NORTH VANCOUVER DISTRICT

1325-1335 Draycott Rd
Public Hearing Binder
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3	**Traffic and Parking** - Traffic Impact Study for the Site, prepared by CTS June 2014.
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7	**Arborist Report** - Arborist report for the trees and hedge on site and immediately adjacent to the site
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	and Water Conservation and Greenhouse Gas Emission Reduction
9	**Geotechnical Report** - Prepared by GeoPacific Consultants and speaking to the soil conditions on site.
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11	**Site Profile** - In accordance with the Environmental Management Act, all commercial sites must complete a site profile on the past use of the site. This is in turn forwarded to the Provincial registry.
12	**District Land Sale** The site consists of 4 lots that were all part of the IRLY Building Supply Business, 3 of the lots were privately owned, and one had a long time lease with the District. This fourth lot, is therefore part of a land sale, and the information in this section outlines the terms of that land sale. • Staff memo outlining details of the proposed sale • Map showing that portion of the subject site owned by the District of North Vancouver and proposed for sale. • North Shore News advert on the proposed land sale

AGENDA INFORMATION

☑ Regular Meeting Date: Feb 2, 2015
☐ Workshop (open to public) Date:

Dept. Manager | GM/ Director | CAO

The District of North Vancouver
REPORT TO COUNCIL

January 23, 2014
File: 3060-20/23.14

AUTHOR: Casey Peters, Community Planner

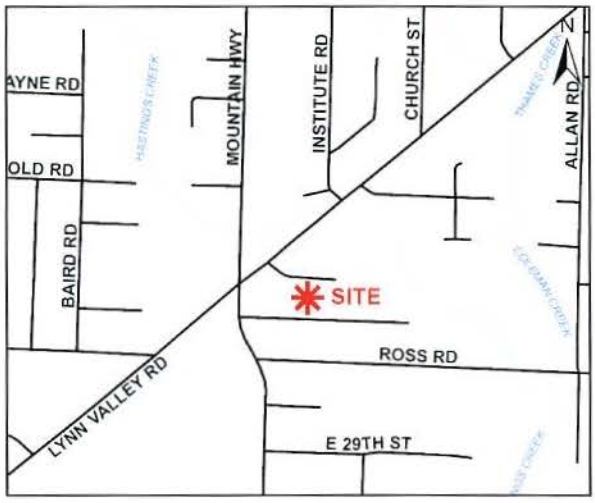
SUBJECT: **BYLAWS 8096 AND 8097: REZONING AND HOUSING AGREEMENT FOR A 35 UNIT APARTMENT PROJECT: 1325-1335 DRAYCOTT ROAD**

RECOMMENDATIONS: **It is recommended that:**

1. **Bylaw 8096, which rezones the subject site from General Commercial Zone 2 (C2) to Comprehensive Development 84 (CD84) to enable the development of a 35 unit residential apartment project, be given FIRST Reading;**

2. **Bylaw 8097, which authorizes a Housing Agreement to prevent future rental restrictions on the subject property, be given FIRST Reading; and**

3. **Bylaw 8096 be referred to a Public Hearing.**



REASON FOR REPORT:

The proposed project requires Council's consideration of:

- Bylaw 8096 to rezone the subject properties; and
- Bylaw 8097 to authorize entry into a Housing Agreement to ensure that owners are not prevented from renting their units.

SUMMARY:

The applicant proposes to redevelop 4 commercial lots located at 1325 and 1335 Draycott Road for a five storey, 35 unit apartment project. Implementation of the project requires a rezoning bylaw (Bylaw 8096), Housing Agreement Bylaw (Bylaw 8097), issuance of a development permit and lot consolidation. The Rezoning Bylaw and Housing Agreement Bylaw are recommended for Introduction and the Rezoning Bylaw is recommended for referral to a Public Hearing. A development permit will be forwarded to Council for consideration if the rezoning proceeds.

BACKGROUND:

Official Community Plan

The subject properties are split designated with three lots designated *Residential Level 5: Low Density Apartment* and one lot designated as *Residential Level 6: Medium Density Apartment* in the District Official Community Plan (OCP). RES5 envisions low rise apartments up to approximately 1.75 FSR and RES6 envisions medium rise apartments up to 2.5 FSR. A blended FSR of 1.91 has been calculated for this project based on the site area of each designation.



The proposed units are a mix of 2 and 3 bedroom units, which will be attractive to families and downsizers, and as such, the proposal responds to Goal #2 of the OCP to "encourage and enable a diverse mix of housing types…to accommodate the lifestyles and needs of people at all stages of life."

The Lynn Valley Town Centre Flexible Planning Framework identified this site for up to 5 storeys. The proposed height is 5 storeys in compliance with the Flexible Planning Framework.

Zoning:

The subject properties are zoned General Commercial Zone 2 (C2) which permits mixed use multi-family/ commercial development at a 1.75 FSR. Rezoning is required to permit this multi-family project at 1.91 FSR. Bylaw 8096 proposes the establishment of a new Comprehensive Development Zone 84 (CD84) tailored specifically to this project.

Development Permit

The subject lots are designated as Development Permit Areas for the following purposes:

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

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



Strata Rental Protection Policy

Corporate Policy 8-3300-2 "Strata Rental Protection Policy" applies to this project as the rezoning application would permit development of more than five units. The policy requires a Housing Agreement to ensure that future strata bylaws do not prevent owners from renting their units and Bylaw 8097 is provided to implement that Policy.

ANALYSIS

The Site and Surrounding Area:

The site consists of 4 Commercial lots located on the Draycott Road cul-de sac. Adjacent uses consist of multifamily to the east, commercial to the north and west and single family to the South. The OCP designates the properties to the west as Residential Level 6, the properties to the south and east as Residential Level 5 and the property to the north as Commercial Residential Mixed Use Level 1.



Site Plan

Project Description:

Site Plan/Building Description:

The project consists of 35 apartment units in a five storey residential building. The proposal includes the dedication of a new north-south lane on the east side of the site and a dedication along the south property line to widen the existing east-west lane.

The units are a mix of 2 and 3 bedrooms and range in size from 71m² (767 sq ft) to 105.9m² (1140 sq ft sq ft). The proposal also includes a residential amenity room. The building is approximately 17m (56 ft) in height.

There is a grade change across the site and the applicant has worked to address this by treating any exposed areas of walls from the underground parking with careful landscaping and ensuring the parkade is not more than 1m above grade in compliance with the District's Schedule B Design Guidelines.

VIEW FROM NORTHWEST



VIEW FROM SOUTHEAST



Parking

Parking is provided on two levels underground with access from the southeast corner of the site off the new north-south lane. There are 60 parking stalls proposed which results in 1.7 stalls per unit inclusive of 4 visitor stalls. This parking rate is slightly higher than the District's Parking Principles for OCP Town and Village Centres which contemplates 1.4 spaces/ unit for projects such as this one. The applicant retained CTS Ltd. to review the proposal in terms of vehicle volumes and parking. CTS concluded that the site is in a walkable location well served by transit and local services. Staff supports the slightly higher proposed parking rate as the building is comprised of 2 and 3 bedroom units.

The proposal also includes space for 19 bicycle storage spaces, 35 storage lockers and a dog washing station within the underground parking area.

Landscaping

The landscaping is concentrated around the perimeter of the site and includes planting at the entrance to the underground parking. The shared trees to the south of the existing lane are proposed for retention.

There is a significant hedge along the current east property line on land that will become the District's new north-south lane. Retention of this hedge was of key concern to the neighbours to the east so the applicant has worked to retain this hedge. The landscape architect has provided a protection plan for this hedge during construction. The new north-south lane can be constructed with the hedge retention.

Acoustic Regulations

Bylaw 8096 includes the District's residential acoustic regulations for maximum noise levels in the bedrooms, living areas and other areas of the units. As a condition of a development permit, the applicant will be required to provide a report from a qualified noise consultant.

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

Accessible Units

In response to the District's Adaptable Design Guidelines, 54% of the units will be designed to meet the Level 1B standard, 34% of the units will be designed to meet the Level 2 standard and 12% will meet Level 3. Should new guidelines be adopted prior to zoning adoption / issuance of DP then staff will consider the revised guidelines applicability to this project and work to incorporate new guidelines where possible.

OFF-SITE IMPROVEMENTS:

The application includes the construction of a new lane to the east, upgrades to the lane to the south and off-site streetscape upgrades along Draycott Road, including a sidewalk.

GREEN BUILDING MEASURES:

Compliance with the Green Building Strategy is mandatory given the need for rezoning and the project is targeting an energy performance rating of Energuide 80 and will achieve a building performance equivalent to Built Green™ 'Gold'.

IMPLEMENTATION:

Implementation of this project will require consideration of a rezoning bylaw, Bylaw 8096, and a Housing Agreement Bylaw, Bylaw 8097, as well as issuance of a development permit and registration of legal agreements.

Bylaw 8096 (Attachment B) rezones the subject properties from General Commercial 2 (C2) to a new Comprehensive Development 84 Zone (CD84) which:

- establishes the multi-family residential use;
- allows home occupations as an accessory use;
- establishes a base density FSR (Floor Space Ratio) of 1.75;
- establishes a density bonus to an FSR of 1.91 subject to payment of a $53,557 CAC and entering into a housing agreement to restrict future strata rental restrictions;
- establishes setback, height, building coverage and site coverage regulations;
- incorporates acoustic requirements; and
- establishes parking regulations specific to this project.

Bylaw 8096, (Attachment C) authorizes the District to enter into a Housing Agreement to ensure that the proposed units remain available as rental units.

In addition, the following legal agreements will be required prior to zoning bylaw adoption to secure:

- a green building covenant;
- a stormwater management covenant;
- a 1m right of way for a portion of the east edge of the site; and
- a lot consolidation that shows the required dedications.

COMMUNITY AMENITY CONTRIBUTION:

The District's Community Amenity Contribution (CAC) Policy requires an amenity contribution for projects including an increase in residential density. In this case, a CAC of $53,557 has been calculated and this amount is included in the proposed CD84 Zone. It is anticipated that the CACs from this development will include contributions toward public art and park, trail, environmental, pedestrian or other public realm, infrastructure improvements.

CONCURRENCE:

Staff

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

Advisory Design Panel

The application was considered by the Advisory Design Panel on September 11, 2014 and the panel recommends approval of the project subject to a review of safe vehicle movements including sightlines on the north/south lane, and landscaping details including integration of landscape into patios.

In response to the Panel's motion, the applicant has submitted a view analysis that demonstrates that a car exiting the parkade has an unobstructed 180° view. This analysis has been reviewed and accepted by our Transportation Department. The landscape architect has added evergreen vines and planters between the patios to soften the fencing.

PUBLIC INPUT:

Public Information Meeting

The applicant held a facilitated early public input meeting at the preliminary application stage and a second facilitated Public Information Meeting on June 24, 2014. The second meeting was attended by approximately 20 residents.

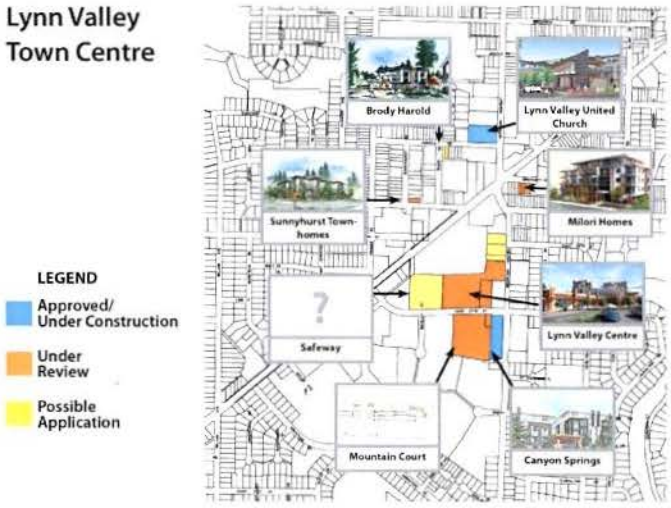
A key issue from the preliminary application had been a concern regarding the retention of the hedge. The applicant advised the neighbours at the Public Information meeting that the hedge could be retained and that was strongly supported by adjacent neighbours.

Neighbours also raised challenges with the existing left turn from Draycott Road onto Lynn Valley Road. The applicant's traffic consultant attended the public information meeting and noted that the vehicle traffic is expected to significantly reduce (e.g. 45% reduction of vehicle trips during p.m. peak hour). This is due to the proposed change of use from commercial to residential.

Ideas regarding the pedestrian signal timing at Mountain Hwy and Lynn Valley Road as well as the possibility of a "no right turn on red" from Mountain Hwy onto Lynn Valley Road were raised by neighbours and in response, the District's Transportation Operations will begin a review of the Lynn Valley Road Mountain Hwy intersection to determine if intersection improvements can be made.

The Lynn Valley Transportation study proposed a new north/ south lane on the east side of the subject site. In future, when the parcels to the south redevelop, this lane will extend from Draycott Road to Ross Road and will allow for an alternative exiting option from the cul-de sac removing the neighbours' concern regarding the existing intersection. A copy of the facilitator's report is attached to this report.

CONSTRUCTION MANAGEMENT PLAN:



The site is shown in relation to other residential construction projects and potential development projects in the image to the right. Under construction at this time in Lynn Valley is Canyon Springs in the 2600 block Mountain Highway south of 27th and Mill House in the 3200 block of Mountain Highway. Both of these projects are west of Mountain Highway. The subject project is east of Mountain Highway, north-east of the intersection of Mountain Hwy and Lynn Valley Road. The District's Construction Traffic Management Project Engineer advises that the highway use permit for this project will need to take other active construction into account and manage construction worker and truck vehicle routes, staging and parking. In addition, the site itself will need to schedule excavation and concrete delivery activities in a way that the adjacent street network can handle. The District expects to undertake sanitary sewer work on Lynn Valley Road at Allan Road this winter, but that work is expected to be complete before excavation of the underground parking will occur on the subject site. At this time we are not expecting major civil infrastructure work in the immediate area in the near term.

A robust 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 and demolition works. This plan will need to take into account other construction projects active in the area including utility projects.

CONCLUSION:

This project is consistent with the directions established in the OCP and the Flexible Planning Framework for Lynn Valley. It addresses OCP housing policies related to the provision of a range of housing options. The project is now ready for Council's consideration.

Options:

The following options are available Council's consideration:

1) Introduce Bylaws 8096 and 8097 and refer Bylaw 8096 to a Public Hearing (staff recommendation); or
2) Defeat Bylaw 8096 and 8097 at First Reading.

Casey Peters
Community Planner

Attachments:
A – Reduced project plans
B – Bylaw 8096
C – Bylaw 8097
D – Public Information Meeting Facilitator's Report

REVIEWED WITH:

				External Agencies:	
☐ Sustainable Community Dev.	____	☐ Clerk's Office	____		
☐ 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:	____

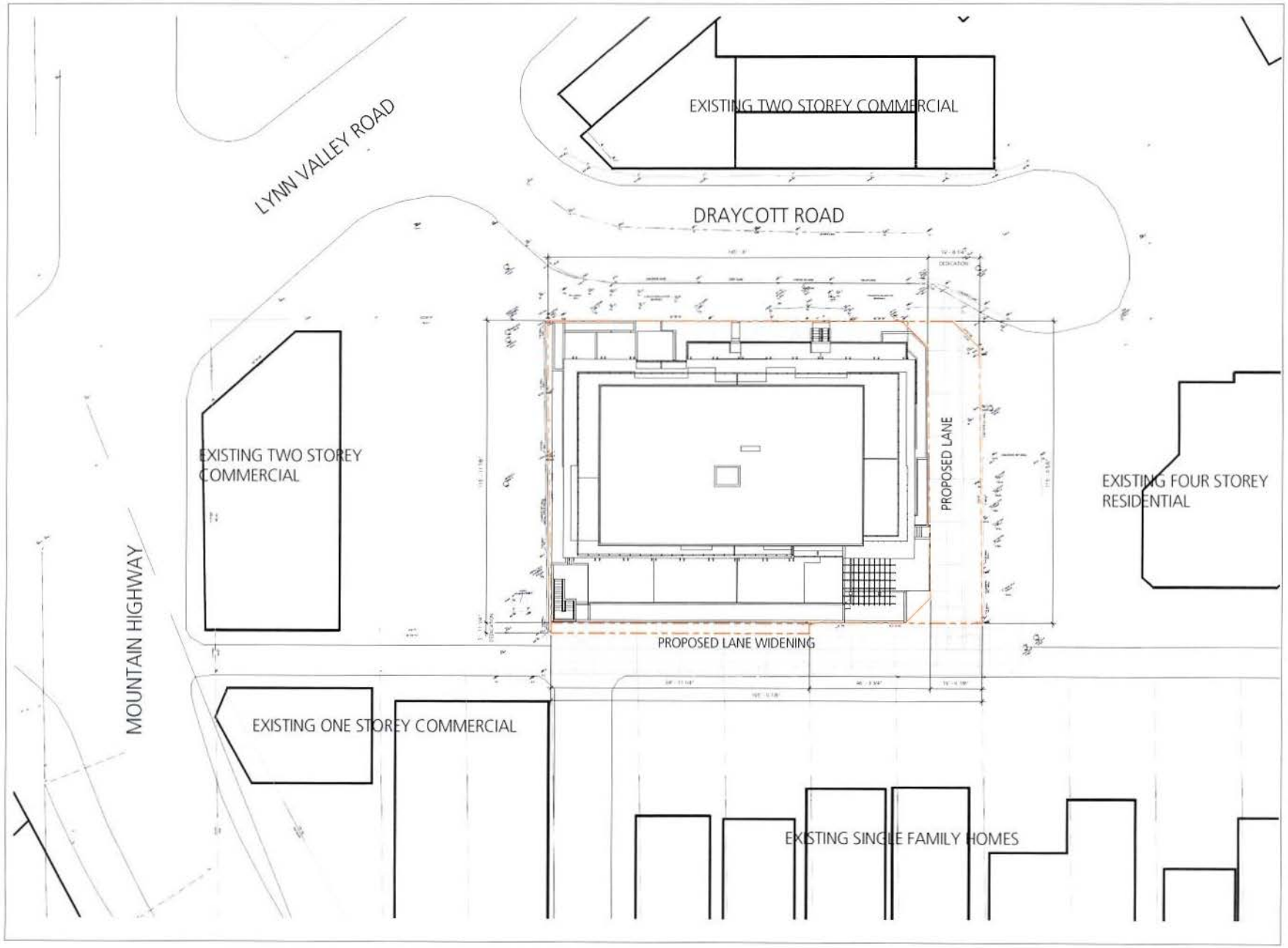
ATTACHMENT A.1

GBLARCHITECTS



1325 DRAYCOTT

ATTACHMENT A-3



gBL

gBL ARCHITECTS INC.
540 - 2234 WEST 11TH AVENUE TEL 604.736.1156
VANCOUVER, BC CANADA V6J 2C5 FAX 604.737.1579

NOTES

REVISIONS

No.	Date	Description
1	Nov. 25, 2013	Preliminary Application
2	Jun. 6, 2014	Issued for Coordination & Review
3	Jul. 9, 2014	Formal Application

