as described in the *Geometric Design Guide for Canadian Roads* (TAC). The analysis assumed that drivers cannot see over or through walls, and that vehicles are driven along a typical path on the lanes and accesses.

Table 4 - Sightline Analysis

Location	Available Sightline (m)	Safe Speed (km/h)
Driveway exit looking north	16.9	21.1
Driveway exit looking south	21.1	25.7
Southbound lane looking east	17.2	21.5
Southbound lane looking west	17.7	22.0
Eastbound lane looking north	18.2	22.6
Westbound lane looking north	21.1	25.7

The results indicate that adequate sightlines are provided for lane vehicle speeds of 20 km/h, which is the District's legal speed limit for lanes, and an appropriate vehicle speed for back lanes, especially with potential sightline constraints. To provide additional sightline-related vehicle safety, other items such as mirrors (to view vehicles around corners or exits), speed humps (to keep travel speeds low) and/or signage informing drivers of a safe driving speed or warning them of driveways can also be provided.

4. TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management or TDM refers to strategies intended to change travel behaviour (how, when and where people travel) in order to achieve specific objectives such as reduced traffic congestion, road and parking construction cost savings, increased safety, improved mobility for non-drivers, energy conservation and pollution emission reductions.

Given that the development meets the District's parking requirements due to its proximity to a Frequent Transit Development Area, the development does not require a TDM strategy. However, there are some TDM measures that could help reduce the number of vehicle trips and parking demand associated with the site should they be implemented.

4.1 Bicycle Facilities

The provision of end-of-trip bicycle facilities such as racks and bicycle lockers would help encourage residents and visitors to bike to and from the development instead of drive, and have been planned for this development. With bicycle routes available nearby with both local and regional connections (such as Marine Drive, the Spirit Trail along Welch Street, Tatlow Avenue, and Capilano Road), biking would be a viable travel mode option.

4.2 Eco-Friendly Facilities

Accommodation for electric vehicle charging stations is another measure that will be provided. This consists of equipping spaces with a receptacle to accommodate electric vehicle charging equipment. The provision of these spaces would further encourage the use of this eco-friendly and sustainable transportation mode. Based on the District's requirements, 20% of the parking spaces (five spaces) would require electric car plug-ins, with wiring for Level 1 plugs. As noted earlier, these charging stations are to be provided by the development.

4.3 Car Shares

Car-sharing schemes tend to thrive in higher density communities similar to the neighbourhood of this development. Communities with higher densities can support a higher level and wider mix of local amenities; more transit services; pedestrian-orientated street design; and lower levels of vehicle ownership and hence make car-sharing more attractive. Moreover, in higher density communities, vehicles can be accessed by a large number of people within a 400-metre radius (or 5-minute walk), which make them attractive locations for operators. From a parking standpoint, car-

sharing schemes can have a profound effect on parking demand, where research has shown that one car-sharing vehicle can potentially reduce between 15 and 20 vehicles from the road network.

The provision of parking spaces specifically for car shares would reduce the need for people on site to require a full-time vehicle for occasional trips, and thus overall parking demand.

5. CONSTRUCTION MANAGEMENT PLAN

Given that the nearby Marine Drive is one of the most important streets within the District, and on-street parking fronting nearby residents can be highly used, these roads should not encounter delays or occupy spaces due to a high number of construction vehicles on the road network. The following notes form guiding principles for the future contractor. The contractor will be notified of the importance of this guidance and will be urged to comply with the general principles and rationale. Note that a detailed construction management plan will be prepared when the contractor is engaged.

- At this very early stage, the strategy is to keep construction vehicles from occupying any part of Capilano Road or Bowser Avenue except the area directly fronting the development along Bowser Avenue. Opportunities for materials storage and vehicle manoeuvring will be maximized on site. Potential two-way alternating traffic on Bowser Avenue could be necessary during construction.
- Scheduling of heavy truck traffic to avoid peak commuter periods must be performed to ensure impacts to the surrounding road network are minimized. Although adding generally low volumes of construction vehicles during any given peak hour will not severely impact the road network, any further increases to the number of construction vehicles will exponentially deteriorate operations for intersections. Where possible, larger construction vehicles should access the road network during off-peak hours. Expected peak hours are 7-9am in the morning and 3-6pm in the afternoon on weekdays.
- During phasing and scheduling planning, the contractor must be mindful to maximize use of available space on site for parking. It is the responsibility of the contractor to ensure that this is adhered to.
- Any construction traffic impacts affecting the public, that is potential usage of corridors within the immediate vicinity of the site, must be conveyed to the public. The method of information conveyance will be determined with District staff upon engagement of the contractor.
- As the lanes surrounding the site are generally narrow, construction vehicles must utilize Bowser Avenue as entry to the site. It is noted that per the DNV heavy vehicle regulations, no heavy vehicle exceeding 30,000 kilograms shall access Capilano Road. Heavy vehicles are expected to access Marine Drive, Capilano Road, and Bowser Avenue within the vicinity of the project area.

- The construction plan must ensure that the sidewalk fronting the site will be open at all times. Where closure is required, a suitable alternative route adjacent to the existing sidewalk facility needs to be provided.

With the above principles, the following should be provided by the contractor as part of their traffic management plan to the District:

- Traffic control plans for roadways and sidewalks for each phase of development if applicable shall be submitted to the District for approval prior to the commencement of construction;
- Anticipated total maximum daily truck loads per phase of development must included;
- Concept plans for construction staff parking for each phase of development; and
- A detailed communications plan.

6. CLOSING

We trust the above parking and circulation review to be acceptable. Note that the suggestions provided will be subject to District approval. Should further information be sought, please kindly contact the undersigned.

Best Regards,

Bunt & Associates

Kanny Chow, P.Eng., PTOE
Senior Transportation Engineer

EXCERPT FROM THE ADOPTED MINUTES OF THE JUNE 12, 2014 MEETING OF THE ADVISORY DESIGN PANEL

3. NEW BUSINESS

a. 1591 Bowser Ave. – Detailed Rezoning and Development Permit Application for 16 unit, 3 storey apartment project. (File: 08.3060.20/020.14)

Mr. Doug Allan of the District Planning Department gave a brief overview of the detailed application and site context. The surrounding properties consist of existing single storey commercial buildings to the north on Marine Drive, a car dealership to the west, two storey townhomes to the south and a commercial building across Bowser Avenue to the east. The development site currently has a two storey commercial building with rear lane access. It was noted that the existing rear lane is wider than normal creating a larger separation between the proposed development site and existing townhomes to the south.

The site is designated in the OCP as Commercial Residential Mixed Use Level 1 (CRMU1) and current zoning of the site is Marine Drive Commercial Zone 9 (C9). The site is within Development Permit Areas for Form and Character of Development (Commercial and Mixed Use Buildings and Energy and Water Conservation and Greenhouse Gas Emission Reduction. The application will be reviewed against the applicable design guidelines for each designation, as well as the draft Multi-Family Housing Guidelines.

On December 12, 2012, the Panel reviewed the preliminary application. At that time, the project involved a larger site that incorporated the lane to the west, with a proposal to construct a 26 unit, 4 storey building with 15.7m height, an FSR of 1.83, and a parking variance of five spaces.

This revised application does not include consolidation of the lane to the west and involves a rezoning application to permit a 16 unit, three storey residential building with a height of approximately 10.4m, an FSR of 1.65 , underground parking with 23 spaces and a parking variance of nine spaces.

Mr. Allan noted there will be a streetwall ranging from two to three storeys, with minimum 4.5m deep recessed balconies and a common open amenity space. It was noted that the north elevation of the project will need to be handled carefully due to visibility from Marine Drive.

Mr. Allan introduced the design team, the project architect, Mr. Doug Johnston, the landscape designer, Mr. Thomas Kyle and the developer's representative, Mr. Matt Stogryn.

The Chair thanked Mr. Allan for his presentation, welcomed the applicant team to the meeting and outlined the procedure to be followed in reviewing the proposal.

Mr. Doug Johnston, the project architect, confirmed that the current proposal is reduced in massing and height due to the decision to abandon the lane purchase.

The revised project proposes that the main floor units have direct street access to allow for live/work units, and to create a more pedestrian feel which is in keeping with the recent development occurring along Marine Drive.

Mr. Johnston noted that the design incorporates an outdoor amenity space for the residents at the west side of the project, and the upper floor units will have larger than required balcony sizes. He also pointed out that the third level is stepped back with large planter features.

The main goal of the project design and materials selected is to allow for a softer, residential character, which at the same time references the industrial history of the neighbourhood. The proposed materials are exposed concrete with pattern details, brick wrapped around the building on the lower floors, and siding on the upper floors. In addition, galvanized steel is proposed on the stair tower and zinc on the canopies, Mr. Johnson reviewed a sample board of the selected materials.

It was noted that the north wall is a proposed zero lot line with a treatment to the end wall in a pattern with hardiplank in three different colours.

Mr. Johnston pointed out that Bunt & Associates are working to address the underground parking requirements in the project.

Mr. Thomas Kyle the project landscape architect, spoke to the landscape design and noted details around the streetscape design, which is intended to be simple and compliment the architecture. One priority noted is to create a strong presence along the street for all four seasons, and selected trees include both summer and fall colours, with manageable heights.

The amenity space at the west side allows a number of options for use and incorporates a water feature, with two steps leading to a turfed area with beech trees and plantings.

The Chair thanked the design team for their presentation and asked if there were any questions of clarification from the Panel members.

Questions of clarification were asked of the design team on the following topics:

Is the plywood cladding material to be finished? Answer: Yes.

Will there be gutters for the awnings? Answer: No.

What is the color for the zinc? Answer: Natural zinc, slate in color.

What is the clearance at the north elevation? Answer: Approximately 6 inches.

Is this a wood frame building? Answer: Yes.

What is the width of the wood balcony projections? Answer: Approximately 12 inches.

What type of material is proposed for the deck at the west elevation? Answer: Not yet determined.

Who is the target market? Answer: Variety of potential purchasers.

The corridor widths seem narrow, is this wheelchair accessible? Answer: Corridor widths have been reviewed and are acceptable and the project could include installation of automatic door openers to assist with access.

How does a resident access the common waste disposal area? Answer: Exterior access – through the courtyard and down two steps.

Could the green grass amenity area be made wheelchair accessible? Answer: Ramping could be incorporated to make this all one level.

The Chair thanked the applicant team and staff for their clarifications and asked for comments from the District Urban Design Planner, Mr. Frank Ducote.

Mr. Ducote expressed some concerns with the detailing of the north wall, as well as the colour selections for the project - he suggested that the proposed grey/charcoal colour scheme could be livelier with a feature colour, and could include the use of handrails in a dramatic colour.

He noted that the front entrance needs stronger definition and suggested it could benefit from lighting. The stair tower feature might need more work to look and function better.

Mr. Ducote identified that the proposed west elevation appears to have the most glazing, but has no solar protection. Other elevations could potentially benefit from a review of both glazing and solar protection opportunities.

The Chair thanked Mr. Ducote for his comments and asked the Panel members for their input on the project.

In general, Panel members commended the applicant team on a far more successful proposal than the previous preliminary application submission. It was noted that the site is a complex one and suggested that this project could set a precedent for other projects in the area.

Some members of the Panel expressed concern with the hardi-panel material of the north wall, and noted that this could require ongoing maintenance, such as caulking, for the strata owners. In addition it was suggested that the awnings might need some review for better management of rainwater and access for convenient maintenance.

Panel members noted the waste disposal can only be accessed from the exterior, and suggested this be moved to an alternate location within the parkade or that an option for interior access be provided.

Some concerns regarding the amenity space were expressed, including the relationship to the adjacent private spaces and issues of over-viewing. Panel members suggested the addition of a buffer/screen between the amenity area and the at-grade residential units for more privacy. In addition, a Panel member noted an issue with the north exit

stairs and that fact that this route is directed through the amenity space into the rear lane.

It was noted that the use of more and varied plantings for the lane and pathway could help to create a more residential feel and ensure a degree of interest throughout the year. It was noted that underground utilities in the lane may limit planting options.

A Panel member noted that Building Code issues should be reviewed as that proposed roof and balcony extensions adjacent to the north property line would need to be of non-combustible construction.

It was suggested that the proposed design appeared unnecessarily complicated and could benefit from simplification and a reduction in materials, particularly to avoid large amounts of flashing at interfaces.

Some concern was expressed from a CPTED perspective for the proposed deeply-recessed doorways.

Panel members noted the importance of the view from Marine Drive and advised that the proposed front entrance treatment could be improved with some brick detailing.

It was suggested that the glazing on the west side of the building could benefit from shading to avoid these units be uncomfortably warm in summer.

The Chair thanked the Panel for their comments and invited the project architect to respond to the comments made by the Panel.