DRAYCOTT ROAD

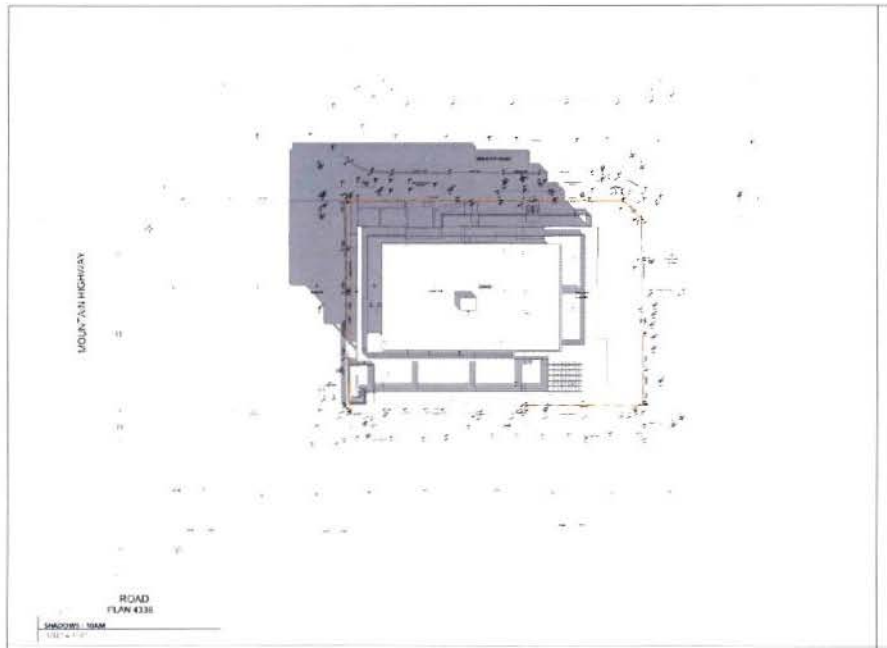
DETAILED APPLICATION

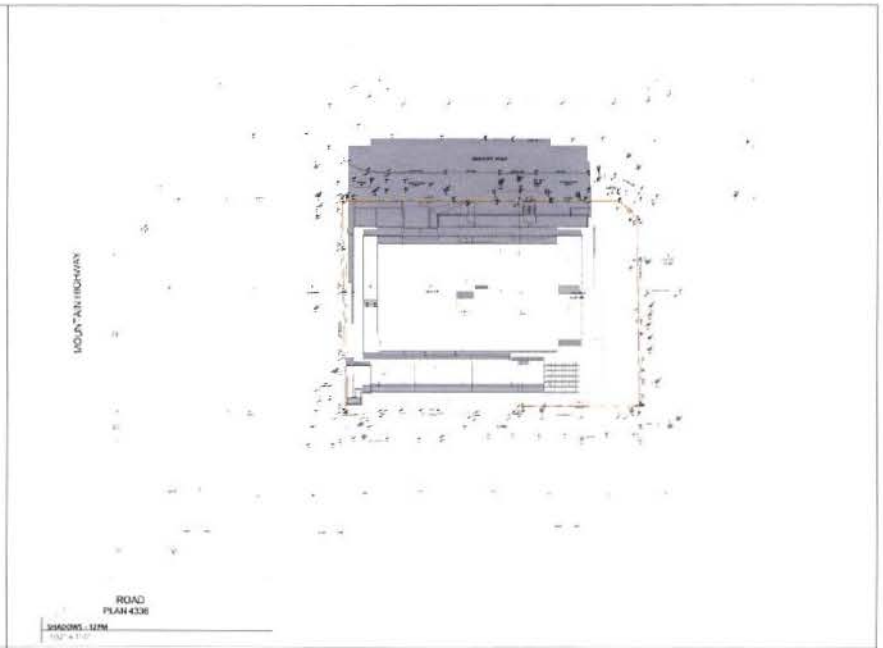
SITE PLAN

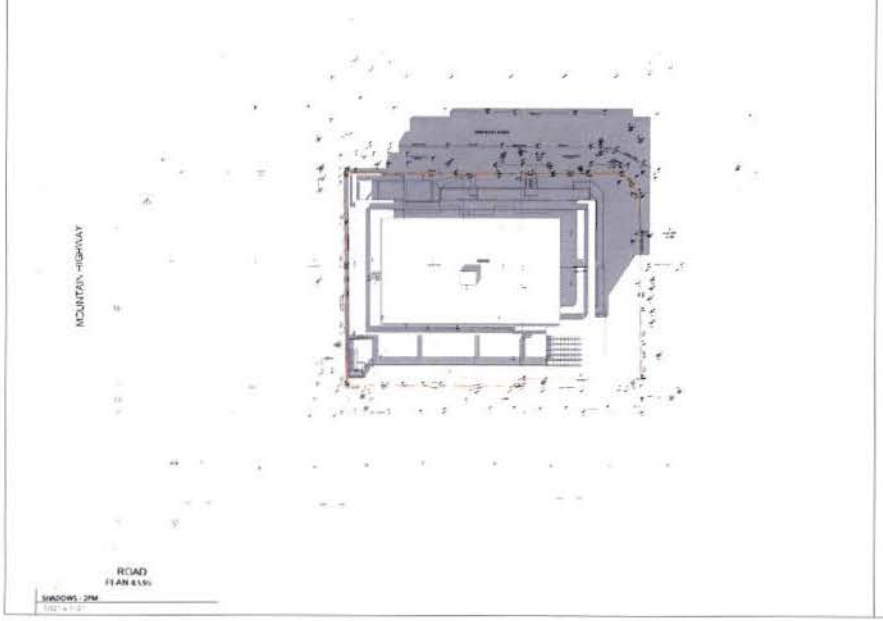
DATE
DRAWN BY
CHECKED BY
SCALE
JOB NUMBER 1285

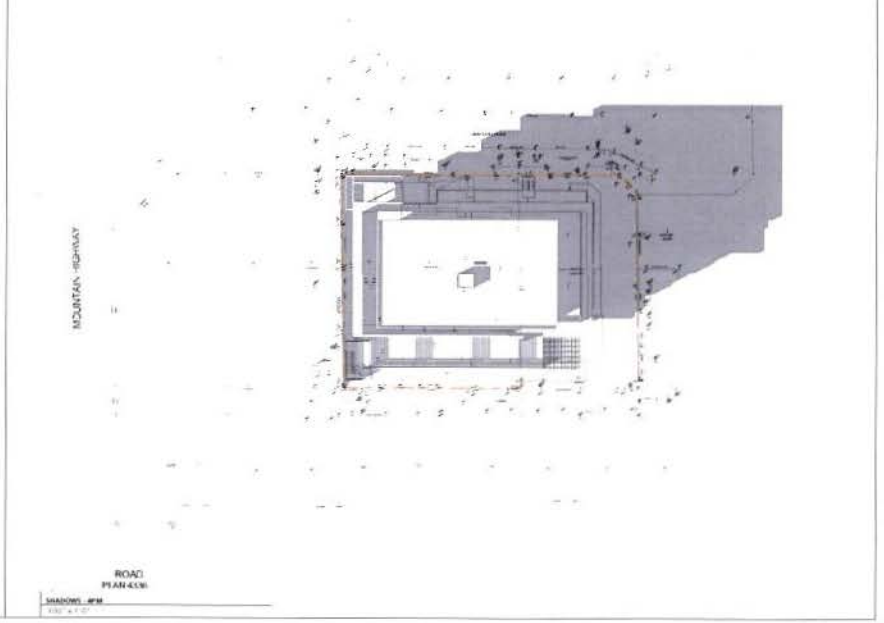
A-1.00

ATTACHMENT A.3









gBL

GBL ARCHITECTS INC
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FAX 604 731 5275

NOTES

REVISIONS

No.	Date	Description
1	Nov. 29, 2013	Preliminary Application
2	Jun. 6, 2014	Issued for Coordination & Review
3	Jun. 8, 2014	Detailed Application

DRAYCOTT ROAD

DETAILED APPLICATION

SHADOW ANALYSIS
(MAR / SEP 21)

DATE	[illegible]
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CHECKED BY	[illegible]
SCALE	[illegible]
JOB NUMBER	1285

A-1.05

ATTACHMENT A.4



1 NW CORNER



2 NE CORNER

gBL

GBL ARCHITECTS INC.
180 - 2034 WEST 11TH AVENUE
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NOTES

REVISIONS

No.	Date	Description
1	Nov 29, 2013	Preliminary Application
2	Jun 3, 2014	Issued for Coordination & Review
3	Jun 3, 2014	Detailed Application

DRAYCOTT ROAD

DETAILED APPLICATION

3D VIEWS

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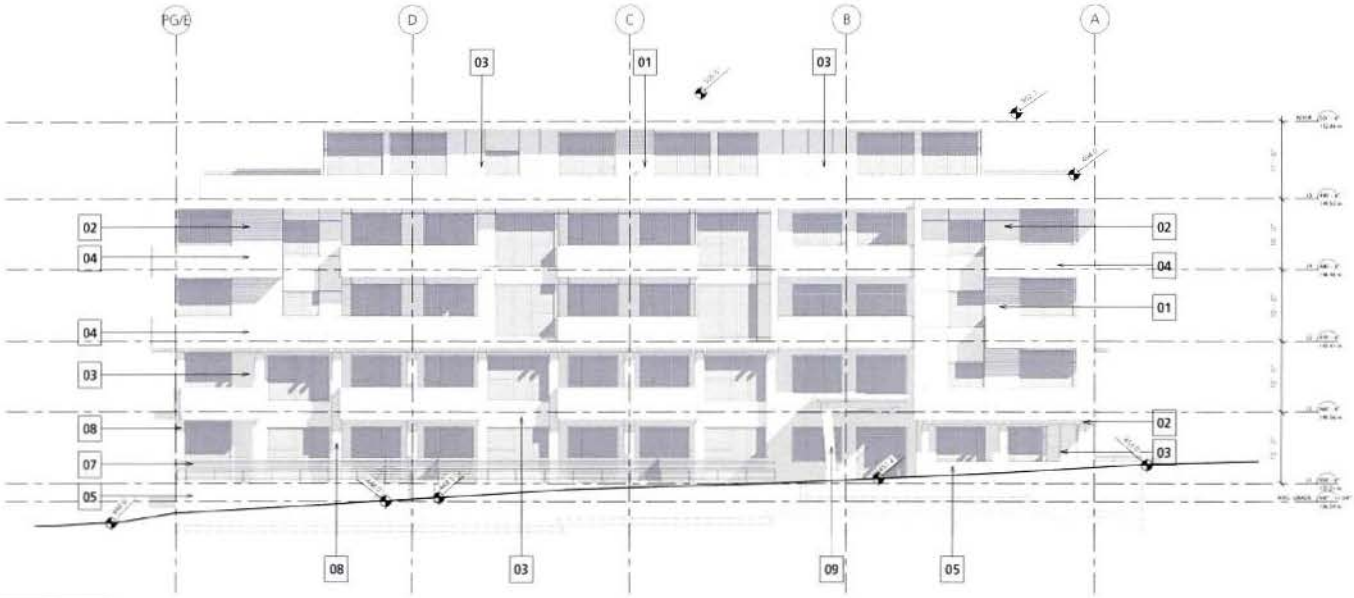
SCALE
JOB NUMBER 1285

A-5.01

ATTACHMENT A.5



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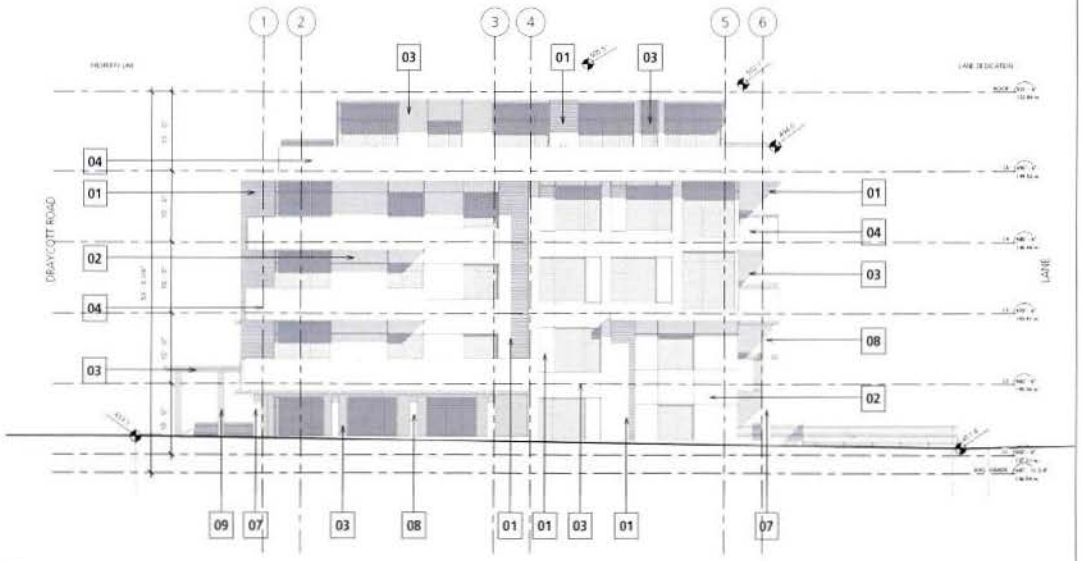

2 WEST

MATERIAL KEY

01 WOOD ACCENT PANELS (CLEAR STAINED CEDAR OR PAINTED CEMENTITIOUS PANEL)
02 WHITE CEMENTITIOUS PANEL
03 CHARCOAL CEMENTITIOUS PANEL
04 GLAZED GUARD RAIL
05 PAINTED ARCHITECTURAL CONCRETE
06 CULTURED STONE
07 CEDAR PRIVACY SCREEN
08 CEDAR CLAD POST
09 HEAVY TIMBER ENTRY CANOPY

gBL

GBL ARCHITECTS INC.
401 - 2234 WEST 11TH AVENUE TEL 604 730 1755
VANCOUVER, BC CANADA V6J 2C5 FAX 604 737 5179

NOTES:

REVISIONS

No.	Date	Description
1	Nov. 25, 2013	Preliminary Application
2	Jun. 6, 2014	Issued for Coordination & Rezoning
3	Jun. 9, 2014	Detailed Application

DRAYCOTT ROAD

DETAILED APPLICATION

ELEVATIONS

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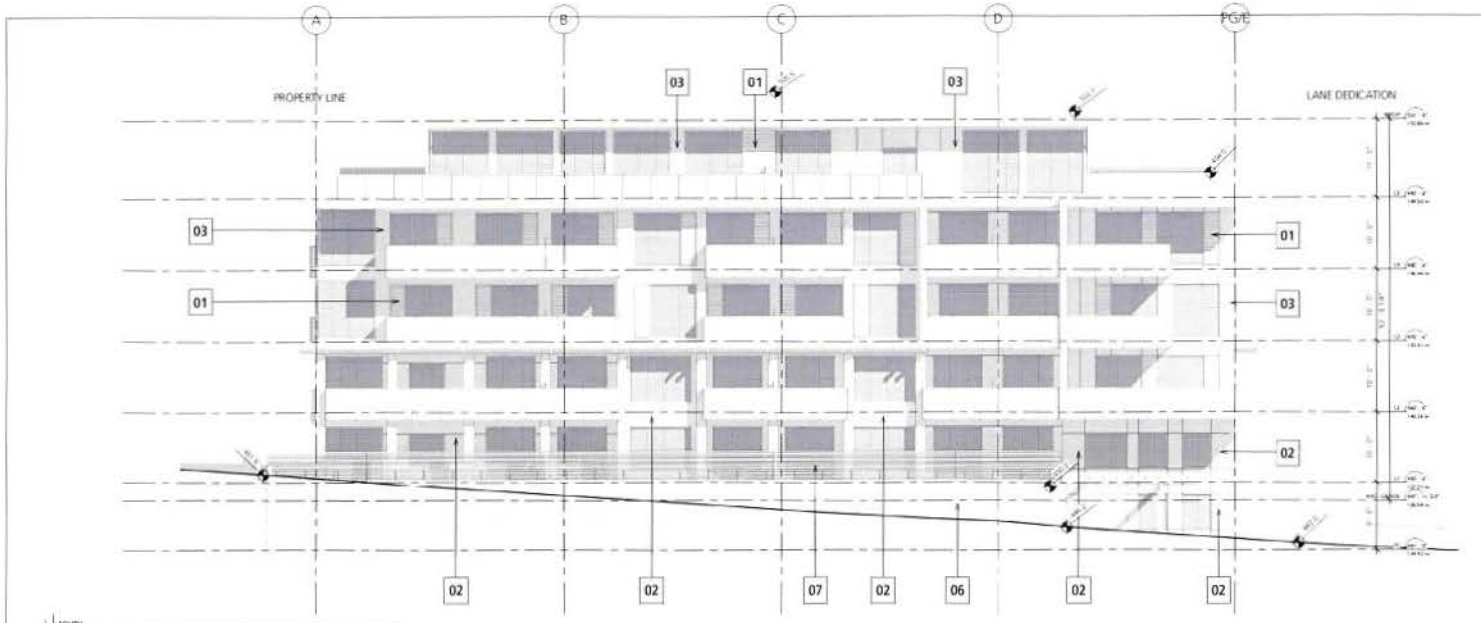
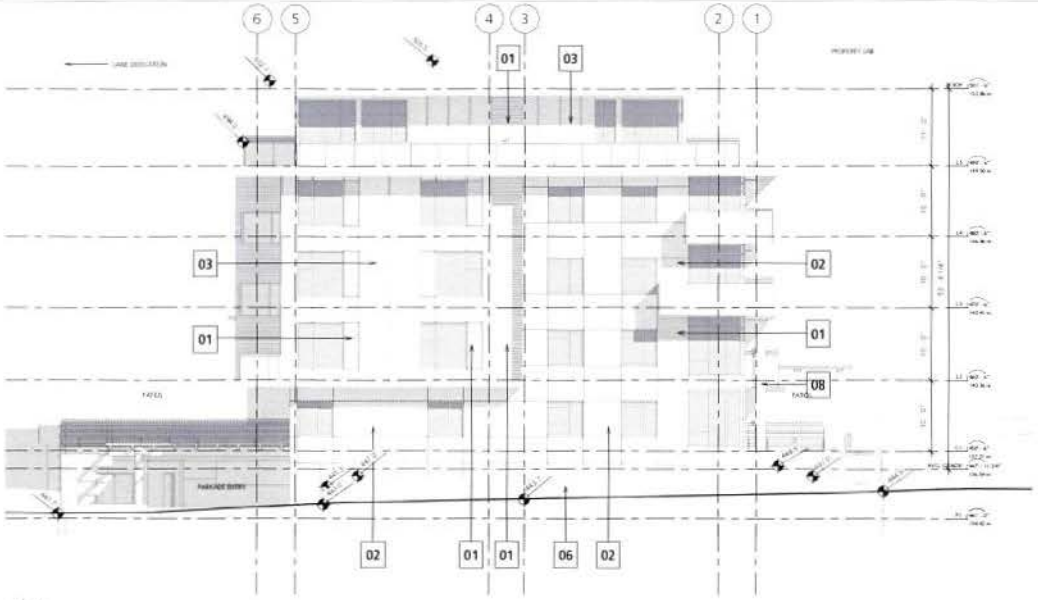
CHECKED BY	Checker
SCALE	As indicated
JOB NUMBER	1285

A-3.01

ATTACHMENT A.6





MATERIAL KEY

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02 WHITE CEMENTITIOUS PANEL
03 CHARCOAL CEMENTITIOUS PANEL
04 GLAZED GUARD RAIL
05 PAINTED ARCHITECTURAL CONCRETE
06 CULTURED STONE
07 CEDAR PRIVACY SCREEN
08 CEDAR CLAD POST
09 HEAVY TIMBER ENTRY CANOPY

gBL

NOTES

REVISIONS

No.	Date	Description
1	Nov 20, 2013	Preliminary Application
2	Jun 5, 2014	Issued for Coordination & Review
3	Jun 9, 2014	Detailed Application

DRAYCOTT ROAD

DETAILED APPLICATION

ELEVATIONS

DATE
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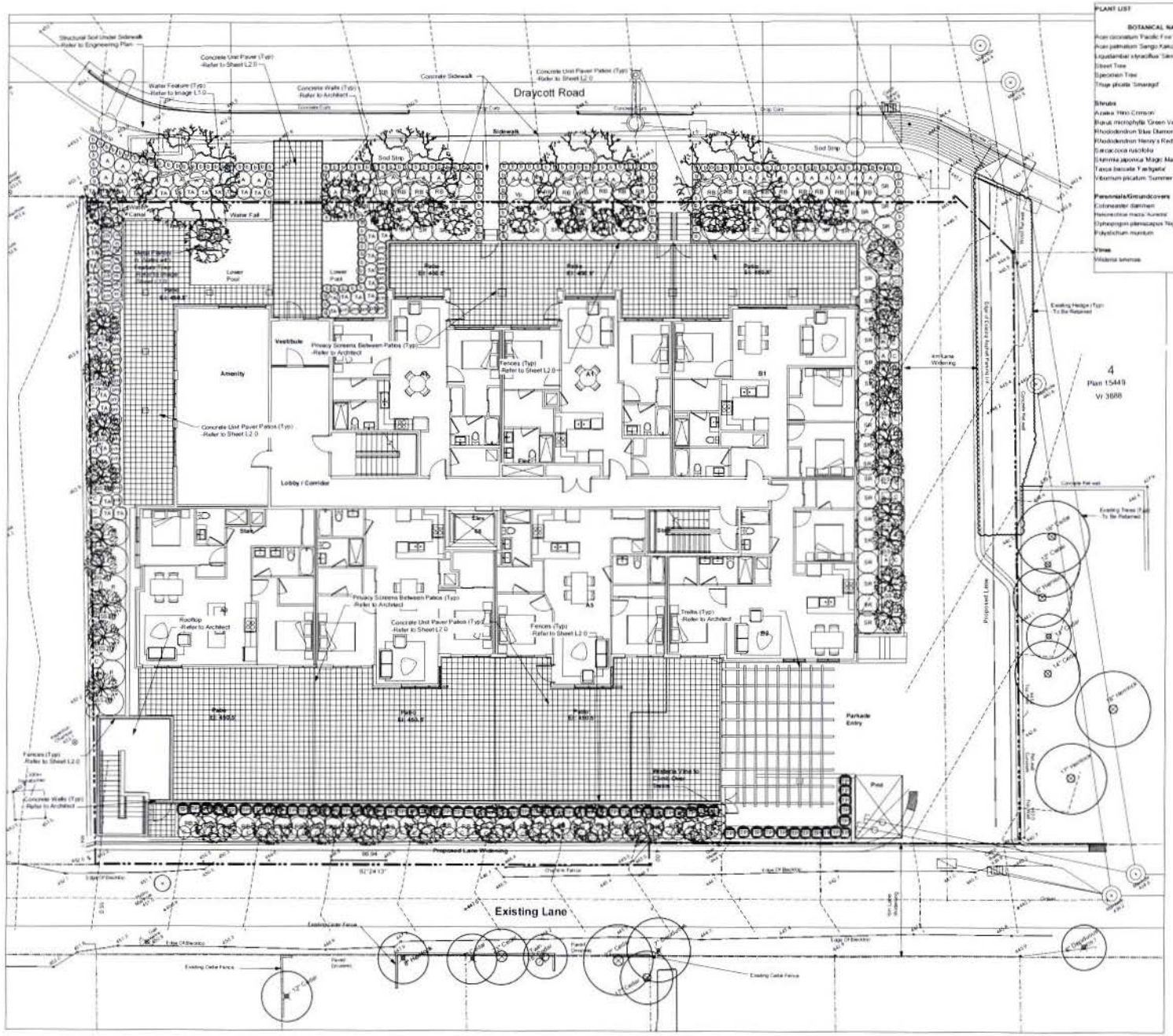
CHECKED BY
SCALE
JOB NUMBER 1285

A-3.02

ATTACHMENT



PLANT LIST

BOTANICAL NAME	COMMON NAME	SYMBOL	QUANTITY	SIZE
Acer circinatum 'Pacific Fire'	Pacific Fire Vine Maple	AC	12	3m
Acer palmatum 'Sango Kaku'	Sango Kaku Japanese Maple	AS	12	4cm cal
Liquidambar styraciflua 'Slender Silhouette'	Slender Silouette Sweetgum	SS	20	6cm cal
Street Tree	To Be Selected By DNV	ST	4	6cm cal
Specimen Tree	To Be Selected By L.A	Sp	1	6cm cal
Thuja plicata 'Smaragd'	Smaragd Cedar	TP	64	2m
Shrubs				
Azalea 'Hino Crimson'	Hino Crimson Azalea	A	77	#3 pot
Buxus microphylla 'Green Velvet'	Green Velvet Boxwood	b	168	#3 pot
Rhododendron 'Blue Diamond'	Blue Diamond Rhododendron	RB	59	#3 pot
Rhododendron 'Henry's Red'	Henry's Red Rhododendron	R	7	#3 pot
Sarcaccoca rusciolia	Sarcaccoca	SR	52	#3 pot
Skimmia japonica 'Magic Marlot'	Magic Marlot Skimmia	m	10	#3 pot
Taxus baccata 'Fastigata'	Columnar Yew	TA	50	1.2m Hi
Viburnum plicatum 'Summer Snowflake'	Summer Snowflake Viburnum	Vp	4	#3 pot
Perennials/Groundcovers				
Cotoneaster dammen	Cotoneaster	c	118	#1 pot
Helionectrice macra 'Aureola'	Japanese Forest Grass	h	4	#1 pot
Ophiopogon planiscapus 'Nigrescens'	Black Mondo Grass	o	8	#1 pot
Polystichum munitum	Sword Fern	pm	42	#1 pot
Vines				
Wisteria sinensis	Cotoneaster	W	1	#1 pot

gBL

PLOT INFO

REVISIONS

Senga Landscape Architecture

PROJECT NAME

1325/1335
DRAYCOTT AVE
(Multi-Family)

NORTH VANCOUVER, BC

PROJECT DESCRIPTION

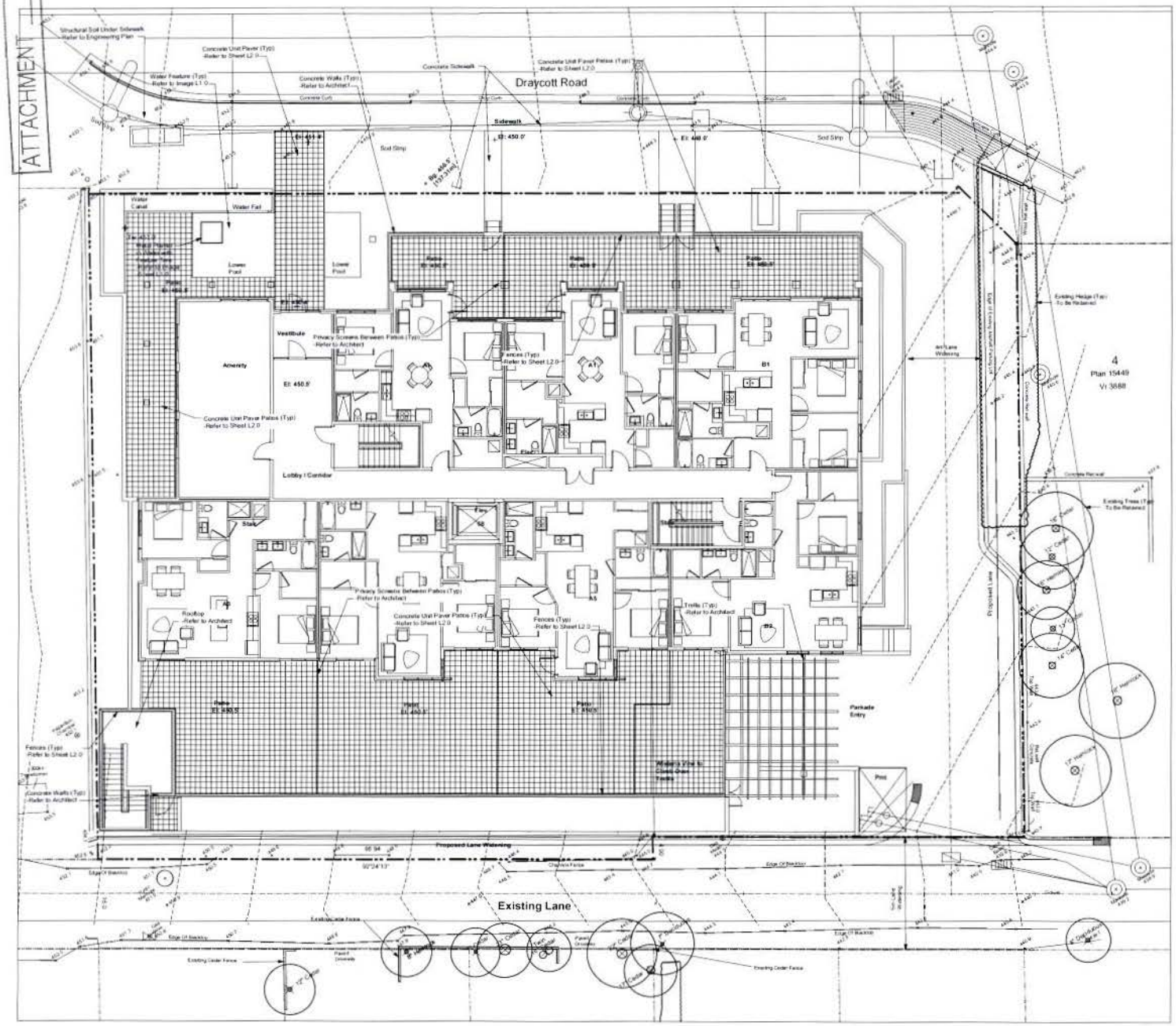
LANDSCAPE
PLAN

DATE	Dec. 2013
DRAWN BY	SJCV
CHECKED BY	SJCV
SCALE	1/8" = 1'

JOB NUMBER

L1.1

ATTACHMENT A.2









Character Images of Water Feature

gBL

GUNNERUFF BELL LYON

PLOT INFO

REVISIONS

Senga Landscape Architecture

PROJECT NAME

1325/1335
DRAYCOTT AVE
(Multi-Family)

NORTH VANCOUVER, BC

PROJECT DESCRIPTION

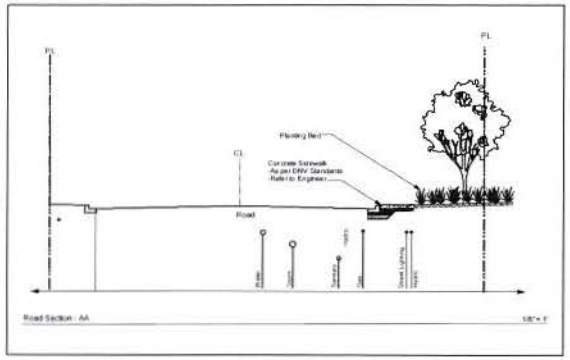
SITE PLAN

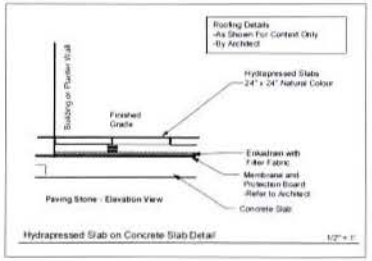
DATE	Dec. 2013
DRAWN BY	SUCV
CHECKED BY	SUCV
SCALE	1/8" = 1'

JOB NUMBER

L1.0

ATTACHMENT A.9





NOTES

All Works and Materials to the latest edition of the a is to be completed in accordance with the BCSLA and the BCLNA Landscape Standards. Contractor to be know and understand with the standard.

All Landscape Areas and Planter Pots (All Levels) to Be Irrigated to RABC Standard Installation Practices. Use High Efficiency Irrigation Heads

Landscape Contractor to Confirm and Verify Field Conditions Prior to Installation

Plant and Material Substitutions to be Approved by Landscape Architect Prior to Installation. In the Case where there is a Discrepancy between Plant Numbers on the Plant List and on the Plan, the Plan shall Supersede the List.

Provide Soils Test of Actual Soil to be Delivered to the Site Prior To Starting Work
Soil Depths are Follows:

Trees = 90cm
Shrubs = 60cm
Groundcovers = 30cm
Lawn and Hydroseed Area = 15 cm

All Planted Areas to Be Mulched with 5cm Finely Shredded Hemlock/Fir - To Be Approved By Landscape Architect

All Retaining Walls and Grades to Be Confirmed By Engineers

Architectural Grades, Planter Layout and Drip Strip Locations Located on Architectural Plans Supercedes Those Found on Landscape Plans

All Planting Areas to have a Minimum 0.6m Growing Medium Throught Entire Planting Area

In Case of Discrepancy - Engineer Drawings for Offsite Works Supercedes Landscape Drawings for Construction Purposes

Street Trees: Final location and species selection will be to the satisfaction of the District

The submission is to include the "Assurance of Professional Design and Commitment for Field Review" form (BCSLA Schedule L-1), the "Summary of Design and Field Review Requirements" form (BCSLA Schedule L-2), and the "Assurance of Professional Field Review and Compliance" form (BCSLA Schedule L-3).

Drawings to be read and constructed in conjunction with Landscape Specifications dated Feb. 9/12 for the project. Specification sections include: 02681 Irrigation and, 02933 Sodding, 02400 Trees, Shrubs and Ground Cover, 02930 Trees, Shrubs and Ground Cover

Temporary Irrigation to be supplied in boulevard area and decommissioned after one year

Boulevards to have 60cm of soil in planting beds

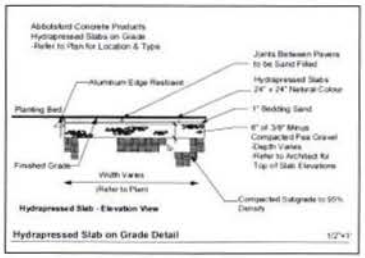
The final location and species selection to be to the satisfaction of the District

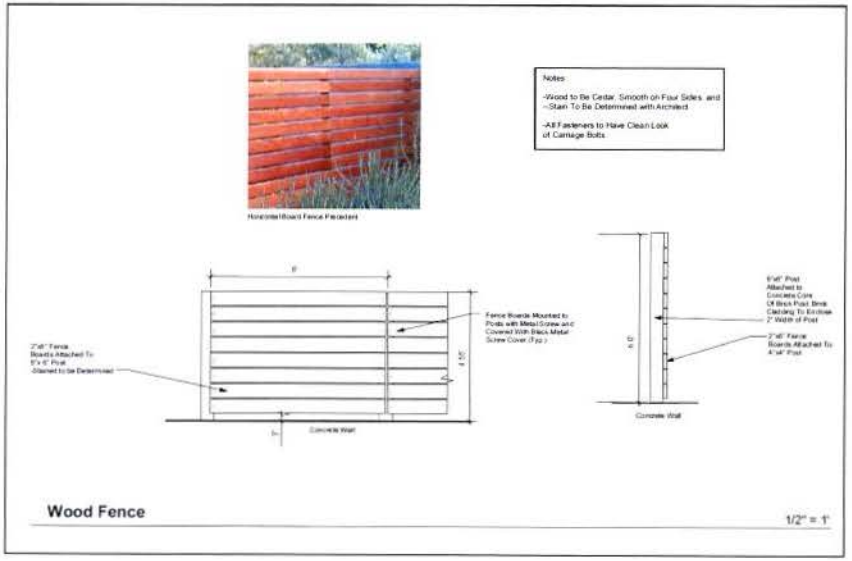
The District of North Vancouver is responsible for the on-going maintenance of street trees on off-site areas. Please ensure that the developer is aware that on-going maintenance of shrubs/groundcover on off-site areas (i.e. boulevards) is the responsibility of of the future property owner

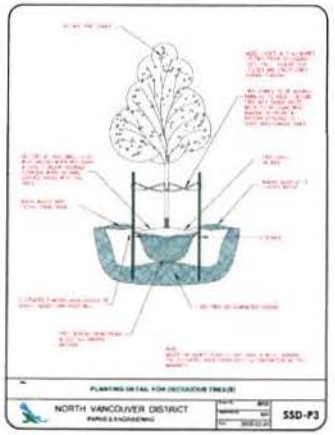
The project landscape contractor, the project landscape architect and a District of North Vancouver Parks (DNV Parks) representative must be present at the project pre-construction meeting. If this is not possible, all three groups meet before any landscape construction works takes place on site.

ALL plants/trees used in the project must first be inspected by a representative of the District of North Vancouver parks department (DNV Parks) before installation. The District of North Vancouver has the right to refuse any or all of the selected plant material if it does not meet current BCLNA guidelines.

Final approval/selection of any off-site street trees/site furniture will be made by DNV staff. The species/furniture will be be made by DNV staff. The stree species/furniture types specified on in the plan could be subject to change. Please contact DNV Park Designer Brad Snelling (snellingb@dnv.org or 604-990-3907) to confirm tree and site furniture types prior to purchase







gBL

gBL COMMERCOFF BELL LYON ARCHITECTS GROUP INC.