Mr. Doug Johnson thanked the Panel for their comments, and assured the Panel that the design team understands the comments and will address their concerns as the project moves forward.

The Chair thanked the applicant team and invited the Panel to compose a motion.

MOVED by Robert Heikkla and **SECONDED** by Kevin Hanvey:

> THAT the ADP has reviewed the proposal and recommends **APPROVAL** of the project **SUBJECT** to addressing the following items to the satisfaction of staff:
>
> - Consideration of simplification of the building envelope to allow for successful detailing;
> - Review of format of common amenity area with regard to the relationships to adjacent private outdoor spaces and accessibility of the amenity area overall;
> - Review of north wall treatment including transition of materials, durability and detailing;
> - Review of format of canopies particularly with regard to management of drainage;
> - Review of location and access to waste disposal facilities;

- Confirmation of building code compliance regarding balcony and roof projections within 1.2 m of north property line; and
- Review of glazing and solar gain issues for west elevation.

MOTION CARRIED

NORTH VANCOUVER DISTRICT

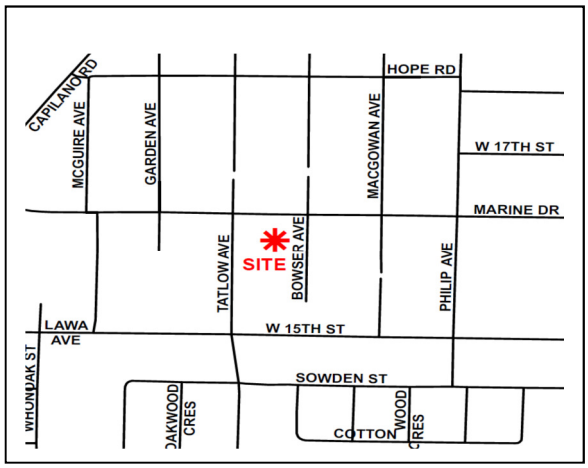
Explanatory Memo to the Advisory Design Panel

June 2, 2014
File: 3060-20/06.14

FROM: Doug Allan, Community Planner

SUBJECT: **DETAILED PLANNING APPLICATION – REZONING AND DEVELOPMENT PERMIT FOR AN APARTMENT PROJECT AT 1591 BOWSER AVENUE (LONDON MERIDIAN PROPERTIES INC.)**

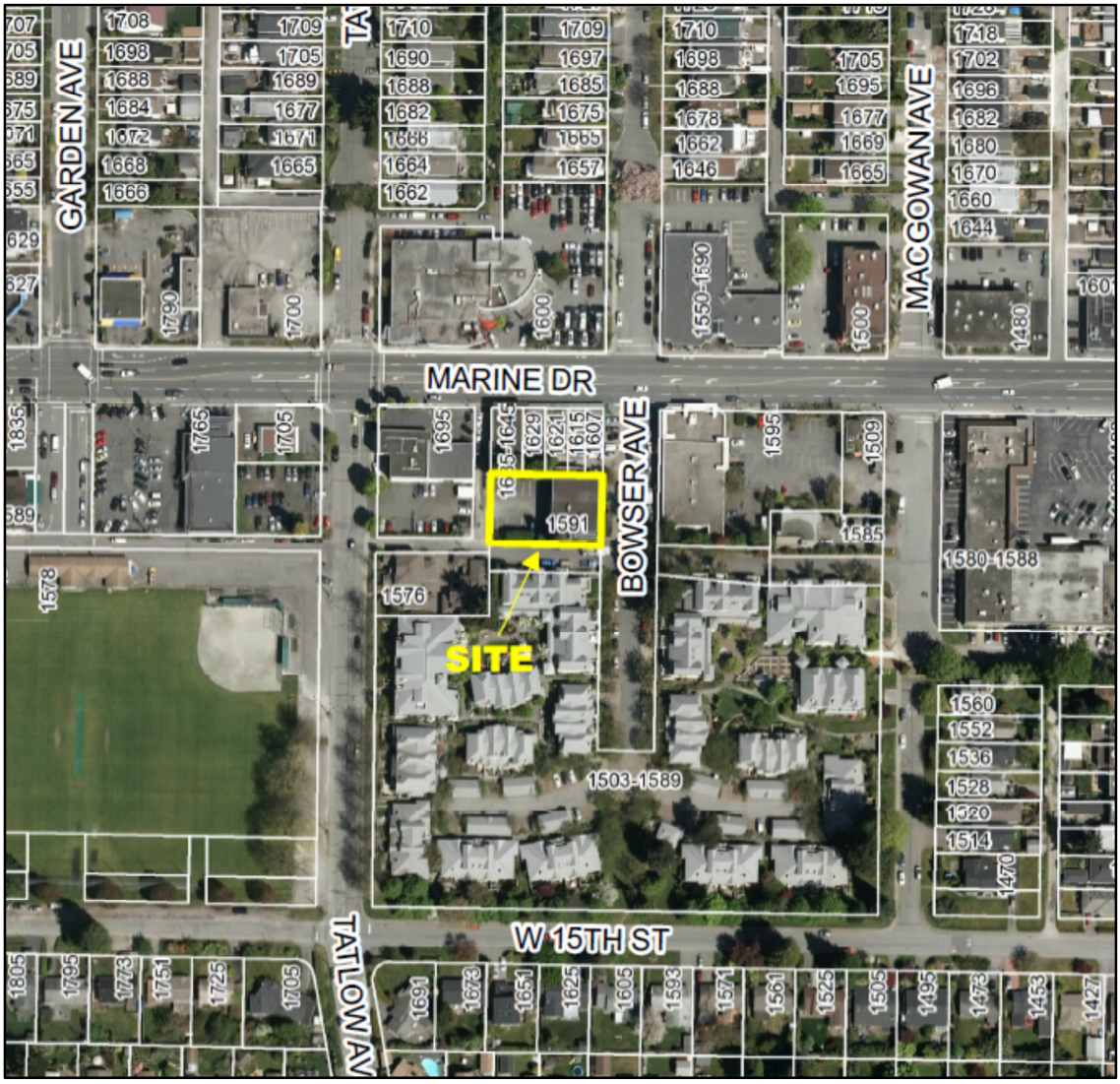
PROJECT INFORMATION



Application Type	Detailed
Applicant	Douglas Johnson, Architect, on behalf of the owner, London Meridian Properties Inc.
Architect	Douglas Johnson Douglas R. Johnson, Architect
Landscape Architect	Meredith Mitchell M2 Landscape Architecture
Official Community Plan Designation	Commercial Residential Mixed Use Level 1
Existing Zoning	Marine Drive Commercial Zone 9 (C9)
Green Building	As rezoning is required, the project must meet at least the minimum Green Building Strategy targets
Public Art	Public art will be considered within the scope of the overall Community Amenity Contribution requirement
Context	The development site is located on the west side of Bowser Avenue, south of Marine Drive and is bounded by lanes to the south and west.