PLOT INFO

REVISIONS

Senga Landscape Architecture
4258 Fortrym Way, North Vancouver
p: 604.290.2771 f: 604.926.0134
www.sengadesigns.com

PROJECT NAME

1325/1335
DRAYCOTT AVE
(Multi-Family)

NORTH VANCOUVER, BC

PROJECT DESCRIPTION

DETAILS

DATE	Dec. 2013
DRAWN BY	SLC/
CHECKED BY	SLC/
SCALE	As Shown
JOB NUMBER	

L2.0

The Corporation of the District of North Vancouver

Bylaw 8096

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 "The District of North Vancouver Rezoning Bylaw 1322, (Bylaw 8096)".

2. Amendments

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

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

"Comprehensive Development Zone 84 CD84"

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

"4B84 Comprehensive Development Zone 84 CD84

The CD84 Zone is applied to:

Lot 5 District Lot 2023 Plan 15449, PID: 007-659-954;
Lot 1 of Lots 7 and 8 Block 2 District Lot 2023 Plan 4336, PID 011-632-721;
Lot 2 of Lots 7 and 8 Block 2 District Lot 2023 Plan 4336, PID 011-632-739; and
Lot 3 of Lots 7 and 8 Block 2 District Lot 2023 Plan 4336, PID 011-632-755.

4B84-1) Intent:

The purpose of the CD84 Zone is to establish specific land use and development regulations for a 35 unit apartment project.

4B84-2) Uses:

The following *principal uses* shall be permitted in the Comprehensive Development 84 Zone:

(a) Uses Permitted Without Conditions:

(i) Five Storey Residential building, multiple-family apartment

(b) Conditional Uses:

Not Applicable

4B84-3) Conditions of Use:

Not Applicable

4B84-4) Accessory Uses:

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

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

4B84-5) Density:

(a) The maximum permitted density in the CD84 Zone is limited to a floor space ratio (FSR) of 1.75, inclusive of any density bonus for energy performance;

(b) For the purposes of calculating floor space ratio, the following areas are excluded:
   i. Parking garage;
   ii. Amenity space to a maximum of 60.4m ² (650 sq ft).

4B84-6) Amenities:

(a) Despite subsection 4B84-5, density in the CD84 Zone is increased to a maximum floor space of 3444m² (37,071 sq ft), inclusive of any density bonus for energy performance, if the owner:

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

2. Contributes $57,557 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; maintenance of the retained hedge on the land to be dedicated as lane; and/or park, trail, environmental, pedestrian or other public realm, infrastructure improvements.

4B76-7) Maximum Principal Building Size:

Not applicable

4B84-8) Setbacks:

Buildings shall be set back from property lines to the closest building face (excluding any partially exposed underground parking structure) as established by development permit and in accordance with the following regulations:

Setback	Buildings (Min Setback)
North	5.03m (16.5 ft)
East	2.27m (7.5ft)
West	2.29m (7.5 ft)
South	8.08m (26.5 ft)

4B84-9) Building Orientation:

Not applicable

4B84-10) Building Depth and Width:

Not applicable

4B84-11) Coverage:

(a) Building Coverage shall not exceed 56%.

(b) Site Coverage shall not exceed 71%.

4B84-12) Height:

The maximum permitted height for each building is 17.1 m (56.0 ft);

4B84-13) Acoustic Requirements:

In the case of residential purposes, 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

4B84-14) Landscaping:

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

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

4B84-15) Subdivision Requirements:

Not applicable

4B84-16) Additional Accessory Structure Regulations:

Not applicable.

4B84-17) Parking and Loading Regulations:

(a) A minimum of 60 parking spaces are required, inclusive of designated visitor parking and parking for persons with disabilities;

(b) A minimum of 4 parking spaces are required for designated visitor parking;

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

(d) A minimum of 17 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 Commercial 2 Zone (C2) to Comprehensive Development Zone 84 (CD 84).

READ a first time

PUBLIC HEARING held

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk

Certified a true copy

Municipal Clerk

Schedule A to Bylaw 8096



Document: 2474317

ATTACHMENT C

The Corporation of the District of North Vancouver

Bylaw 8097

A bylaw to enter into a Housing Agreement (1325-1335 Draycott Road)

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

1. Citation

This bylaw may be cited as "Housing Agreement Bylaw 8097, 2014 (1325-1335 Draycott Road)".

2. Authorization to Enter into Agreement

2.1 The Council hereby authorizes the District of North Vancouver to enter into an agreement, substantially in the form attached to this bylaw as Schedule "A" (the "Housing Agreement"), between The Corporation of the District of North Vancouver and Milori Homes (Draycott) GP Ltd Inc. No. BC1008485, with respect to the following lands:

(a) Lot 5, District Lot 2023, Plan 15449, PID: 007-659-954
(b) Lot 1 of Lots 7 and 8, Block 2, District Lot 2023, Plan 4336, PID: 011-632-721
(c) Lot 2 of Lots 7 and 8, Block 2, District Lot 2023, Plan 4336, PID: 011-632-739
(d) Lot 3 of Lots 7 and 8, Block 2, District Lot 2023, Plan 4336, PID: 011-632-755.

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 8097

SECTION 219 COVENANT – HOUSING AGREEMENT

This agreement dated for reference the ____ day of _____, 20____ is

BETWEEN:

Milori Homes (Draycott) GP Ltd Inc. No. BC1008485 of

_____

(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 (as hereinafter defined);

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

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

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

1. DEFINITIONS

1.01 Definitions

In this agreement:

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

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

(c) *"Proposed Development"* means the proposed development containing not more than 35 Units to be constructed on the Lands in accordance with the Development Permit;

(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 8028 and remain in effect until terminated by the District as set out in this Agreement.

3. RENTAL ACCOMODATION

3.01 Rental Disclosure Statement

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

(a) before the first Unit is offered for sale, or conveyed to a purchaser without being offered for sale, filed with the Superintendent of Real Estate a Rental Disclosure Statement designating all of the Units as rental strata lots and imposing 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 before the prospective purchaser enters into an agreement to purchase in respect of the Unit.

3.02 Rental Accommodation

The Units constructed on the Lands from time to time may always be used to provide rental accommodation as the Owner or a Unit Owner may choose from time to time.

3.03 Binding on Strata Corporation

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

3.04 Strata Bylaw Invalid

Any strata Ccorporation bylaw 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 shall not pass any bylaws preventing, restricting or abridging the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation.

3.06 Vote

No Unit Owner, nor any tenant or mortgagee thereof, shall vote for any strata corporation bylaw purporting to prevent, restrict or abridge the use of the Lands, the Proposed Development 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 delivery of the notice. The notice must specify the nature of the default. The Owner must act with diligence to correct the default within the time specified.

4.02 Costs

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

4.03 Damages an Inadequate Remedy

The Owner acknowledges and agrees that in the case of a breach of this Agreement which is not fully remediable by the mere payment of money and promptly so remedied,

the harm sustained by the District and to the public interest will be irreparable and not susceptible of adequate monetary compensation.

4.04 Equitable Remedies

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

4.05 No Penalty or Forfeiture

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

4.06 Cumulative Remedies

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

5. LIABILITY

5.01 Indemnity

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

5.02 Release

The Owner hereby releases and forever discharges the District, its elected officials, board members, officers, directors, employees and agents, and its and their heirs, executors, administrators, personal representatives, successors and assigns from and against all

claims, demands, damages, actions or causes of action by reason of or arising out of advice or direction respecting the ownership, operation or management of the Proposed Development or any part thereof which has been or hereafter may be given to the Owner by all or any of them.

5.03 Survival

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

6. GENERAL PROVISIONS

6.01 District's Power Unaffected

Nothing in this Agreement:

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

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

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

6.02 Agreement for Benefit of District Only

The Owner and District agree that:

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

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

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

6.03 Agreement Runs With the Lands

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

6.04 Release

The covenants and agreements on the part of the Owner and any Unit Owner and herein set forth in this Agreement have been made by the Owner and any Unit Owner as contractual obligations as well as being made pursuant to Section 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, including any amendments to this Agreement as may be required by the Land Title Office or the District to effect such registration.

6.06 Agreement to Have Effect as Deed

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

6.07 Waiver

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

6.08 Time

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

6.09 Validity of Provisions

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

6.10 Extent of Obligations and Costs

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

6.11 Notices

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

If to the District:

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

Attention: Planning Department
Facsimile: (604) 984-9683

If to the Owner:

Attention:
Facsimile: (604)

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 facsimile transmission, on the first business day after the date when the facsimile transmission was transmitted; and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

6.12 Further Assurances

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

6.13 Enuring Effect

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

7. INTERPRETATION

7.01 References

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

7.02 Construction

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

7.03 No Limitation

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

7.04 Terms Mandatory

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

7.05 Statutes

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

7.06 Entire Agreement

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

(e) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8097.

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

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

C. The Owner granted to THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER (the "District") a Covenant 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.

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

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

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

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

Milori Homes: 1325 – 1335 Draycott Road Development Application

Public Input Meeting Summary Report

Event Date: June 24, 2014
Time: 6:30pm – 8:30pm
Location: Lynn Valley Community History Centre
Attendance: 20 members of the public
Comment Forms: One comment sheet and one email were submitted.

Meeting Purpose:
1) To present development application materials to neighbours and demonstrate how the development application had been modified to address feedback provided at the Early Public Input Opportunity in January
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

The principals of Milori Homes hand-delivered meeting invitations with fact and comment sheets to residents within a 75 metre radius of the site.

Site Sign

A sign was erected on the site two weeks prior to the meeting to notify neighbours. A photograph of the erected notification sign is included in Appendix A: Notification.

Email Notification

Participants who provided their email on the sign-in sheet at the January 2014 Early Public Input Opportunity meeting were emailed invitations to the Public Information Meeting.

Newspaper Ad

The Public Information Meeting was advertised in the North Shore News the week of June 16 to invite the public to the meeting. A copy of the June 18 ad is included in Appendix A: Notification.

Attendance:

19 members of the public signed in for the meeting. 20 members of the public were counted at the meeting. Fourteen participants indicated that they lived in the adjacent condominium building east of the proposed development site.

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

District of North Vancouver:

- Casey Peters, Development Planner, District of North Vancouver
- Natasha Letchford, Development Planner, District of North Vancouver

Project Team:

- Hesam Deihimi, Milori Homes
- Ehsan Deihimi, Milori Homes
- Joey Stevens, GBL Architects
- Gary Vlieg, Transportation Engineer, Creative Transportation Solutions

Facilitator:

- Steven Petersson, Petersson Planning Consulting

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 30 minutes, where participants could browse display boards and have informal discussion with the proponent, architect and transportation consultant.

The Open House was followed by a fifteen minute presentation by the architect and transportation consultant. Since this was the second public engagement session this year, the presentation focused on changes to the project to respond to public feedback given in January's Early Public Input Opportunity.

The presentation was followed by a seventy-five-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. Many of the questions were directed to the transportation consultant. The audience applauded the transportation consultant and the proponents at the end of the meeting, and several participants commended the proponent team for responding to feedback provided in the Early Public Input Opportunity meeting last January.

The key theme of the evening was transportation. Participants were particularly interested in knowing how traffic would circulate from Draycott to Lynn Valley Road, and the function of the proposed lane. The participants were also pleased to hear that the hedge separating the subject site from 1385 Draycott Road could be preserved.

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

C1 I am glad to hear that your transportation study predicts that the proposed development will generate less traffic than the existing Irly Bird building centre business.

C2 It is difficult to turn left from Draycott Road to Lynn Valley Road because of queuing cars on Lynn Valley Road.

Q3 How much visitor parking will be provided?
A3 8 visitor stalls are proposed in the underground parkade.

C4 Please consider painting hatched lines on Ly nn Valley Road to facilitate egress from Draycott to Lynn Valley Road.

C5 Please consider installing a "do not block the intersection" sign on Lynn Valley road to raise driver awareness of vehicles wishing to turn left from Draycott Road to Lynn Valley Road.

C6 Please consider traffic light sequencing to facilitate turning left from Draycott Road to Lynn Valley Road.

C7 The lane will be used by garbage trucks and other traffic. It is often used by pedestrians to access trails. I am concerned about pedestrian s afety.

C8 Drivers use driveways on neighbouring properties to turn around. Sometimes drivers will turn right (north-east) on Lynn Valley road, and then turn around in a driveway to proceed south-west.

C9 Traffic from the Canada Trust bank frequently blocks traffic.

C10 The lane on Mountain Highway will be used for egress: please consider installing a "no lef t turn" sign.

C11 We need on-street parking.

C12 Construction might block access to 1385 Draycott (the neighbouring condominium building).
A12 A Construction Traffic Management Plan will be submitted to the DNV. This plan will seek to minimize impacts to neighbours.

C13 Turning left from Draycott Road to Lynn Valley Road means effectively crossing five lanes of traffic. It is very challenging now.

Q14 Will there be lane access behind Tommy's (Ross Road at Mountain Highway)?
A14 Although it looks like a lane, it is actually private property. There is no legal access there.

C15 The portion of the lane south of the site and heading east is a fire access road. I am concerned about safety if emergency access is blocked by service vehicles.

C16 I am concerned about the sight lines where the proposed lane east of the site meets Draycott Road: the driveway at 1385 Draycott is close by.
A16 The proposed sight lines are suf ficient for the proposed east lane at Draycott Road. I understand that the hedge separating 1385 Draycott from the proposed driveway is very important to residents. Trimming or removing the hedge would, however, improve sight lines.

Q17 When was the traffic study done?
A17 The study was done after Irly Bird closed. It was based on a combination of projections and counts made at Lynn Valley Road and Mountain Highway.

C18 Consider adding a "no right turn on red light" sign to increase traf fic safety (i.e. for the Mountain Highway to Lynn Valley Road turning movement).

Q19 Will the lane have one-way or two-way traffic? Will it be used by fire trucks?
A19 The lane is designed to accommodate two-way traffic. The proposed lane east of the subject site is not intended for use as a fire lane because the turning radius is too tight for a fire truck. Fire trucks will back out.

Q20 Will the lane be able to accommodate the volume of traffic? There will be room for only one vehicle at a time in the lane south of the site. Cars driving from the other direction will need to wait. I'm concerned about pedestrian safety.
A20 Multi-family uses generate less traffic per dwelling unit than single family uses. Relatively low traffic volumes make the lane safe for pedestrians. It will be easier to egress by Draycott than the lane. Widening the lane may not increase safety because narrow lanes slow traffic speed.

Q21 Can the lane be designed for a larger volume of traffic and include sidewalks?
A21 That is up to the DNV. The current lane standard is 6m wide and does not include sidewalks. The lane dedication on the south side of the site will improve the lane. The long-term plan for the neighbourhood includes extending lane access south to Ross Road.

Q22 Will the (informal) trails east of the site be affected by this proposal?
A22 The trails are not located on the subject site: there will be no impact from this development.

Q23 How will sight lines in the lane be affected by the development?
A23 After development, the sight lines will be similar to today.

C24 The architecture and site plan is beautiful.

C25 The proposed new lane east of the site has a portion that is more narrow than the 6m lane standard.
A25 A portion of this lane is proposed to be 4m wide to protect the existing hedge. One-way traffic is proposed at that location: 4m lane width is sufficient for one-way traffic. The hedge is on the subject site now, but will be given to the DNV. The DNV will manage the hedge in the future. The DNV wants to preserve the hedge.

Q26 Why is proposed access to the garage via a lane east of the site, rather than directly off Draycott?
A26 The parkade ramp works with the slope of the site and is relatively flat. Access from Draycott Road would be steeper.

Q27 Where will the solid waste bin be located?
A27 The architect showed the location on the site plan and indicated that it was proposed to be screened by landscaping.

Q28 Where will people wash cars?
A28 We need to work on this point. We may dedicate a parking stall for car wash use in off-peak times.

Q29 Will this be a leaky condo?

A29 No: there are new building standards to meet that will prevent this from being a leaky condo.

Q30 What will happen to the planter retaining wall?
A30 The planter retaining wall will remain.

C31 I appreciate how Milori Homes responded to our concerns raised in the first meeting in January.

Comment Sheet and Email Summary
One comment sheet and one email were submitted to the DNV after the meeting. A copy of the correspondence is attached as an Appendix to this report.

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

Access During Construction

- I walk nearly every day with my walker and would like to know if I will still be able to use the sidewalk during construction.

Landscaping

- Preserving the hedge will provide noise protection and privacy

Traffic

- My main concerns are with traffic and parking, especially the ability to turn left from Draycott Road onto Lynn Valley Road
- I think the DNV should change the intersection at Lynn Valley Road and Mountain Highway to not allow right turns on red when turning east on Lynn Valley Road off of Mountain Highway. This will stop the steady flow of vehicles and perhaps allow more left turns off Draycott onto Lynn Valley Road. There is an issue regarding pedestrians at this intersection. Motorists see the red light, check to the left for vehicular traffic, and then proceed to the right without stopping at the red light which they are required to do. The pedestrian standing there about two seconds after the light turns red has the walk sign.
- I support this project if these traffic concerns are publicly debated if need be and I commend the Milori group for its public engagement.

Conclusion

The purpose of this public meeting was to present to neighbours the proposed development concept, demonstrate how the proposal had been updated to respond to earlier public feedback, and provide an opportunity for neighbours to ask clarifying questions and comment on the proposal. 19 people signed in, and 20 people were counted participating in the meeting. More than half of the participants came from an adjacent condominium building on the Draycott Road cul-de-sac. By this measure, the meeting successfully engaged local residents.

Participants asked the development team and DNV planner a variety of specific questions. The key theme raised at the meeting was transportation, particularly egress from Draycott Road turning south-west onto Lynn Valley Road. Participants were also interested in traffic circulation in the proposed lane. Participants were keen to learn if the hedge east of the site could be preserved: the lane design was modified to preserve the hedge. Several participants remarked on the beautiful design of the proposed building.

The meeting format and length was sufficient to provide all participants an opportunity to learn more, ask questions, and make the comments they wished to provide that evening. Residents expressed appreciation to the applicant for responding to all concerns raised at the previous early public input opportunity meeting held in January 2014.

The Corporation of the District of North Vancouver

Bylaw 8096

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 "The District of North Vancouver Rezoning Bylaw 1322, (Bylaw 8096)".

2. Amendments

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

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

"Comprehensive Development Zone 84 CD84"

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

"4B84 Comprehensive Development Zone 84 CD84

The CD84 Zone is applied to:

Lot 5 District Lot 2023 Plan 15449, PID: 007-659-954;
Lot 1 of Lots 7 and 8 Block 2 District Lot 2023 Plan 4336, PID 011-632-721;
Lot 2 of Lots 7 and 8 Block 2 District Lot 2023 Plan 4336, PID 011-632-739; and
Lot 3 of Lots 7 and 8 Block 2 District Lot 2023 Plan 4336, PID 011-632-755.