The site is presently occupied by a 2½ storey commercial office building with both surface and under building parking.

Surrounding properties consist of: developed single storey commercial buildings to the north on Marine Drive, a car dealership to the west, 3 storey townhomes to the south and a commercial building to the east. The development site and the surrounding properties are illustrated on the following aerial photograph.



Design Guidelines: The site is designated as Development Permit Areas for: Form and Character of Development (Commercial and Mixed Use Buildings and Marine Drive Design Guidelines) and Energy and Water Conservation and Greenhouse Gas Emission Reduction and the application will be reviewed against the applicable design guidelines for each designation. In addition, it will be reviewed against the draft Multi-Family Housing Guidelines.

THE PROPOSAL:

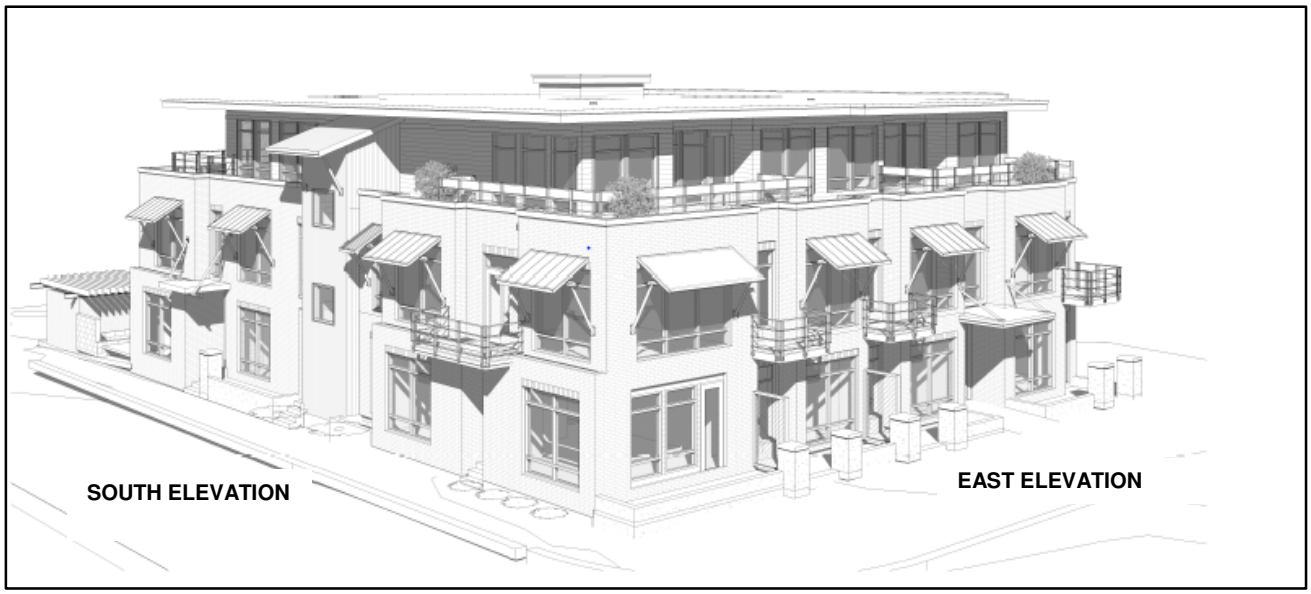
As outlined in the attached project plans, the proposal involves the development of a 3 storey apartment building containing a total of 16 units over underground parking. The building is approximately 18,188ft.^{2} in size, excluding the area of the parkade and is about 34ft. in height.

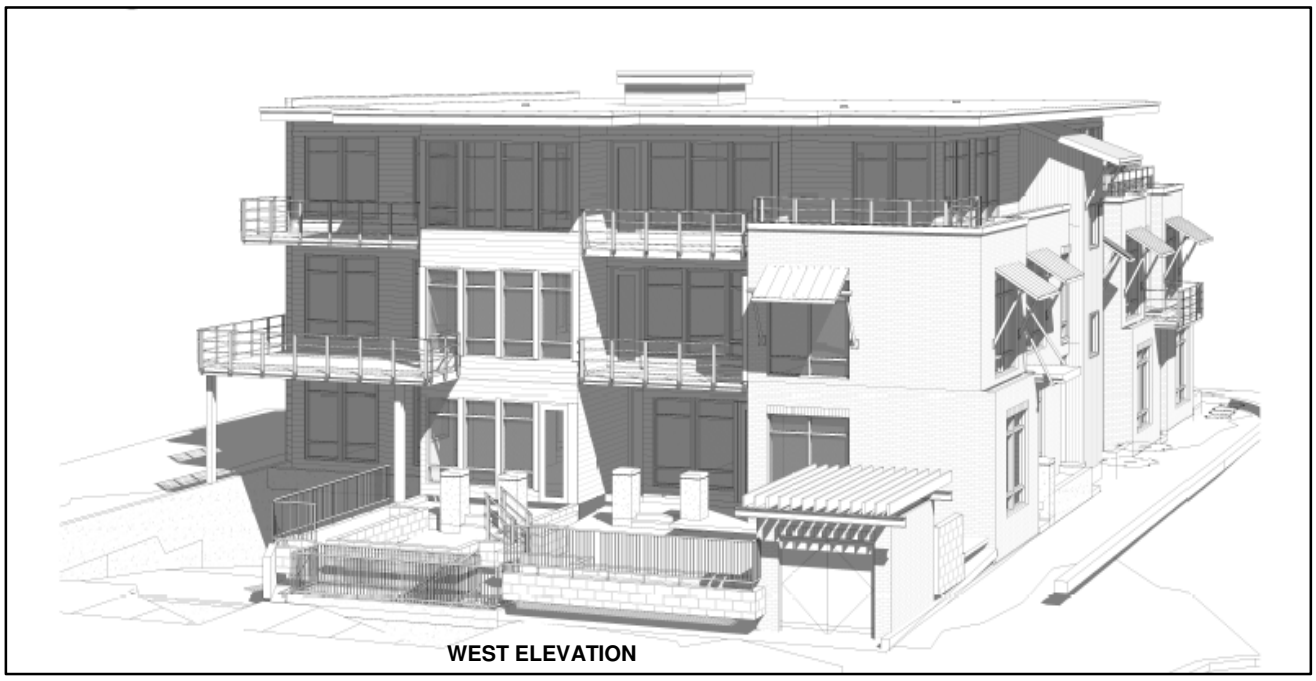
The apartment suites represent a mix of unit types and sizes including 5 studios; 3, one bedroom units; 6, two bedroom units and 2, three bedroom suites, ranging in size from 645ft.^{2} to 1496ft.^{2}.

A landscaped courtyard is provided on the west side of the site and the landscape concept incorporates additional planting along the south edge of the property

All parking is provided underground with access off the lane to the west. A total of 32 spaces, inclusive of visitor spaces, are required under the Zoning Bylaw, but the applicant is proposing 23 spaces, necessitating consideration of a 9 space variance. A parking study has been provided in support of the variance. In addition, the project will include 7 bicycle parking spaces for the residents located in a storage room in the underground parkade.

The following two images are 3 dimensional views of the building.





The applicant's written submission and reduced plans of the project are included as Attachments 1 and 2.

Previous ADP Consideration:

The ADP considered this project at the Preliminary Application on December 13, 2012. At that time, the project involved a larger 4 storey structure on a larger site that incorporated the lane to the west. A copy of the minute from that ADP meeting, as well as the applicant's response to the motion are included as Attachments 3 and 4 for the Panel's reference.

Design Guidelines

The following are key Multi-Family Housing Design Guidelines applicable to this project.

1. **Site Planning:**

    - provide communal outdoor space that is conveniently accessible and in a visible, sunny location with suitable wind protection

2. **Public Realm and Streetscape Elements:**

    - on corner sites, both frontages should be designed to face the street and the building should address the corner with strong massing;
    - pedestrian routes should be smooth, level and clear of encumbrances;
    - vehicular entrances to parking structures should be unobtrusive; and architecturally integrated and screened from view with landscaping, trellises

3. **Building Form and Architectural Elements**

    - new development should relate to the height and scale of neighbouring buildings by incorporating complementary building forms and transitional heights
    - design of new development should ensure the identity, function and access to the building is easily understood
    - where there is an exposed end-wall, it should be designed and finished to be aesthetically pleasing.
    - ensure that there are 'eyes on the street', in this case, along the lane to the south;
    - utilize durable materials
    - incorporate adaptable design features;
    - provide private or semi-private outdoor space for all units – 1.8m x 2.5m with minimum area of 4.5m^2; and
    - recess balconies into the main building façade and utilize transparent guardrails

In addition to the Multi-Family Guidelines, some of the Marine Drive Design Guidelines would also apply, including:

- site buildings at, or close to, the front property line to create a streetwall of 2 or 3 storeys;
- provide variety in the streetwall through building articulation;

URBAN DESIGN COMMENTS

The Urban Design Planner's comments will be provided at the meeting.

Doug Allan
Community Planner

Attach.

1. Applicants written submission
2. Project plans
3. December 13, 2012 ADP Minutes
4. Applicant's response to ADP comments

GeoPacific
Consultants Ltd.

#215 -1200 West 73rd Avenue, Vancouver, BC, V6P 6G5
Phone (604) 439-0922 / Fax (604) 439-9189

London Meridian Properties
300 - 2240 Chippendale Road
West Vancouver, B.C.
V7S 3J5

December 11, 2014
File: 12548

Attention: Karim Virani

Re: Geotechnical Investigation Report: Proposed Mixed Use Development
1591 Bowser Avenue, North Vancouver, B.C.

1.0 INTRODUCTION

We understand that London Meridian Properties is proposing to re-develop the above mentioned site. Based on preliminary plans provided, the development will include four levels of above grade development over a single level below grade parking level. Main and parking level elevations are assumed to be 11.68 m and 8.79 m geodetic, respectively. We anticipate reinforced concrete construction for the parking and main floor levels, with wood framed construction likely above.

This report has been prepared exclusively for London Meridian Properties, for their use and the use of others on their design team. The report presents the results of an investigation of the soil conditions at the proposed development site and also makes recommendations for the design and construction of the new building.

2.0 SITE DESCRIPTION

The proposed development site consists of a single lot located on the west side of Bowser Avenue, south of Marine Drive, in North Vancouver. The lot is currently developed with a two level commercial building with basement level located at the east side of the site and paved at grade parking at the west side. The site is rectangular and relatively flat.

The site is bounded by Bowser Avenue at the east side, a lane to the south and adjacent private lands to the north and west. A new lane easement is proposed at the west side of the property.

A plan showing the location of the existing improvements on site as well as surrounding private and public lands is shown on our Drawing 12548-01, attached to this report.

3.0 FIELD INVESTIGATION

A site specific investigation was initially conducted on November 19, 2014 using an auger drill rig supplied by On Track Drilling. The drill was unable to penetrate deeper than about 2.1 m below current site grades at all 3 test hole locations, which was not sufficient to identify the position of the groundwater table. Subsequently on December 9, 2014 an ODEX drill rig was mobilized to the site and 2 additional test holes were put down to 9.1 m depth. Wells were installed in these ODEX test holes to permit locating and long

term monitoring of the groundwater table as required by the District of North Vancouver. All test holes were logged in the field by a geologist from our office.

The test hole results are presented in Appendix A of this report.

The approximate locations of the test holes with respect to the development site is shown on our Drawing 12548-01, following the text of this report.

4.0 SUBSURFACE CONDITIONS

4.1 Soil Conditions

The soil classification used herein is based on the "Unified Soil Classification System", except as noted otherwise. According to the Geological Survey of Canada Surficial Geology Map 1484A, the site is underlain by post glacial fan deposits, put down by the Capilano River, overlying glacial deposits.

The soil profile as encountered in our test holes consisted of a thin layer of FILL underlain by dense to very dense cobbly SAND AND GRAVEL to the maximum depth of exploration. A detailed description of the soils encountered is given below.

FILL

In general our test holes were drilled through pavements and thus the upper layers are comprised of asphalt overlying pavement gravel fills. Fill was encountered to a depth of about 1.2 m and generally consists of loose to compact sand with trace to some gravel mainly brown and dry.

SAND & GRAVEL

A sequence of dense to very dense cobbly sand and gravel was observed in all test holes to final depths of 9.1 m below current site grades. Occasional sandy zones were noted within the sand and gravel.