4B84-1) Intent:

The purpose of the CD84 Zone is to establish specific land use and development regulations for a 35 unit apartment project.

4B84-2) Uses:

The following *principal uses* shall be permitted in the Comprehensive Development 84 Zone:

(a) Uses Permitted Without Conditions:

(i) Five Storey Residential building, multiple-family apartment

(b) Conditional Uses:

Not Applicable

4B84-3) Conditions of Use:

Not Applicable

4B84-4) Accessory Uses:

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

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

4B84-5) Density:

(a) The maximum permitted density in the CD84 Zone is limited to a floor space ratio (FSR) of 1.75, inclusive of any density bonus for energy performance;

(b) For the purposes of calculating floor space ratio, the following areas are excluded:
   i. Parking garage;
   ii. Amenity space to a maximum of 60.4m ² (650 sq ft).

4B84-6) Amenities:

(a) Despite subsection 4B84-5, density in the CD84 Zone is increased to a maximum floor space of 3444m² (37,071 sq ft), inclusive of any density bonus for energy performance, if the owner:

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

2. Contributes $57,557 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; maintenance of the retained hedge on the land to be dedicated as lane; and/or park, trail, environmental, pedestrian or other public realm, infrastructure improvements.

4B76-7) Maximum Principal Building Size:

Not applicable

4B84-8) Setbacks:

Buildings shall be set back from property lines to the closest building face (excluding any partially exposed underground parking structure) as established by development permit and in accordance with the following regulations:

Setback	Buildings (Min Setback)
North	5.03m (16.5 ft)
East	2.27m (7.5ft)
West	2.29m (7.5 ft)
South	8.08m (26.5 ft)

4B84-9) Building Orientation:

Not applicable

4B84-10) Building Depth and Width:

Not applicable

4B84-11) Coverage:

(a) Building Coverage shall not exceed 56%.

(b) Site Coverage shall not exceed 71%.

4B84-12) Height:

The maximum permitted height for each building is 17.1 m (56.0 ft);

4B84-13) Acoustic Requirements:

In the case of residential purposes, 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

4B84-14) Landscaping:

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

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

4B84-15) Subdivision Requirements:

Not applicable

4B84-16) Additional Accessory Structure Regulations:

Not applicable.

4B84-17) Parking and Loading Regulations:

(a) A minimum of 60 parking spaces are required, inclusive of designated visitor parking and parking for persons with disabilities;

(b) A minimum of 4 parking spaces are required for designated visitor parking;

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

(d) A minimum of 17 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 Commercial 2 Zone (C2) to Comprehensive Development Zone 84 (CD 84).

READ a first time February 16th, 2015

PUBLIC HEARING held

READ a second time

READ a third time

ADOPTED

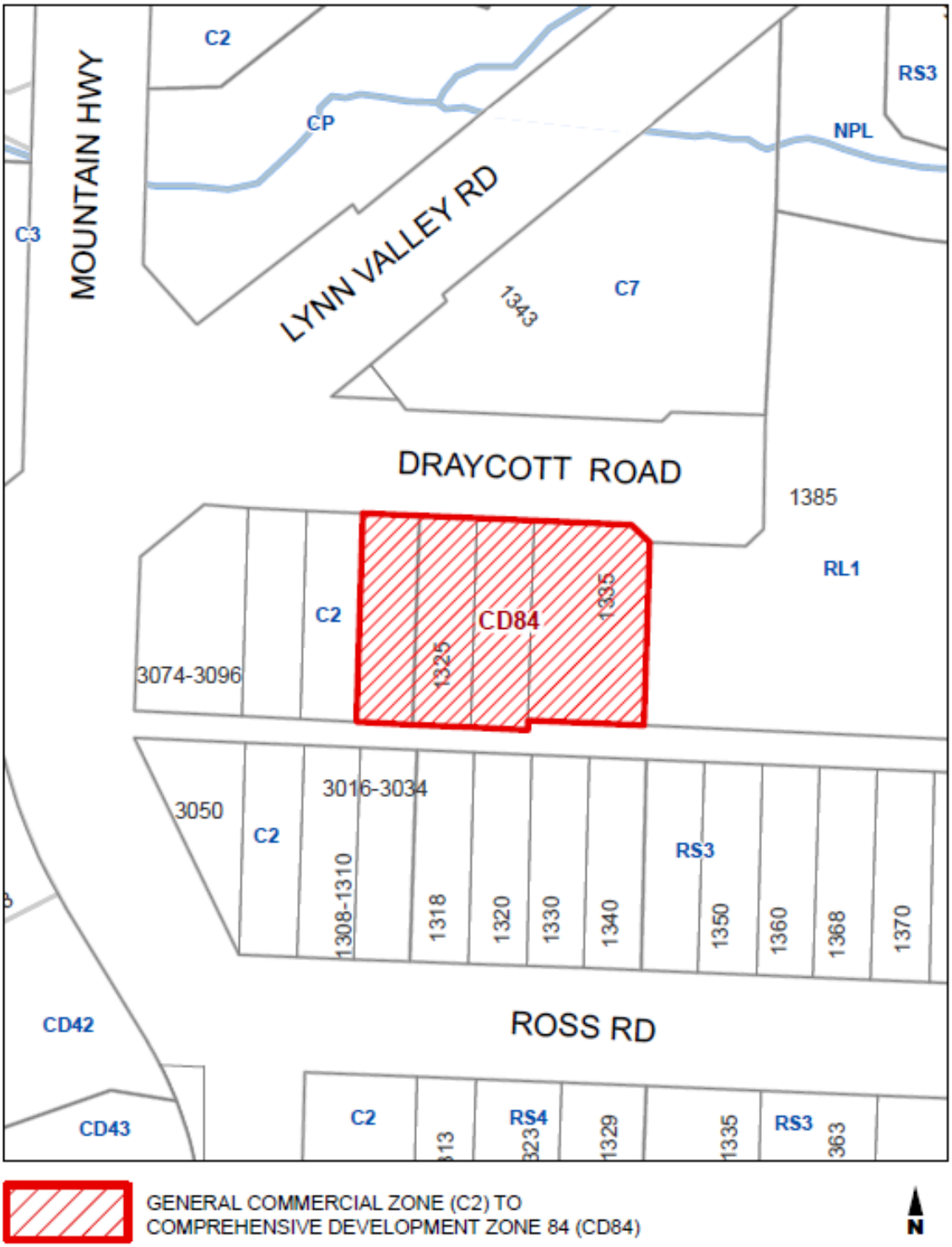
Mayor

Municipal Clerk

Certified a true copy

Municipal Clerk

Schedule A to Bylaw 8096



The Corporation of the District of North Vancouver

Bylaw 8097

A bylaw to enter into a Housing Agreement (1325-1335 Draycott Road)

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

1. Citation

This bylaw may be cited as "Housing Agreement Bylaw 8097, 2014 (1325-1335 Draycott Road)".

2. Authorization to Enter into Agreement

2.1 The Council hereby authorizes the District of North Vancouver to enter into an agreement, substantially in the form attached to this bylaw as Schedule "A" (the "Housing Agreement"), between The Corporation of the District of North Vancouver and Milori Homes (Draycott) GP Ltd Inc. No. BC1008485, with respect to the following lands:

(a) Lot 5, District Lot 2023, Plan 15449, PID: 007-659-954
(b) Lot 1 of Lots 7 and 8, Block 2, District Lot 2023, Plan 4336, PID: 011-632-721
(c) Lot 2 of Lots 7 and 8, Block 2, District Lot 2023, Plan 4336, PID: 011-632-739
(d) Lot 3 of Lots 7 and 8, Block 2, District Lot 2023, Plan 4336, PID: 011-632-755.

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 February 16th, 2015

READ a second time

READ a third time

ADOPTED

Mayor

Municipal Clerk

Certified a true copy

_____

Municipal Clerk

Schedule A to Bylaw 8097

SECTION 219 COVENANT – HOUSING AGREEMENT

This agreement dated for reference the ____ day of _____, 20____ is

BETWEEN:

Milori Homes (Draycott) GP Ltd Inc. No. BC1008485 of
_____

(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 (as hereinafter defined);

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

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

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

1. DEFINITIONS

1.01 Definitions

In this agreement:

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

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

(c) *"Proposed Development"* means the proposed development containing not more than 35 Units to be constructed on the Lands in accordance with the Development Permit;

(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 8028 and remain in effect until terminated by the District as set out in this Agreement.

3. RENTAL ACCOMODATION

3.01 Rental Disclosure Statement

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

(a) before the first Unit is offered for sale, or conveyed to a purchaser without being offered for sale, filed with the Superintendent of Real Estate a Rental Disclosure Statement designating all of the Units as rental strata lots and imposing 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 before the prospective purchaser enters into an agreement to purchase in respect of the Unit.

3.02 Rental Accommodation

The Units constructed on the Lands from time to time may always be used to provide rental accommodation as the Owner or a Unit Owner may choose from time to time.

3.03 Binding on Strata Corporation

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

3.04 Strata Bylaw Invalid

Any strata Ccorporation bylaw 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 shall not pass any bylaws preventing, restricting or abridging the use of the Lands, the Proposed Development or the Units contained therein from time to time as rental accommodation.

3.06 Vote

No Unit Owner, nor any tenant or mortgagee thereof, shall vote for any strata corporation bylaw purporting to prevent, restrict or abridge the use of the Lands, the Proposed Development 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 delivery of the notice. The notice must specify the nature of the default. The Owner must act with diligence to correct the default within the time specified.

4.02 Costs

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

4.03 Damages an Inadequate Remedy

The Owner acknowledges and agrees that in the case of a breach of this Agreement which is not fully remediable by the mere payment of money and promptly so remedied,

the harm sustained by the District and to the public interest will be irreparable and not susceptible of adequate monetary compensation.

4.04 Equitable Remedies

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

4.05 No Penalty or Forfeiture

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

4.06 Cumulative Remedies

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

5. LIABILITY

5.01 Indemnity

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

5.02 Release

The Owner hereby releases and forever discharges the District, its elected officials, board members, officers, directors, employees and agents, and its and their heirs, executors, administrators, personal representatives, successors and assigns from and against all

claims, demands, damages, actions or causes of action by reason of or arising out of advice or direction respecting the ownership, operation or management of the Proposed Development or any part thereof which has been or hereafter may be given to the Owner by all or any of them.

5.03 Survival

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

6. GENERAL PROVISIONS

6.01 District's Power Unaffected

Nothing in this Agreement:

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

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

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

6.02 Agreement for Benefit of District Only

The Owner and District agree that:

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

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

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

6.03 Agreement Runs With the Lands

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

6.04 Release

The covenants and agreements on the part of the Owner and any Unit Owner and herein set forth in this Agreement have been made by the Owner and any Unit Owner as contractual obligations as well as being made pursuant to Section 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, including any amendments to this Agreement as may be required by the Land Title Office or the District to effect such registration.

6.06 Agreement to Have Effect as Deed

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

6.07 Waiver

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

6.08 Time

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

6.09 Validity of Provisions

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

6.10 Extent of Obligations and Costs

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

6.11 Notices

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

If to the District:

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

Attention: Planning Department
Facsimile: (604) 984-9683

If to the Owner:

Attention:
Facsimile: (604)

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 facsimile transmission, on the first business day after the date when the facsimile transmission was transmitted; and if made by personal service, upon personal service being effected. Any party, from time to time, by notice in writing served upon the other parties, may designate a different address or different or additional persons to which all notices, demands, or requests are to be addressed.

6.12 Further Assurances

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

6.13 Enuring Effect

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

7. INTERPRETATION

7.01 References

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

7.02 Construction

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

7.03 No Limitation

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

7.04 Terms Mandatory

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

7.05 Statutes

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

7.06 Entire Agreement

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

(e) This Agreement may be amended only by a document executed by the parties to this Agreement and by bylaw, such amendment to be effective only upon adoption by District Council of a bylaw to amend Bylaw 8097.

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

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

C. The Owner granted to THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER (the "District") a Covenant 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.

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

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

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

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



LYNN VALLEY TOWN CENTRE

1 INTRODUCTION

Lynn Valley Town Centre is one of the District's two Town Centres in the OCP. Regionally, Lynn Valley is also identified as the District's Municipal Town Centre, which is a municipal-wide centre or hub with medium and higher density uses including residential, commercial, employment, recreational and civic. It is also a focus for potential frequent transit service. The land use policies for Lynn Valley Town Centre serve to accommodate approximately 2,500 new units within the timeframe of this OCP. Policies support the creation of a vibrant, compact and more complete community and direct and coordinate growth and redevelopment towards that vision.

Located in the heart of Lynn Valley, the Town Centre core is currently characterized by retail malls, and the new Lynn Valley library and civic plaza. Heritage buildings and features, parks and views to local mountains reflect the rich cultural and natural history of Lynn Valley. Building on the quality design, liveliness and sense of place initiated by the new Lynn Valley library and civic plaza, there is an opportunity to revitalize the Town Centre into a more vibrant, pedestrian oriented, mixed use centre with housing choices and inviting street level shopping along a High Street with sidewalk cafes and community spaces. Redevelopment of the Town Centre also provides an opportunity to increase the diversity of housing choices in an area close to services, shops, jobs and transit.

2 VISION

Lynn Valley Town Centre is envisioned as a well-designed pedestrian, biking and transit-oriented mixed use centre in the heart of Lynn Valley that celebrates its natural and cultural setting and strong sense of community. Building on the existing strong commercial core with recreation and civic uses, a mix of new residential, commercial and employment uses, park and community space, and green building design and infrastructure will create a more vibrant and complete community.

3 TOWN CENTRE POLICIES

3.1 LAND USE

Map 6 indicates the predominant land uses for Lynn Valley Town Centre.

3.1.1 GENERAL LAND USE

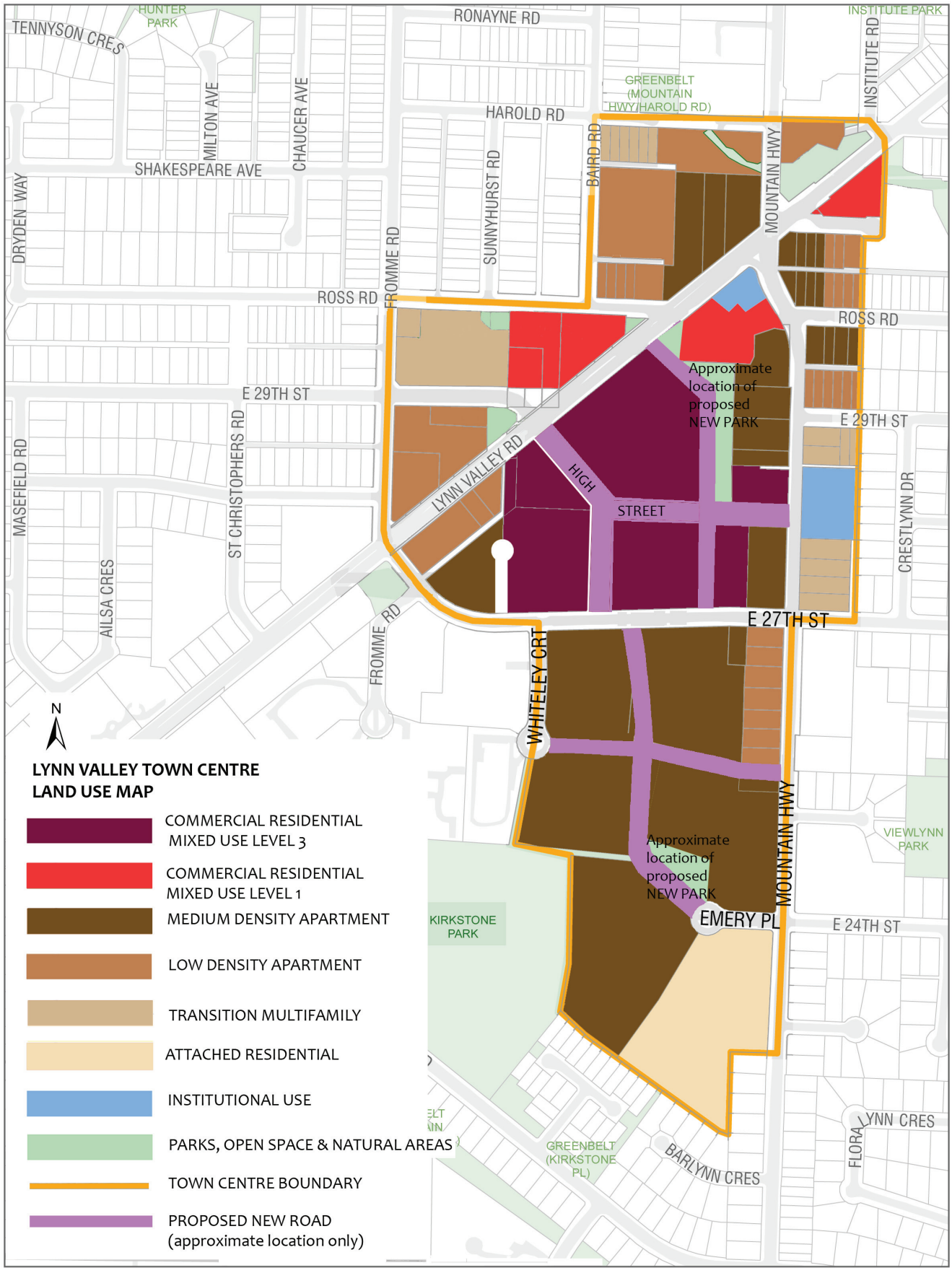
1. Locate higher density forms in the core of the Town Centre so that new residents may walk to and from shops, community and recreational services, cultural events and potential employment

2. Focus ground-oriented multifamily housing along the edges of the Town Centre and transition sensitively to surrounding low density residential areas

3. Provide for private and semi-public open spaces with good access to views and sunlight through appropriate building orientation and massing

4. Establish a gateway to the Town Centre at the historic intersection of Mountain Highway and Lynn Valley Road

5. Establish East 27th Street as a predominantly residential street with similar character on both sides and potential for limited retail on the north side



MAP 6: LYNN VALLEY TOWN CENTRE LAND USE MAP

3.1.2 HOUSING

1. Facilitate the provision of a diverse mix of multifamily housing forms and choices in the Town Centre to accommodate the needs of people at different lifecycle stages

2. Facilitate the provision of family housing in the residential area south of East 27th Street in the form of townhouses as well as apartments

3. Encourage redevelopment that includes units with more than 3-bedrooms that are suitable for families with children, and that may include flexible lock-off units

4. Facilitate the provision of new affordable and rental housing through the redevelopment of the Town Centre

5. Ensure that a portion of residential units in the Town Centre include adaptable design elements

6. Explore opportunities for the co-location of some ancillary housing for seniors on church sites

7. Consider the use of the District's old library site for a combination of market and non-market housing



Examples of potential housing forms for the Lynn Valley Town Centre area

3.1.3 COMMERCIAL AND EMPLOYMENT USES

1. Promote the retention of existing office uses and provide additional flexible office/retail space for local job opportunities according to the Lynn Valley Town Centre Land Use Map (Map 6)

2. Plan for sufficient additional retail and office space in the Town Centre in the next 20 years

3. Encourage redevelopment in which smaller commercial units are wrapped around large format retail units to create active and engaging store fronts, and to facilitate regular breaks in the street wall to promote pedestrian access and connectivity

4. Promote flexible retail or office use on strategic sites in the Town Centre and within mixed use buildings to accommodate changing community needs

5. Incorporate a portion of covered space for indoor shopping and gathering

3.1.4 COMMUNITY FACILITIES, SERVICES AND AMENITIES

6. Prepare a community amenity strategy for the Lynn Valley Town Centre to deliver community amenities and public benefits generally to include, but not limited to:

    - Affordable and non-market rental housing
    - Network of interconnected public gathering places including open space and plazas
    - Parks, greenways, trails, playgrounds and community gardens
    - Multi-purpose community space and daycare space
    - Community art and cultural facilities
    - Restoration of heritage features
    - Enhanced public recreation facilities and services

3.1.5 PARKS AND OPEN SPACES

1. Improve connections to existing parks and open space within and adjacent to the Town Centre through an integrated network of pedestrian walkways, sidewalks and trails according to the Mobility Network Map (Map 7)

2. Establish a strong pedestrian corridor to connect the library square to the Town Centre core and High Street

3. Create a Town Centre Green/Park south of the library square to connect with the High Street and consider opportunities for innovative stormwater management, community gardens and other recreational uses in this space

4. Protect natural parkland and local ecosystems including forest and riparian habitat, and seek to rehabilitate Hastings Creek at Lynn Valley Road

5. Create new park and greenway connections south of East 27th Street to provide additional park space for residents and to improve linkages between neighbourhoods, within the Town Centre and Kirkstone Park

6. Provide additional gathering spaces in the Town Centre and an urban plaza at a central location along the High Street

7. Design new urban spaces to promote public safety, provide attractive design elements (seating, lighting, public art, view corridors and landscaping) and encourage activity and vibrancy

8. Use public art, signage and other creative "way-finding" strategies in the Town Centre to enhance sense of place and to mark major trail connections and points of historical, recreational or other significance

Character sketches of the Lynn Valley Town Centre



Lynn Valley Road looking north-east



Mountain Highway at East 27th Street looking north

3.2 MOBILITY NETWORK

Map 7 provides a conceptual representation of the mobility network for Lynn Valley Town Centre.

1. Support a safe and integrated transportation network that includes all modes of transportation with an emphasis on walkability and strong pedestrian connections and plan road, transit, bike and pedestrian routes in accordance with the Lynn Valley Town Centre Mobility Network Map (Map 7)

2. Connect the Town Centre to outside destinations and explore opportunities to establish a north-south pedestrian/cycle route east of Mountain Highway

3. Maintain Lynn Valley Road and Mountain Highway as primary vehicular routes for Lynn Valley

4. Establish a pedestrian and vehicle oriented High Street in the core of the Town Centre to include generous sidewalks, weather protection, bike facilities and on-street parking

5. Encourage the majority of parking to be located underground, and explore opportunities for reduced parking standards and shared residential/commercial parking in concert with enhanced pedestrian, cycling and transit facilities

6. Work with the regional transportation authority to support the provision of frequent transit service to and from the Town Centre and support transit service with appropriately located lay-by areas and accessible, safe and attractive transit stops

7. Provide accessible and comfortable sidewalks in the Town Centre and provide safe and attractive pedestrian crossings of Lynn Valley Road, Mountain Highway and East 27th Street at strategic locations

8. Continue to explore innovative transit choices in the long-term

3.3 SUSTAINABILITY

1. Assess the feasibility of a district energy system for Lynn Valley Town Centre, and subject to the results of this analysis, encourage new development to be district energy ready

2. Promote the implementation of green building and water conservation practices

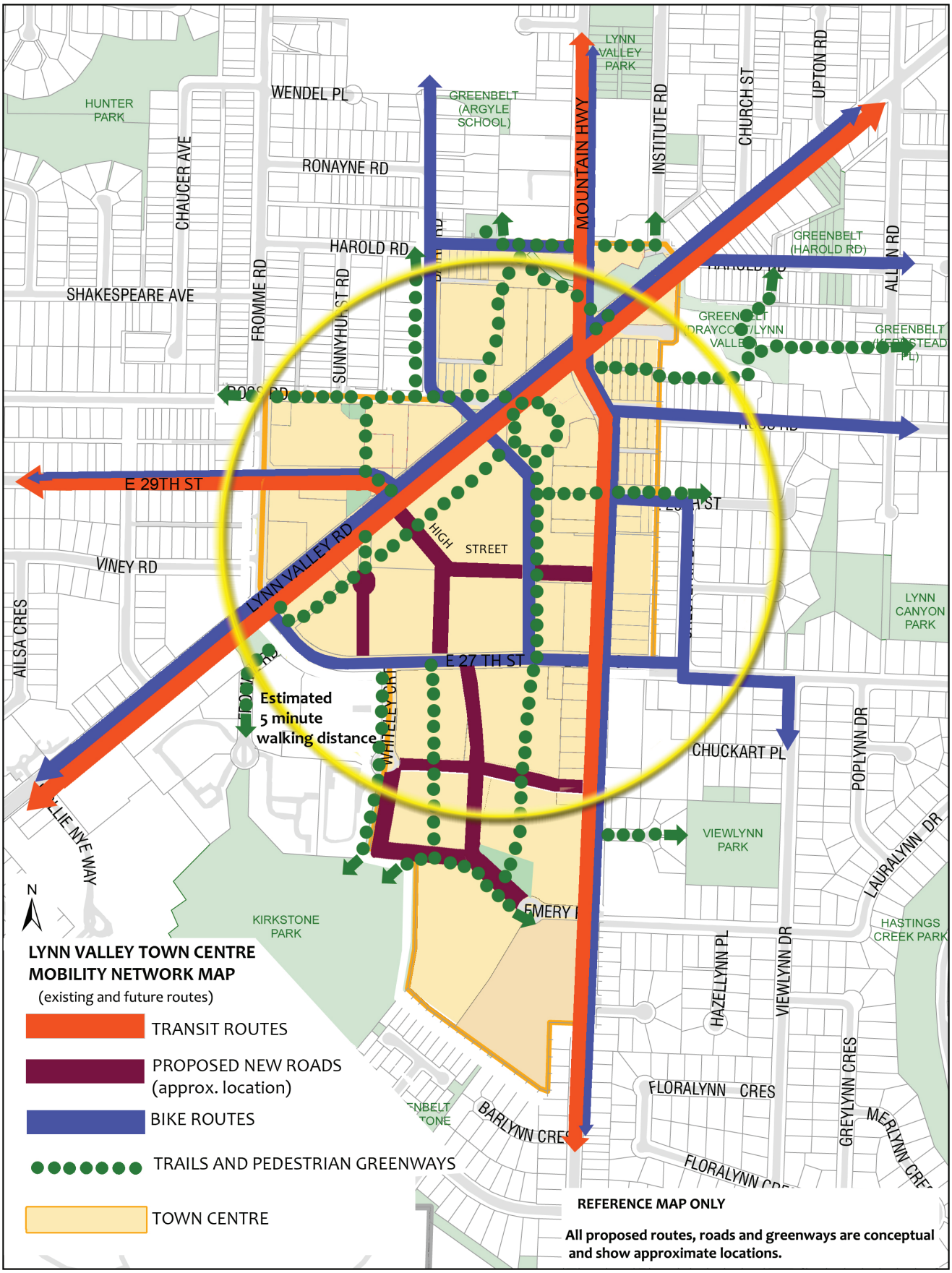
3. Integrate the natural environment into the Town Centre by planting native landscaping, protecting pocket parks and heritage stumps, and encourage innovative rain gardens/ rainfall capture features, green walls and roofs to utilize ecological services and reflect the natural context

4. Complete an integrated stormwater management plan for the Hastings Creek watershed and implement measures to maintain and enhance the health of the watershed

5. Require integrated stormwater management strategies for new development in the Town Centre and seek to manage and re-use stormwater on site to the greatest extent possible

6. Encourage community gardens and urban agriculture in open spaces and roof top gardens

7. Encourage new multi-family housing developments to provide composting facilities and/or coordinate composting services



MAP 7: LYNN VALLEY TOWN CENTRE MOBILITY NETWORK MAP

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News Update

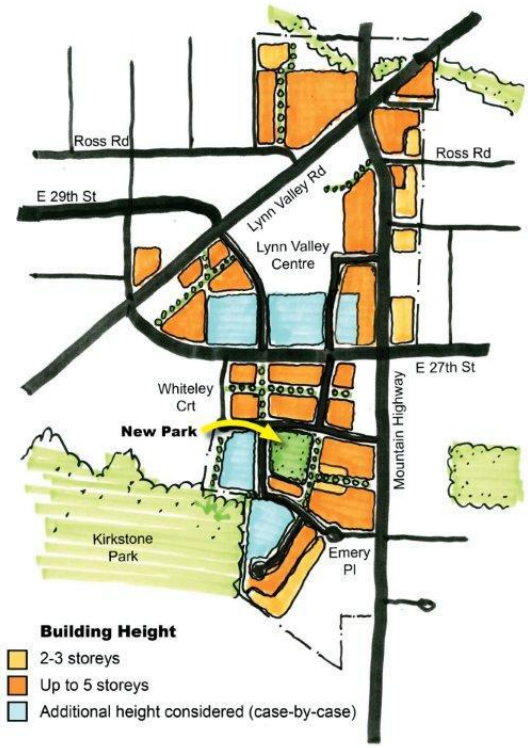
FOR IMMEDIATE RELEASE

October 8, 2013

North Vancouver District Council adopts Flexible Framework for future development in Lynn Valley Town Centre

North Vancouver District Council took a close look at the realities and facts of Lynn Valley Town Centre planning at their meeting last night and staked out a way forward.

At issue were two possible approaches to guiding new development over the next 20 years. The first option was to enshrine in policy an absolute height limit of five storeys across the town centre. The second option, recommended by staff and adopted by Council, was a 'flexible planning framework' that allows heights of predominantly five storeys, increasing to eight storeys at strategic locations. The framework also provides the flexibility to receive community input on and review, on a case-by-case basis, applications for developments that exceed eight stories. In adopting the framework Council set a height limit of 12 storeys for those specific locations.



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Council arrived at this point after a rigorous and wide-ranging community consultation with 950 residents, during which they received over 1,400 submissions, distinctly focussed on Lynn Valley Town Centre. This was in addition to a previous public consultation program which reached over 5,000 people and resulted in the Official Community Plan being adopted by Council in 2011.

After much analysis, Planning staff provided Council with a side-by-side comparison of the trade-offs between the five storey absolute height limit and the flexible framework model. Highlights of the benefits of the flexible framework approach include:

- addition of a large local park as well as more public spaces and pocket green spaces
- the ability to create enough critical mass to support provision of enhanced transit service
- road dedication for a transit exchange along East 27th Street
- the ability to protect views in public spaces and avoid excessive shading from buildings
- enhancement of the area's ecology, including stream enhancement
- 45 – 60 percent difference in the dollar value of Community Amenity Contributions and Development Cost Charges (funds received from developers in exchange for additional density that help pay for highly-valued neighbourhood features such as daycare spaces, new parks, public plazas, walking trails, stream enhancements, etc.)
- increased economic opportunity by creating and maintaining a vibrant business community that enables and encourages a walkable streetscape
- the ability to more closely dictate and monitor the character of new buildings to meet the community's desired 'mountain village' aesthetic
- more diverse and plentiful mix of housing types suitable for seniors and young families

The flexible framework allows the District to continue to meet objectives already adopted in the Official Community Plan around transportation, housing, parks and open spaces, economic vibrancy, the environment and the social well-being of the population, while acknowledging community concerns about rapid or extreme change, cookie-cutter design, shading from buildings, and transportation improvements. It also allows the community to help shape the future look, feel and functionality of the area by being involved in redevelopment proposals and rezonings for the town centre, particularly those that ask to exceed eight storeys and build towards the 12 storey limit that Council has set.

Mayor Walton said, "I'm pleased that, with the help of the Community, Council has landed on a balanced approach that takes into consideration all viewpoints and provides a clear path forward for rejuvenation of the Lynn Valley Town Centre."

– 30 –

North Vancouver District Communications Office
604-990-2459

View the full Council report from the October 7 North Vancouver District Council Meeting

AGENDA INFORMATION		Dept. Manager	GM/ Director	CAO
☐ Regular Meeting	Date: OCT. 7-2013			
☐ Workshop (open to public)	Date:			

The District of North Vancouver
REPORT TO COUNCIL

September 25, 2013
File: 13.6480.30/002.002

AUTHOR: Karen Rendek - Policy Planner, MCIP, RPP

SUBJECT: **Lynn Valley Town Centre - Alternative Implementation Planning Directions**

RECOMMENDATION:
THAT Council:

i. Support the *Planning Framework* outlined in this report as a decision-making tool to guide implementation and redevelopment of the Lynn Valley Town Centre; and,

ii. Direct staff to communicate the preferred implementation planning direction to all interested parties as part of the final phase of public consultation.

REASON FOR REPORT:
At its September 23, 2013 meeting Council directed staff *to report back in an expeditious manner on proposed planning directions two and three as outlined in the September 17th, 2013 report of the Policy Planner for Lynn Valley*. This report provides further detail and compares, for Council's consideration, the *Low-rise Development* (5-storey option) and the *Planning Framework* (generally based on a 5-storey height limit with maximum 8 storeys at strategic locations; additional height considered on a case-by-case basis). The analysis of these two implementation planning directions focusses on the financial/economic implications and the relationship to Official Community Plan (OCP) objectives as directed by Council.

SUMMARY:
Based on Council's direction staff have further developed two implementation planning options for Lynn Valley. These options are described and compared in this report and include:

- *Low Rise Development*; or a
- *Planning Framework* to guide decision-making.

The intent of both implementation plan options is to provide additional context to the policies contained in the Official Community Plan and to guide property owners, staff, residents, stakeholders and Council when considering redevelopment proposals in the centre.

Based on the analysis in this report, staff recommends proceeding with the *Planning Framework* as it responds most effectively to community feedback, OCP objectives and financial considerations. With regard to financial implications, the difference between the *Planning Framework* and the *Low-rise Development* options is estimated in the range of $16.3-19.8 million for one-time revenue and $1.4 million in annual on-going revenue – both in favour of the *Planning Framework*.

The implementation plan directions contained in this report are intended for Council's consideration with the preferred direction to be communicated to all interested parties as part of the final phase of the consultation process.

BACKGROUND:
At its January 7, 2013 meeting Council directed staff *to undertake an intensive and focussed community engagement initiative in early 2013 to seek further feedback to shape and refine the Lynn Valley Town Centre Implementation Plan*. A series of public events were held in June with approximately 1,200 people attending. Diverse community feedback was received and reported to Council on September 23, 2013 by Golder Associates, the consultants hired to design, facilitate and report on the community engagement initiative for Lynn Valley.

The Golder report indicated there was no option clearly favoured by a majority of participants and preferences by residents were noted along the entire continuum of options (Options A, B, C, or D) in the (quantitative) feedback. Themes from the substantial qualitative feedback which included comments on the options in the Metro Quest survey, the open ended paper surveys, letters to Council and to staff were also summarised. These themes reflect the key considerations of many participants and can help guide directions for implementation planning. Themes include:

- Concerns about the population growth projection and associated impacts on transportation infrastructure and services
- Concern regarding traffic congestion and lack of parking
- Concerns related to building height and potential view loss and shading
- Desire for the character and aesthetics of development to reflect a mountain village, local geography, history and culture of Lynn Valley
- Protection of the natural environment
- Need for parks, plazas and open spaces
- Desire for more affordable and diverse housing
- Desire for a mixed-use centre – focal point for the community, places to live, work, play and connect

Staff briefly outlined three optional directions for implementation planning in Lynn Valley for Council's consideration in the September 17th report:

1. Delay implementation planning in Lynn Valley at this time; or
2. Low-rise Development (5-Storey Option); or
3. Develop a Planning Framework to guide decision-making (generally based on a 5-storey height limit with maximum 8 storeys at strategic locations; additional height considered on a case-by-case basis).

At its September 23rd, 2013 meeting, Council directed staff to report back further on potential planning directions two and three from the above list with specific direction to provide details on each option from a financial planning perspective.

EXISTING POLICY:
The 'Network of Centres' concept, a District–wide growth management strategy contained in the OCP, provides the foundation for planning of Lynn Valley Town Centre. Schedule A of the OCP includes the broad vision, policy directions and land use and mobility network concepts intended to guide detailed implementation planning and redevelopment of Lynn Valley Town Centre. Looking to 2030, the OCP identifies capacity for approximately 10,000 new housing units, District-wide, and a population increase of around 20,000 people with approximately 75-90% of growth to be concentrated mainly within four centres. These figures are estimates intended to help guide planning. This growth may or may not occur over the 20-year planning horizon to 2030 and will depend on market and other forces, including the capacity of infrastructure.