For a more detailed description of the subsurface soil conditions refer to the test hole logs provided in Appendix A, following the report.

4.2 Groundwater Conditions

Groundwater was encountered below 6 m during our drilling. After wells were established and allowed to equilibrate, static groundwater was identified at between 5.9 and 6 m below present site grades in the parking lot. Groundwater levels can be expected to vary seasonally, with generally higher water levels when the Capilano River is in flood, though given the distance between the site and the river, changes in water table are not expected to be large (0.5 m or less).

The development is expected to be founded well above the water table and we do not expect any groundwater to be encountered during excavation or foundation construction.

5.0 DISCUSSION

We understand the development will include 4 levels of above grade construction over a single parking level constructed below grade. We expect that superstructure loading would be moderately heavy whereas slab on grade loading is expected to be relatively light, less than 5 kPa.

The below grade structure will be constructed directly against or near to the property lines, thus shoring will be required to support a vertical excavation.

The underlying sand and gravel soils are very strong and well suited to supporting the proposed development structures. We expect that the new building will be constructed on conventional pad and strip foundations. No special ground treatment is anticipated, provided that all foundations are constructed on the undisturbed, dense to very dense sand and gravel.

We expect subgrade soils will be well drained and therefore pumped sumps will not be required to control surface water or groundwater. A conventional drainage system should be constructed around the below grade parkade, to control any transient seepage from the surface.

We confirm, from a geotechnical point of view, that the proposed development is feasible provided the recommendations outlined in Section 6.0 of this report are incorporated into the overall design.

6.0 RECOMMENDATIONS

6.1 Site Preparation

The existing structures, pavements, underground services, all organic materials, fills, and loose or otherwise disturbed soils must be removed from the construction area.

We expect that the depth of stripping at this site will be dictated by the proposed underground parking elevations rather than the condition of the soils present on-site.

It may be necessary to re-compact the sand and gravel subgrade after excavation for foundations due to excavation induced disturbance. Crushed gravel as described in Section 6.4 or engineered fill should be used beneath the slab-on-grade only.

"Engineered Fill" is generally defined as ***clean sand to sand and gravel*** *containing silt and clay less than 5 % by weight*, compacted in 300 mm loose lifts to a minimum of 98% of the ASTM D698 (Standard Proctor) maximum dry density at a moisture content that is within 2% of optimum for compaction.

6.2 Spread Foundations

Based on the preliminary design information provided and the results of our field investigation, we envisage that foundations will be supported on the dense to very dense sand and gravel as described in Section 4.1 above. We expect that the sand and gravel will provide satisfactory support for the proposed development on conventional strip and pad foundations and recommend that foundation bearing on this material be designed using a serviceability limit state (SLS) bearing pressure of 400 kPa. Factored ultimate limit state (ULS) bearing pressure can be assumed to be 2 x the serviceability limit state bearing pressure.

Irrespective of allowable bearing pressures, footings should not be less than 450 mm in width for strip foundations and not less than 600 mm in width for square or rectangular foundations.

We estimate for foundations designed as recommended settlements will not exceed 25 mm total and 19 mm over 10 m differential.

Foundation subgrades must be reviewed by a geotechnical engineer prior to footing construction.

6.3 Seismic Design of Foundations

The subgrade conditions underlying the site may be classified as Site Class C as defined in Table 4.1.8.4.A of the 2012 British Columbia Building Code.

6.4 Slab-On-Grade Floors

In order to provide suitable support for slab-on-grade floors, we recommend the placement of at least 150 mm of 19 mm clear crushed gravel to inhibit upward migration of moisture beneath the slab. The gravel should be lightly tamped in place. A moisture barrier should underlie the slab directly above the free draining granular material in areas considered habitable.

There is no geotechnical requirement for under slab drainage, however the under slab fill should be hydraulically connected to the perimeter drainage system.

6.5 Foundation Drainage

We envisage that perimeter drainage systems for the proposed buildings will be required to prevent the development of water pressures on the foundation walls and the basement floor slab. We anticipate typical perimeter drainage system would be sufficient.

Flows are expected to be transient and very light, less than 5 L/min.

6.6 Temporary Excavations, Shoring and Underpinning

As noted above, shoring will likely be required in order to construct the single level of underground parking. Excavation depths are expected to be in the range of 3 to 4 m below the current site grades. Based on the ground conditions encountered, we expect conventional anchored shotcrete system would be suitable for supporting vertical excavation faces. Some vertical reinforcements in the form of small diameter drilled piles may be required in areas of thicker fills or where utilities are present off-site. The use of IBO self drilling anchors should be anticipated due to the granular nature of the subgrade materials, resulting in unstable holes and requiring continuous drilling with injecting grout.

Our observations during our site investigation as well as our experience in this area indicate that cobbles and boulders may be present within the native soils. Cobbles and small boulders can typically be removed with conventional excavation equipment. However, large boulders may require splitting/blasting to facilitate their removal from the site.

6.7 Earth Pressures on Foundation Walls

Below grade foundation walls are expected to be constructed with single sided forms with a vertically shored excavation. We assume that a geosynthetic flat drain would be incorporated along the foundation walls and a drain would be provided at the bottom of all basement walls to ensure that water pressures cannot build up against the basement wall.

We recommend that the foundation walls be designed to resist the following lateral pressures:

Static:	Triangular soil pressure distribution of 5.5 H (kPa), where H is equal to the total wall height in metres.
Seismic:	Inverted triangular soil pressure distribution of 3.5 H (kPa), where H is equal to the total wall height in metres.

Any additional surcharge loads located near the foundation walls should be added to the earth pressures given.

Irrespective of the foregoing, the minimum earth pressure should not be less than 20 kPa in the upper 1.5 m of the foundation wall to account for transient loading encountered during construction. Any additional (surcharge) loads not specifically described herein should be added to the earth pressures given. All earth pressures are based upon unfactored soil parameters and are assumed to be unfactored loads.

6.8 Utility Design and Installation on Building Envelope

Site utilities will be required beneath the slab-on-grade. The design of these systems must consider the locations and elevations of the pad and strip foundations. The service trenches and excavations required for the installation of underground facilities must be located at least outside of a 1:1 (H:V) slope measured downward from the edge of adjacent foundations.

6.9 New Asphalt Pavements

New pavements are proposed surrounding the development, including a 0.8 m widening of the commercial lane along the south property line and the construction of a new commercial standard lane on the west side. Based on our testing on site, we expect that the existing gravelly sand fill or the underlying native sand and gravel will be sufficient to support the District of North Vancouver's minimum pavement section for commercial lanes, as detailed on the Creus Engineering Drawing 14153 C-1. Prior to construction of the pavement section the sugrade should be compacted to at least 100 percent ASTM D698 Standard Proctor and the CBR (California Bearing Ratio) for the subgrade should be confirmed to be a minimum of 10.

Any organic materials or unsuitable fills should be removed as a part of the subgrade preparation.

7.0 FIELD REVIEWS

As required for Municipal "Letters of Assurance", GeoPacific Consultants Ltd. will carry out sufficient field reviews during construction to ensure that the Geotechnical Design recommendations contained within this report have been adequately communicated to the design team and to the contractors implementing the design. These field reviews are not carried out for the benefit of the contractors and therefore do not in any

way effect the contractors obligations to perform under the terms of his/her contract.

It is the contractors' responsibility to advise GeoPacific Consultants Ltd. (a minimum of 48 hours in advance) that a field review is required. Geotechnical field reviews are normally required at the time of the following:

1. Review of excavations in excess of 1.2 m depth requiring man-entry
2. Review of shoring installation
3. Review of foundation subgrade prior to foundation construction
4. Review of slab-on-grade fill material and compaction
5. Review of anchor and shoring decommissions and reinstatement of City property

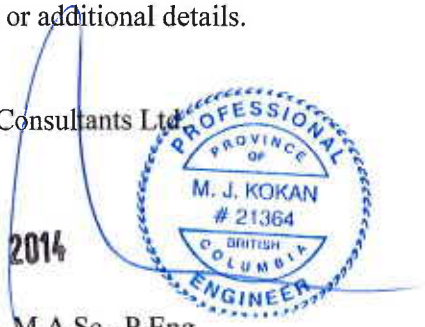
It is critical that these reviews are carried out to ensure that our intentions have been adequately communicated. It is also critical that contractors working on the site view this document in advance of any work being carried out so that they become familiarised with the sensitive aspects of the works proposed. It is the responsibility of the contractor to notify GeoPacific Consultants Ltd. when conditions or situations not outlined within this document are encountered.

8.0 CLOSURE

This report is prepared solely for used by our client's design and construction team for this project as described to the general standards of similar work for similar projects in this area and no other warranty of any kind is expressed or implied. GeoPacific Consultants Ltd. accepts no responsibility for any other use of this report.

We are pleased to assist you with this project and we trust this information is helpful and sufficient for your purposes at this time. However, please do not hesitate to call the undersigned if you should require any clarification or additional details.

For:
GeoPacific Consultants Ltd.



DEC 1 1 2014

Matt Kokan, M.A.Sc., P.Eng
Principal

Reviewed by:

Kevin Bodnar, P.Eng.
Senior Engineer

LEGEND:

CPT14-# – CONE PENETRATION TEST (CPT) LOCATION

TH14-# – TEST HOLE (TH) LOCATION

SITE PLAN

REFERENCE:

#215-1200 West 73-rd Ave.
Vancouver, B.C.
Canada V6P 6G5
Ph. (604) 439-0922
Fax (604) 439-9189

GeoPacific Consultants Ltd.

DATE:	19-Nov-2014		
DRN. BY:	Z.H.	APP'D.	Z.H.
SCALE:	NOT TO SCALE		

Mixed Use Development
1591 BOWSER AVE, NORTH VANCOUVER, BC
TEST HOLE PLAN

FILE NO.: 12548

DWG. NO.: 12548-01

REVISIONS:
A. 09-Dec-2014
B.
C.

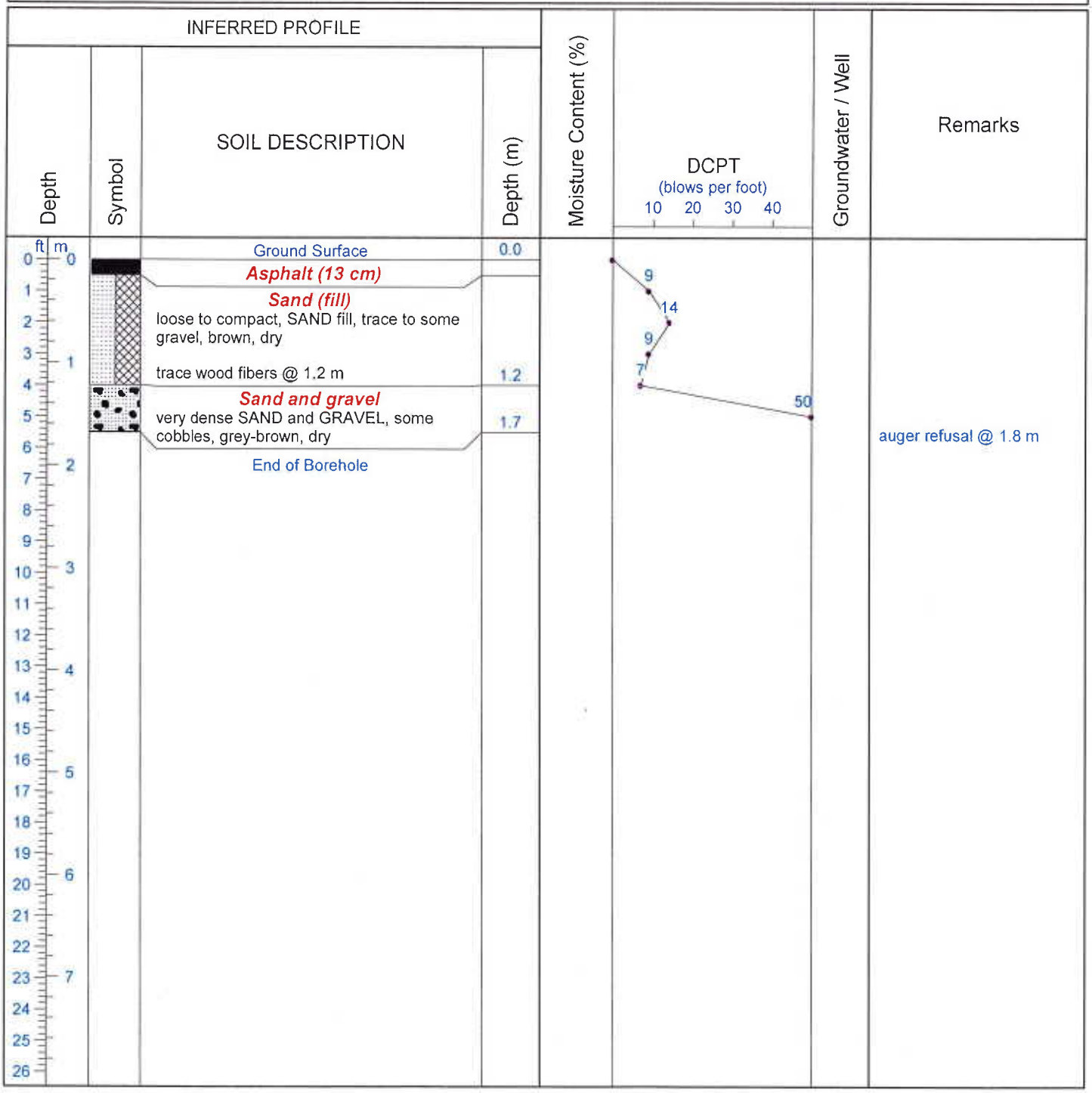
ORIGINAL PAPER SIZE 8.5"x11"