Community Amenity Strategy (CAC's)
The provision of community amenities in Lynn Valley is a critical aspect of making the Town Centre a livable and vibrant place for the entire community. Amenities are anticipated to be delivered through the redevelopment process consistent with the CAC strategy for OCP growth centres (see identity.dnv.org). Amenities and benefits desired by the community for Lynn Valley Town Centre as identified in the OCP include:

- Interconnected public gathering places including open space and plazas
- Parks, greenways, trails, playgrounds and community gardens
- Multi-purpose community space and day care space
- Community art and cultural facilities
- Hastings Creek watershed environmental enhancements
- Restoration of heritage features
- Enhanced public recreation facilities and services
- Affordable and non-market rental housing

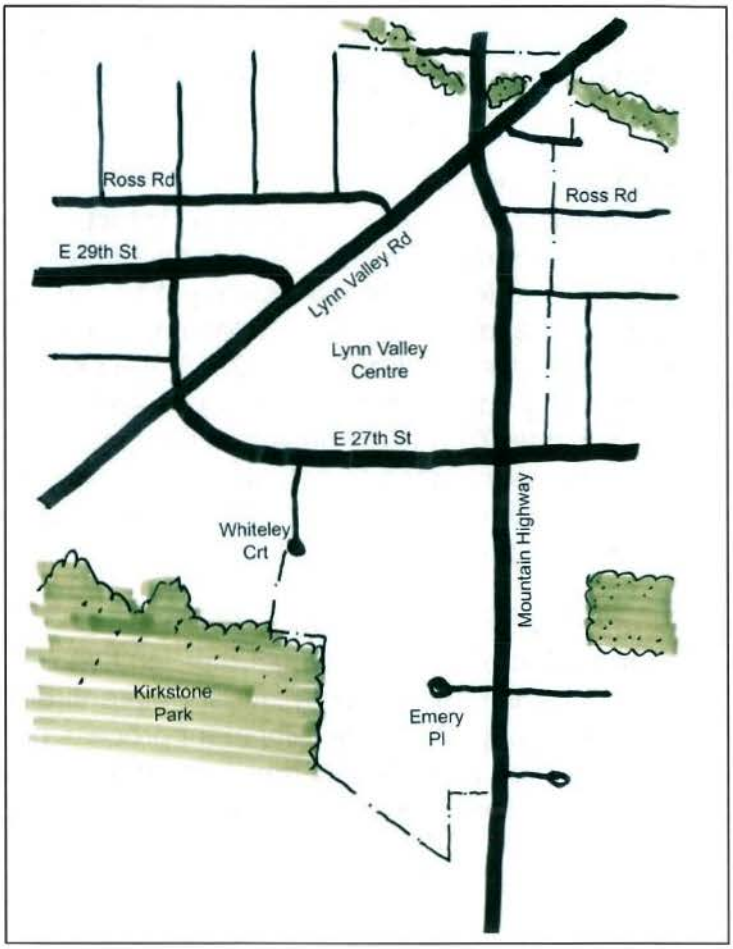
DESCRIPTION AND ANALYSIS:
The following includes a description of two alternative implementation plan directions followed by a comparative analysis for Council's consideration. Both planning directions support a strong "Village" theme and character for this Centre through design measures.

The options are compared from a financial planning perspective as well as on their ability to achieve the overall vision and policy objectives identified for Lynn Valley in the OCP (i.e. integration of transportation, parks and open space, community building, economic vibrancy and changing needs of the community over time).

For comparative purposes, the *Low Rise Option* models 1,450 units and the *Planning Framework* 2,100 units.

The general planning area of Lynn Valley Town Centre and the existing road network and parkland is shown conceptually in the adjacent diagram.

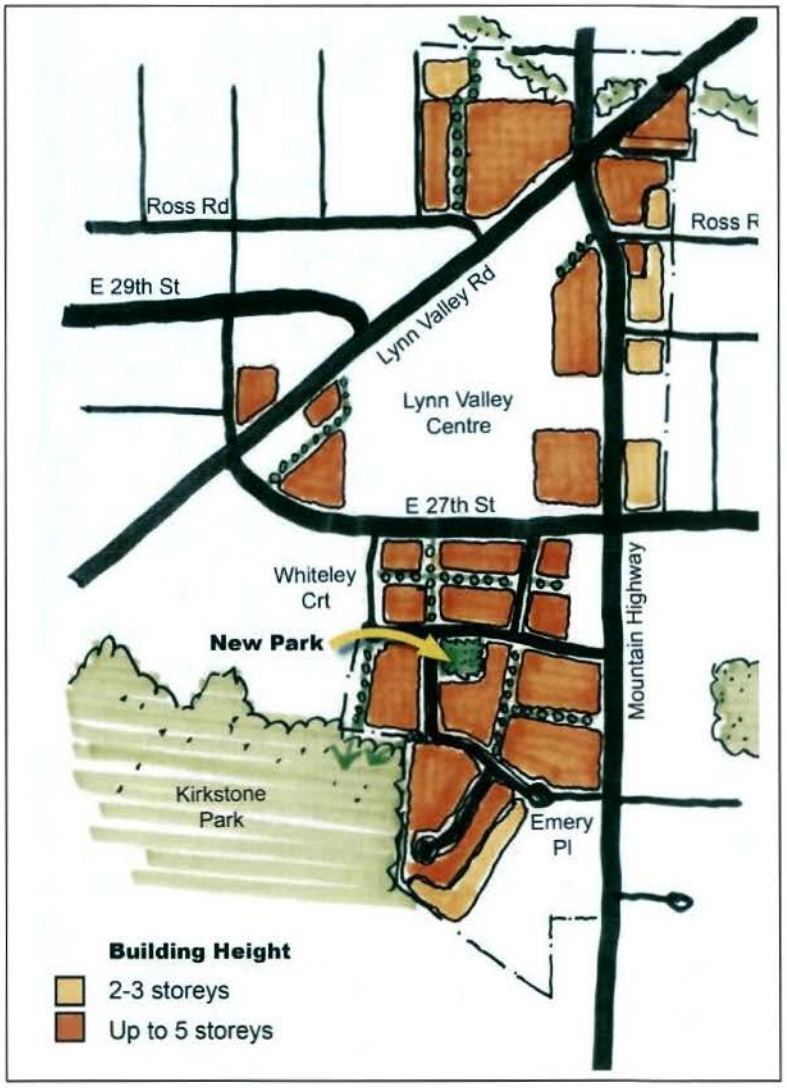
Areas of potential change, associated building heights and road/pedestrian/cycle network improvements are shown for each option in the subsequent diagrams.



LOW-RISE DEVELOPMENT (5-STOREY OPTION)

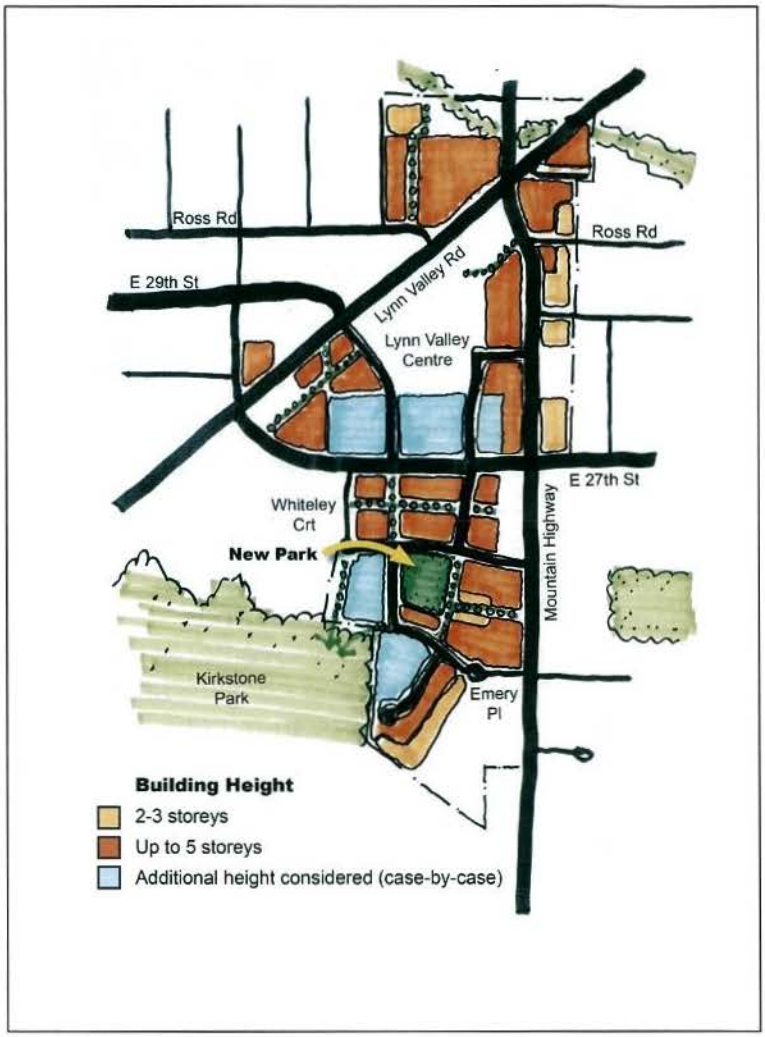
Description: In this option, staff anticipates some redevelopment may proceed along the edges of the Town Centre and south of East 27th Street. Mixed use redevelopment of the core area is not anticipated (Safeway, Zellers sites) with a 5 storey constraint. Some commercial redevelopment in the core may be anticipated. Key characteristics of this option:

- The maximum building height for properties within the Town Centre will be set at five storeys
- Housing next to single family residential will be set at 2-3 storeys
- Plan implementation and infrastructure improvements will be monitored and consideration of additional growth may be made by Council in the future



PLANNING FRAMEWORK (5-8 STOREY OPTION; ADDITIONAL HEIGHT CONSIDERED ON A CASE-BY-CASE BASIS)

Description: In this option, staff anticipates redevelopment may occur along the edges of the Town Centre, south of East 27th Street and within portions of the central core (Zellers, parkade, Safeway, District's old library). Key characteristics include:



- The maximum building height for properties within the Town Centre will be predominantly five storeys increasing to eight storeys at strategic locations (within the central core and along the spine adjacent to Kirkstone Park)
- Housing next to single family residential will be set at 2-3 storeys
- Additional height at strategic locations (more than eight storeys but not exceeding the height of Kiwanis Lynn Manor) may be considered on a case-by-case basis provided the following criteria are addressed:
    - Building design is reflective of a mountain village character
    - Demonstrated design excellence
    - Retention of key public vistas to the mountains
    - Community amenity contribution and open space provision
    - Demonstrated community support
    - Transportation and infrastructure improvements
    - Exemplary sustainability measures

- Plan implementation and infrastructure improvements will be monitored and the pace of change will be managed based on the above criteria

Comparative Analysis

The two alternatives are compared on financial aspects as well as on their ability to deliver key OCP objectives for Lynn Valley Town Centre. The financial analysis is based on work undertaken with Coriolis consultants where the Community Amenity Contribution (CAC) and Development Cost Charge (DCC) revenue potential was examined for all four OCP growth centres for long range planning purposes. Community Amenity Contributions (CAC) and Development Cost Charges (DCC) include monies the municipality collects from redevelopment to provide necessary infrastructure, community facilities, services and amenities associated with growth. Costs to provide services to future residents are not reflected in the analysis below. However, previous financial planning work during the OCP process has indicated that growth in a compact form in an area largely served by existing infrastructure is anticipated to result in a positive annual cash flow to the municipality.

The following growth estimates for Lynn Valley Town Centre are based on the 2 potential plan directions compared in this report. These options would not be expected to achieve all of the proposed community amenities (valued at approximately $30 million) outlined in the OCP (by funding through redevelopment alone) and amenities would need to be adjusted. This financial analysis assumed that approximately 25% of the properties within the town centre area may not redevelop within the timeframe of this plan and the total estimated revenue forecasted below has been adjusted accordingly. The District's Finance Department estimated potential tax and utility revenues. The District's Real Estate and Properties Department provided estimates on the District property.

Comparative Analysis of Implementation Planning Options

Key Considerations	***Low-rise Development*** (5-storey option)	***Planning Framework*** (5-8 storey option; additional height considered case-by-case basis)
Revenue Estimates		
Development - CACs and DCCs (Capital)	$27.6M – see note 1	$43.3M
Old Library Site – District property	$4.5M - $8.6M - see note 2	$8.6M - $9.2M – see note 3
Total One Time Revenue	**$32.1 M – 36.2M**	**$51.9M - $52.5M**
Total On-going Revenue – Municipal Property Tax and Utility Rates	**$3.2M annually**	**$4.6M annually**

OCP Objectives		
Open Space Provisions • interconnected system of open spaces, parks, plazas and greenway	• Wouldn't provide plazas and pathways in the core area • Provides greenway, pathway connections in area South of East 27th and along edges of the TC • Provides small pocket park (~½ acre) through redevelopment South of East 27th	• Provides plazas and some pathways in the core area • Provides greenway, pathway connections in area South of East 27th and along edges of TC • Provides ~ 2-acre active park through redevelopment South of East 27th
Environmental	• Surface parking and large impervious surfaces remain in central core with associated run-off impacts • Limited ability to improve environmental conditions of Hastings Creek Watershed without CACs from core redevelopment	• On-site and off-site measures required as part of redevelopment to reduce run-off and enhance on-site infiltration within portion of the core • CAC's to include stream habitat enhancement projects for Hastings Creek Watershed
Infrastructure	• Reduced DCC revenue may impact timing of proposed sanitary sewer upgrades and DCC listed road projects	• Sanitary sewer and road Infrastructure improvements partially funded through redevelopment
Transportation – Land Use Mix	• No new internal road, pedestrian and cycling network delivered in the core • No road dedication for transit exchange along E 27th • Internal road network, greenway and pedestrian pathways provided in area S of E 27th St enhancing connectivity • Longer timeframe to achieve frequent transit service levels due to reduced density and population estimates	• Portion of internal road, pedestrian and cycling network delivered in the core area improving connectivity and walkability • Road dedication for transit exchange along E 27th • Internal road network, greenway and pedestrian pathways provided in area S of E 27th St enhancing connectivity • Densities supportive of provision of frequent transit service • Potential contribution for highway interchange improvements through redevelopment to improve Lynn Valley Road access to the Highway •

Housing Diversity	• Less diverse housing mix – predominantly apartments • rental unit replacement unlikely due to economics • unlikely to achieve housing in the core	• More diverse and plentiful housing mix of apartments, townhouses • some rental unit replacement anticipated • opportunity to achieve housing in a portion of the core (mixed-use on Safeway and Zellers site)
Economic Vibrancy	• Fewer people in the centre and less mixed-use development anticipated to contribute less to economic vibrancy	• More people in the centre, mixed use development and greater walkability would likely enhance economic vibrancy
Social Well Being • i.e. accessibility of community services and facilities, housing, throughout various stages of life	• Housing choices expanded from present; greenway and trail connections S of E 27 St.; unlikely to provide additional community facilities or large park area	• Greater ability to deliver community facilities and services; greater diversity of housing; greater opportunities for active/healthy living (e.g. enhanced walkability in the core, greater ability to support frequent transit, large local park)
Overall OCP Vision	• Unlikely to achieve the mixed-use, pedestrian, biking and transit oriented heart in the centre or the infrastructure and public realm improvements envisioned	• Generally supports the vision for a mixed-use, pedestrian, biking and transit oriented heart with enhanced public realm and infrastructure improvements

Note 1 - properties within the core would likely proceed with commercial redevelopment under existing zoning. A commercial only redevelopment of Safeway and/or Zellers complies with existing zoning and would not generate any CAC's and little DCC's and limited offsite improvements for these properties

Note 2- Estimate assumes stand-alone strata redevelopment

Note 3 – Estimate assumes an integrated strata redevelopment

This financial analysis estimates that the *Low-rise Development* option could generate approximately $36.2 million in revenue from redevelopment (one-time) and the *Planning Framework* Option could generate approximately $52.5 million. In terms of tax and utility revenues, it is further estimated that the *Low-rise Development* option could generate $3.2 million annually and the *Planning Framework* Option could generate $4.6 million annually.

The *Planning Framework* more effectively addresses OCP objectives related to transportation, housing, parks and open spaces, environment, economic vibrancy and social well-being relative to the *Low-rise Development* option. The *Planning Framework* is consistent with the overall Network of Centres concept. It provides the flexibility to distribute growth and to respond to changing conditions. The plan affords Council the opportunity to

shape the centre based on community needs, acceptance and infrastructure capacity. The *Planning Framework* is also reflective of the key themes from recent community engagement.

Based on the above analysis, staff recommends the *Planning Framework* as the preferred direction to guide implementation and redevelopment of Lynn Valley Town Centre.

Timing/Approval Process:
Following Council's direction regarding this report, staff will communicate the preferred implementation planning direction to all interested parties as part of the final phase of public consultation.

Concurrence:
The two alternative plan directions under consideration have been reviewed by Planning, Finance, Real Estate and Properties, Transportation, Engineering and Utilities.

Financial Impacts:
The Community Amenity Contribution (CAC) and Development Cost Charge (DCC) projections contained in this report reflect the financial analysis completed by Coriolis Consultants for the Lynn Valley Town Centre in 2012. Coriolis Consultants has revised their forecasted projections based on the request by Council to compare the two alternative plan directions and the update reflects a comparison in 2012 dollars.

Public Input:
A summary and analysis of public feedback was reported by Golder Associates at the September 23, 2013 Regular Meeting of Council and their report was included as Attachment 1 to the staff report dated September 17th, 2013. Next steps include communicating the preferred implementation planning direction to all interested parties as part of the final phase of public consultation.

Conclusion:
This report compares two implementation planning options for Council's consideration. Based on the analysis in this report, staff recommends the *Planning Framework* as the preferred direction to guide implementation and redevelopment of Lynn Valley Town Centre. The *Framework* provides the flexibility to distribute growth and to respond to changing conditions while affording Council the opportunity to shape the centre based on community needs, acceptance and infrastructure capacity. This option also allows Council to base their decision on the merits of individual applications coming forward.

Options:
Council may:

i. Support the *Planning Framework* outlined in this report as a decision-making tool to guide implementation and redevelopment of the Lynn Valley Town Centre; and,

i. Direct staff to communicate the preferred implementation planning direction to all interested parties as part of the final phase of public consultation.

Alternatively, Council may: choose the *Low-rise Development* option as outlined in this report. OR,

Alternatively, Council may: direct staff on an alternative course of action.

Respectfully submitted,

Karen Rendek, MCIP, RPP
Policy 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:	____

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Lynn Valley Town Centre
Transportation Study
2013

In 2013, Urban Systems consultants completed a comprehensive Transportation Study for Lynn Valley Town Centre. The study assessed worst case scenario of development-generated traffic in the peak hour in the year 2030. **Based on the outcome of the study, the District is confident that there is a sound transportation plan for the area for the coming years.**

Key findings:

- The Lynn Valley Transportation study identified opportunities for enhanced traffic operations through better lane continuity and an improved grid network. With the planned improvements, the overall network is expected to experience minimal additional delay. Under the worst case scenario of development in 20 years, no operational issues are expected for any intersections within the area. For the average trip in the Town Centre area, the **total increase in delay per vehicle would be less than 30 seconds in the worst case scenario in 20 years**.

- As a result of signal operation improvements, lane continuity, removal of turning restrictions, and overall circulation enhancements, **safety benefits at intersections** are anticipated.

- The proposed land use changes enable **improvements for active and healthy transportation**. The study identified opportunities for **new walkways and improved facilities for cyclists** of all ages and abilities, including a separated two-way cycle track along E 27 Street and bike lanes on the high street.

- The North Shore Area Transit Plan identifies **future frequent transit corridors** serving the Town Centre. To support these transit improvements, the study identifies a multimodal on-street transit exchange on 27th Street.

- The study is based on the **conservative assumption** that 20 percent of trips will be made by walking, cycling and transit (consistent with the 21 percent of trips by walking, cycling and transit across the District of North Vancouver). The actual proportion of people that choose to walk, cycle or take transit will likely be higher because of the quality of the pedestrian and cycling infrastructure in the Town Centre.