APPENDIX A - TEST HOLE LOGS

Test Hole Log: TH14-01

File: 12548
Project: Mixed Use Development
Client: London Meridian Properties Inc.
Site Location: 1591 Bowser Ave, North Vancouver, BC

GeoPacific Consultants Ltd.
215 - 1200 West 73rd Avenue, Vancouver, BC, V6P 6G5
Tel: 604-439-0922 Fax:604-439-9189



Logged: ZH
Method: Solid stem auger
Date: 19-Nov-2014

Datum: Ground elevation
Figure Number: A.01
Page: 1 of 1

Test Hole Log: TH14-02

File: 12548
Project: Mixed Use Development
Client: London Meridian Properties Inc.
Site Location: 1591 Bowser Ave, North Vancouver, BC

GeoPacific Consultants Ltd.
215 - 1200 West 73rd Avenue, Vancouver, BC, V6P 6G5
Tel: 604-439-0922 Fax:604-439-9189

INFERRED PROFILE

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)
0 / 0		Ground Surface	0.0
		Asphalt (16 cm)	
		Sand (fill) loose to compact, SAND fill, trace to some gravel, brown, dry	1.2
		Sand and gravel very dense SAND and GRAVEL, trace cobbles, grey-brown, dry	1.5
		End of Borehole	

Moisture Content (%)

DCPT (blows per foot): 10 20 30 40
7
10
6
14
>50

Groundwater / Well

Remarks: auger refusal @ 1.5 m

Logged: ZH
Method: Solid stem auger
Date: 19-Nov-2014

Datum: Ground elevation
Figure Number: A.02
Page: 1 of 1

Test Hole Log: TH14-03

File: 12548
Project: Mixed Use Development
Client: London Meridian Properties Inc.
Site Location: 1591 Bowser Ave, North Vancouver, BC

GeoPacific Consultants Ltd.
215 - 1200 West 73rd Avenue, Vancouver, BC, V6P 6G5
Tel: 604-439-0922 Fax:604-439-9189

INFERRED PROFILE

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)
0 / 0		Ground Surface	0.0
		Asphalt (13cm)	
		Sand (fill) loose to compact, SAND fill, trace to some gravel, brown, dry	1.2
2 / 1		***Sand and gravel*** very dense SAND and GRAVEL, trace cobble, grey-brown, dry	2.1
		End of Borehole	

Moisture Content (%)

DCPT (blows per foot) 10 20 30 40

8
11
10
17
>50
>50

Groundwater / Well

Remarks

auger refusal @ 2.1 m

Logged: ZH
Method: Solid stem auger
Date: 19-Nov-2014

Datum: Ground elevation
Figure Number: A.03
Page: 1 of 1

Test Hole Log: TH14-04

File: 12548
Project: Mixed use development
Client: LONDON MERIDIAN PROPERTIES INC
Site Location: 1591 BOWSER AVENUE, NORTH VANCOUVER, BC

GeoPacific Consultants Ltd.
215 - 1200 West 73rd Avenue, Vancouver, BC, V6P 6G5
Tel: 604-439-0922 Fax:604-439-9189

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)	Moisture Content (%)	DCPT (blows per foot) 10 20 30 40	Groundwater / Well	Remarks
0 / 0		Ground Surface	0.0				
		Asphalt (13cm)					
		Sand (fill) loose to compact SAND fill, some gravel, brown, dry	1.2				
		Sand and gravel very dense SAND and GRAVEL, trace cobbles, grey-brown, dry					
13 / 4		trace fines after 4.0m					
20 / 6		moist after 6.3m					6.01m observed water depth in monitoring well (Dec 10, 2014)
23 / 7		wet after 7.0m					
29 / 9			9.1				
31		End of Borehole					

Monitoring well:
1" PVC installed to 9.1m
screened from 4.6m to 9.1m
backfilled with filter sand from 2.7m to 9.1m
backfilled with bentonite from 0.3m to 2.7m

Logged: ED
Method: ODEX
Date: 9-Dec-2014

Datum: Ground elevation
Figure Number: A.04

Test Hole Log: TH14-05

File: 12548
Project: Mixed use development
Client: LONDON MERIDIAN PROPERTIES INC
Site Location: 1591 BOWSER AVENUE, NORTH VANCOUVER, BC

GeoPacific Consultants Ltd.
215 - 1200 West 73rd Avenue, Vancouver, BC, V6P 6G5
Tel: 604-439-0922 Fax:604-439-9189

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)	Moisture Content (%)	DCPT (blows per foot) 10 20 30 40	Groundwater / Well	Remarks
0 / 0		Ground Surface	0.0				
		Asphalt (13cm)					
		Sand (fill) loose to compact SAND fill, some gravel, brown, dry	1.2				
4 / 1		***Sand and gravel*** very dense SAND and GRAVEL, trace cobbles, grey-brown, dry					
8 / 2							
12 / 3							
16 / 4		gravel and cobble with trace sand from 4.0m to 4.6m					
20 / 5							
22 / 6		slightly moist to moist after 6.4m					5.94m observed water depth in monitoring well (Dec 10, 2014)
24 / 7		wet after 7.0m					
25 / 7		cobble or boulder at 7.3m					
28 / 8							
29 / 9			9.1				
31		End of Borehole					

Monitoring well:
1" PVC installed to 9.1m
screened from 3.1m to 9.1m
backfilled with filter sand from 2.7m to 9.1m
backfilled with bentonite from 0.2m to 2.7m

Logged: ED
Method: ODEX
Date: 9-Dec-2014

Datum: Ground elevation
Figure Number: A.05