- **Parking** levels would be matched with demand and generally provided underground. On-street parking would also be available to support vibrant retail.

- Each development will be responsible for establishing a **construction management plan** to minimize the impacts of development on traffic in the area.

A full copy of the study follows.

URBAN systems

REPORT

District of North Vancouver

Lynn Valley Town Centre

Transportation Assessment

550 - 1090 Homer Street, Vancouver, BC V6B 2W9 | T: 604.235.1701

2013

File: 1333.0018.01

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Executive Summary

In June 2011, the District of North Vancouver adopted a new Official Community Plan (OCP), with a vision of establishing a 'network of centres' to manage expected growth over the next 20 years. Lynn Valley Town Centre, a deep-rooted community within the District, has been identified as one of two designated Town Centres within the OCP. With steady growth anticipated over the next two decades, the OCP calls for a revitalization of Lynn Valley Town Centre that will increase residential density, while providing more pedestrian-friendly roadways and housing options that maintain and enhance the community's overall vibrancy. This revitalization is possible only through redevelopment, which will make land and funds available for key improvements. Prior to approval of any future development projects, the Lynn Valley Town Centre Transportation Assessment was a necessary step to further understand the implications of such development on the transportation network, a vital component of any vibrant community.

The Lynn Valley Town Centre Transportation Assessment examines existing contexts, including roadway characteristics and an analysis of existing conditions. The analysis creates a better understanding of existing network deficiencies. Through this understanding, existing network issues and the resulting impacts can be mitigated.

Furthermore, a snapshot of Lynn Valley Town Centre by 2031 has been developed and included within this assessment. Future growth and land use as well as eight (8) mobility network policies, as described in the OCP, have been outlined for reference. Some of the benefits within this snapshot include a more walkable environment within a safe transportation network with strong connectivity, the establishment of a new pedestrian and vehicle oriented street within the core of the Town Centre, and opportunities for improvements to parking. Other plans and studies that will influence future transportation in Lynn Valley, including the North Shore Area Transit Plan, the District of North Vancouver Transportation Plan, and the North Vancouver Bicycle Master Plan have been considered and summarized to include relevant highlights complimentary to this report.

Building on the vision for the future, an assessment of future conditions was completed for two separate timelines, a 20-year horizon and an unlimited horizon, which will account for additional development not anticipated within the 20-year timeframe of the OCP. Future traffic forecasts indicate that the increase in new vehicle trips due to redevelopment will be small and may be further mitigated by increasing internal trips and non-auto mode share. These are both expected to increase over time as a result of a more vibrant, pedestrian focused Town Centre, with minimal impacts to its users. In line with the North Shore Transit Plan, an assessment of future transit needs shows an outlook of improved transit exchanges with more frequent service as well as better connectivity east and west. As identified within the OCP, the ability for the District to increase sustainable forms of transportation will result in a more liveable Town Centre. As a result, the transportation study has carefully considered the future needs of both pedestrians and cyclists in order to enable a safer environment for users of all ages and skill levels.

Also identified in this report are a number of guiding principles that will further improve accessibility for pedestrians, cyclists, transit users, and motorists. These guiding principles help inform improvement options, ultimately transforming Lynn Valley Town Centre into a complete community where people want to live, work, and play. The guiding principles align well with the final recommendations, included in

summary, of the impact future development will have on area residents over the next 20 years and beyond. A brief summary follows.

Impact of future growth on pedestrians could include:

- More walkable neighbourhoods,
- Improved connectivity and well designated spaces for pedestrians,
- Wider sidewalks,
- A new residential corridor within the core of the Town Centre,
- A safer, more comfortable walking environments for residents of all ages and mobilities, and
- A reduction in intersection crossing distances.

Impact of future growth on cyclists could include:

- Improved facilities for cyclists of all ages and abilities,
- A separated two-way cycle track along an important connection for area cyclists,
- Improved connectivity for cyclists traveling east-west,
- Decreased travel time and distance, and
- Clear signage that will help to direct users to their intended destinations.

Impact of future growth on drivers could include:

- An improved grid network that will lessen the impacts on the road network as vehicle trips increase,
- Continued access for commercial industries,
- New roadways to improve circulation,
- Safer intersection operations,
- Minor increase in travel time for some vehicle trips with all intersections operating at an acceptable level of service
- Minimal delays to through traffic on Mountain Highway and Lynn Valley Road, and
- Parking improvements.

Impact of future growth on transit users could include:

- Improved service, including increases in frequency and routes, for an exceptional overall experience, and
- Improved accessibility resulting in an increase in ridership.

With all change and growth cultivates a need to better understand the surrounding area and how certain regeneration will impact others. The report has considered the impact of future development on the residents who call the District of North Vancouver home and how best to mitigates any potential impacts. The recommended changes are expected to provide a better function while balancing the needs of both vehicular traffic and other sustainable modes of transportation now and into the future.

1.0 Introduction

1.1 Lynn Valley

Lynn Valley Town Centre is a long-established community in the District of North Vancouver, located amongst a beautiful, natural setting. In the core of the community there are retail establishments and civic uses, including the new Lynn Valley Main Library. In 2011, District of North Vancouver Council adopted a new Official Community Plan (Bylaw 7900). This OCP establishes a 'network of centres' to manage growth within a defined urban structure over the next 20 years. Lynn Valley Town Centre is one of two Town Centres identified in the OCP and is the designated Municipal Town Centre under the *Metro Vancouver 2040: Shaping Our Future (2011)* Regional Growth Strategy. In particular, the OCP calls for the revitalization of the Lynn Valley Town Centre and provides land uses that increase residential density, making the community more pedestrian-oriented, vibrant and with more housing choices.

1.2 Project Rationale

Before development projects are approved under the scope of the new OCP, the implications on the transportation network must first be well understood. As such, a major component of the Transportation Study has been to examine the future transportation conditions that are anticipated as a direct result of future land use plans. Once the impacts of the land use changes on the transportation system were identified, required multi-modal transportation improvements were developed in consultation with the District of North Vancouver.

In addition to land use and density projections, the Transportation Study required an update to the existing Synchro model, local area traffic projections and the development of a new Synchro model. The project included an assessment of alternative modes and planning for transit stops, pedestrian, and cycling connectivity. Goods movement access and internal study area configuration were also considered. Finally, a number of alternatives for various segments of the transportation network were developed and assessed. The recommended scenario is a transportation network that accommodates growth while supporting mobility for all modes.

The overall purpose of this study is to ensure that the community's vision for a vibrant and complete Town Centre is upheld. The functionality of the transportation network is a major factor in achieving this objective.

1.3 Report Outline

This report is divided into eight sections that describe the study processes, analysis, and recommendations. The sections are as follows:

1. **Introduction**
2. **Scope of Work**: Description of the approach to the study, including the area and time horizons considered.
3. **Existing Context**: Summary of the existing pedestrian, cycling, transit, and road networks, including analysis of existing intersection operations.

4. **Lynn Valley Town Centre by 2031**: Presentation of the anticipated growth and land use patterns based on the OCP. The vision for Lynn Valley is summarized along with the planned transportation network for all modes.
5. **Future Conditions Assessment**: Summary of forecast conditions for the roadway network and analysis of roadway operations. Description of future transit, cycling, and pedestrian needs.
6. **Guiding Principles**: Identification of the guiding principles that informed the design. These principles are based on the vision and conditions outlined in previous sections.
7. **Recommendations by 2031**: Presentation of the recommended transportation network for 2031 and beyond.
8. **Conclusion**

2.0 Scope of work

2.1 Deliverables

In pursuing the objectives of this Transportation Study, two major deliverables have been completed by the consulting team with guidance from the District. These deliverables include:

1. The traffic model, to provide developers with assistance in identifying development impacts and solutions that will mitigate these impacts.
2. The recommended improvements to the transportation network, illustrated in plan view, with cross-sections showing laning, road classification, traffic control, bus stops, parking, cycling and pedestrian accommodation, as well as other road elements.

2.2 Time Horizon

The scope of the Transportation Study includes two future horizons, one for 2031 (20 year horizon) and one for full build-out, which would occur in the future after 2031 (ultimate horizon). The timing of the ultimate horizon is unknown and would be subject to future assessment of long term market conditions. The purpose of modelling two future horizons is to assess the impact on the transportation network of a partial mall redevelopment (within the timeframe of the OCP) and the impact on the network when the remainder of the mall redevelops (anticipated at some point after 2031). One analysis period (P.M. peak hour) was used to assess impacts. The A.M. peak hour impacts are estimated at a high level by comparing trip generation rates to the P.M. peak. This provides a rough gauge of the difference between the two peaks.

2.3 Study Area

The Transportation Study addresses the road network surrounding the Lynn Valley Town Centre area. The Town Centre area, as identified in the Official Community Plan, is shown in Figure 2-1**.**



Figure 2-1: *Lynn Valley Town Centre*

2.4 Analysis

In order to achieve the vision of a vibrant, mixed use centre with sustainable modes of transportation (walking, cycling, transit), a balance must be achieved between accommodating vehicular traffic and supporting these sustainable modes. Because of these diverse objectives, it was determined that traditional measures of effectiveness, such as level of service and volume to capacity ratios, do not necessarily indicate whether the transportation network will meet future needs. This is especially important for the internal road network in the Study Area because the community's vision is for a pedestrian, cycling and transit-friendly, vibrant mixed use centre. Achieving this vision may result in an internal network with reduced vehicular capacity. Along the adjacent arterial and collector roads, the priority is to maintain lower delays and limit queues. Traditional measures of effectiveness and analysis tools were used to measure changes in mobility along these corridors.

In keeping with the vision for the Lynn Valley Town Centre and the analysis boundaries described above, the Study Area intersections were divided into two categories:

1. **Connectivity intersections**: these intersections are important for connectivity within the broader road network. The analysis includes turning movement forecasts and assessment in Synchro.

Analysis is completed for the 2031 build-out scenario (i.e. with upper shopping mall site not redeveloped, and using design concept road network) and for an ultimate future build-out (i.e. with upper shopping mall site redeveloped and OCP road network).

2. **Vision intersections**: it is most important for these intersections to be designed consistently, with the sustainable-mode vision. As described above, analysis tools like Synchro are not an effective tool to determine if these intersections meet their intended purpose. Instead, recommendations are made based on best practices for sustainable modes, urban livability, and the vision for the community.

In Figure 2-2 below, the key connectivity intersections are identified in blue and the vision intersections are highlighted in orange.



Figure 2-2: *Proposed Intersections for Analysis*

3.0 Existing Context

Traffic counts were collected in the autumn of 2012 to confirm existing traffic volumes within the study area. The counts are summarized in Table 3-1.

Table 3-1: Intersection Count Locations

Intersection Location	Count Date
Fromme Road and E 29th Street	September 19, 2012
Mountain Highway and Lynn Valley Road	September 20, 2012
Mountain Highway and E 27th Street	September 25, 2012
Mountain Highway and Ross Road	September 26, 2012
Mountain Highway and Emery Place	September 27, 2012
Mountain Highway and Existing Mall Entrance	October 2, 2012
Fromme Road / E 27th Street and Lynn Valley Road	September 26, 2012
Whiteley Court and E 27th Street	October 3, 2012
Lynn Valley Road and Ross Road	October 4, 2012

Existing traffic count volumes were balanced within the study area to ensure consistency between intersections prior to commencing evaluation of existing traffic conditions. Traffic volumes at some intersections were not available. For connectivity intersections where traffic volumes were not available (including Lynn Valley Road at E 29th Street) were estimated based on the best available information and engineering judgement.

3.1 Roadway Characteristics

The study area road network consists of almost a dozen different streets as summarized in the following table:

Road	Class	Number of Lanes	Existing Transit Service	Existing Bicycle Facilities	Existing Pedestrian Facilities	On Street Parking
Lynn Valley Road (LVR)	Major Arterial	5 lanes – two per direction + left turn lane	Route 228 Route 255 Route 229 (N of 29th St) Bus lay-by on south side of LVR by Main Library	Northbound shared lanes between Molly Nye way and E. 29th Street	Sidewalks on north and south sides	Small pocket of on street parking on south side at Ross Road
Mountain Highway	Major Arterial	3 lanes – one per direction + left turn lane	Route 209 Route 210 Route 255	Northbound and southbound painted bike lanes from E. 27th St to E. 29th St	Continuous Sidewalk on west side. Sidewalk on portions of east side, some on private property.	Small pocket of on street parking on east side north of Lynn Valley Road
E 27th Street	Collector	3 lanes – one per direction + left turn lane	None	None	Sidewalks on north and south sides	On street parking on south side of E 27th Street
Fromme Road (North of LVR)	Collector	2 lanes – one per direction	None	None	Sidewalks on east and west sides	On street parking on east and west sides
Fromme Road (South of LVR)	Local Road	2 lanes – one per direction	None	None	Sidewalk on east side	On street parking on west side
Ross Road (East of Mountain Hwy)	Collector	2 lanes – one per direction	None	None	Sidewalk on south side	On street parking on north and south sides
Ross Road (West of LVR)	Local Road	2 lanes – one per direction	None	None	Sidewalk on south side	On street parking on south side
Whiteley Court	Local Road	2 lanes – one per direction	None	None	Sidewalks on east and west sides	On street parking on east and west sides
E 29th Street (West of LVR)	Major Arterial	2 lanes – one per direction	Route 229	None	Sidewalks on portion of north and south sides	On street parking on north and south sides
E 29th Street (East of Mountain Hwy)	Local Road	2 lanes – one per direction	None	None	None	On street parking on north and south sides
Emery Place / E 24th Street	Local Road	2 lanes – one per direction	None	None	None	On street parking on north and south sides

3.2 Existing Conditions Analysis

Existing traffic volumes were obtained at key intersections in the study area and modeled to identify existing network issues and deficiencies. Traffic operations at key street intersections within the Study Area were evaluated using the Synchro 7 traffic analysis software package. This operational analysis included calculation of volume-to-capacity (v/c) ratios, and predicted delay based Level of Service (LOS) for each traffic movement at each intersection assessed.

At signalized intersections, the v/c ratio is used as a measurement of the traffic congestion for a particular traffic lane, lane group, or entire intersection. Generally, values up to 0.85 are considered appropriate for the intersection and up to 0.90 for individual lanes or lane groups. A v/c ratio of 1.0 or greater indicates that the traffic operation is over-capacity. The traffic LOS indicator ranges from the ideal LOS A condition with minimal or no delay through to the LOS F condition with extensive delay.

For unsignalized intersections, the LOS is based on the estimated average control delay per vehicle for each crucial movement. A control delay less than 10 seconds indicates sufficient capacity and good traffic conditions. A calculated control delay value that is greater than 50 seconds is assigned a LOS F performance measure. Balanced existing traffic volumes at key Study Area intersections are shown in Figure 3-1**.** The results of the Synchro analysis of signalized intersections are shown in Figure 3-2**.** All individual movements at signalized and unsignalized key connectivity intersections operate with LOS D or better and volume to capacity (v/c) ratio less than 0.90.

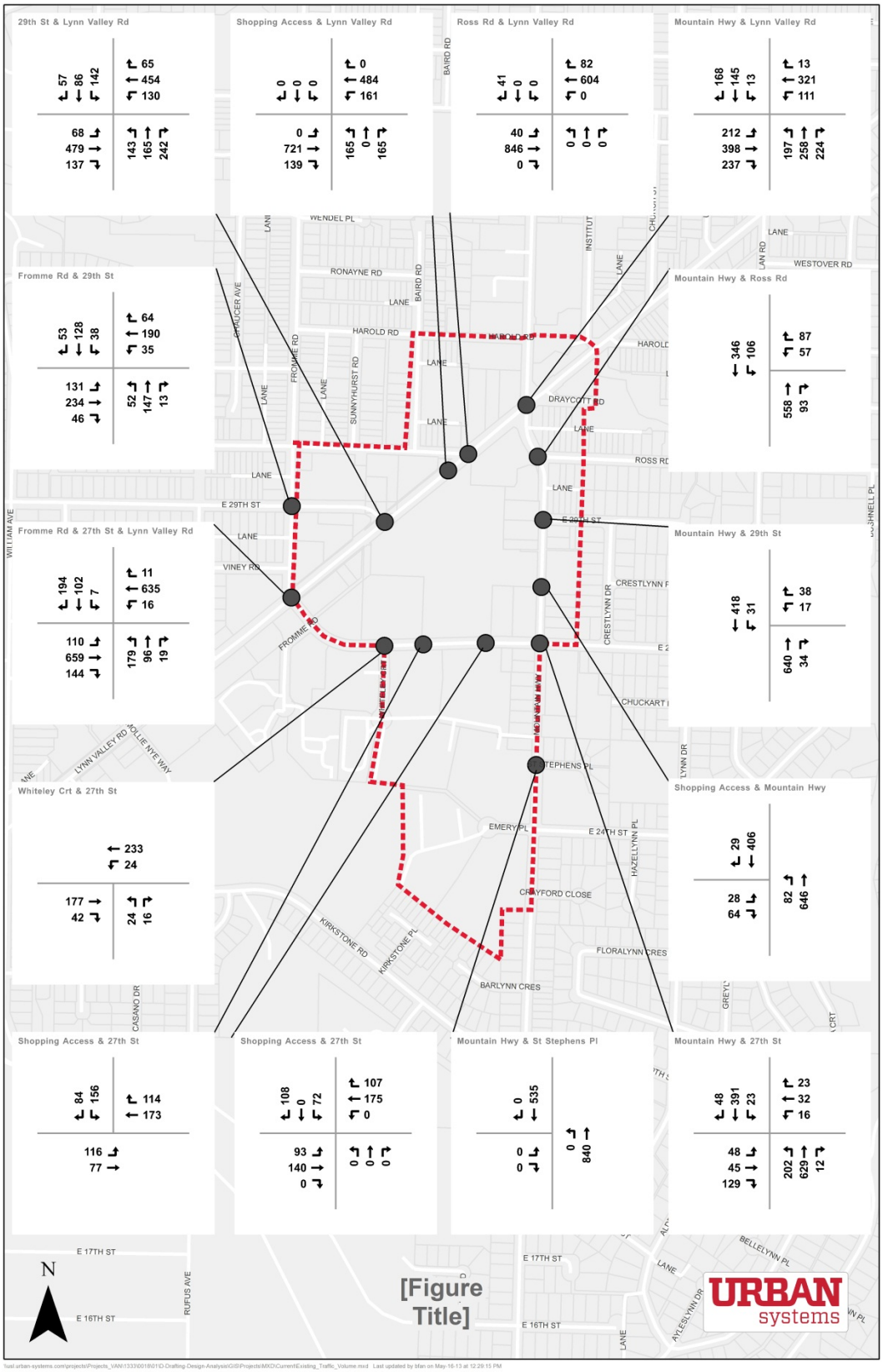


Figure 3-1: Existing traffic volumes (PM Peak)

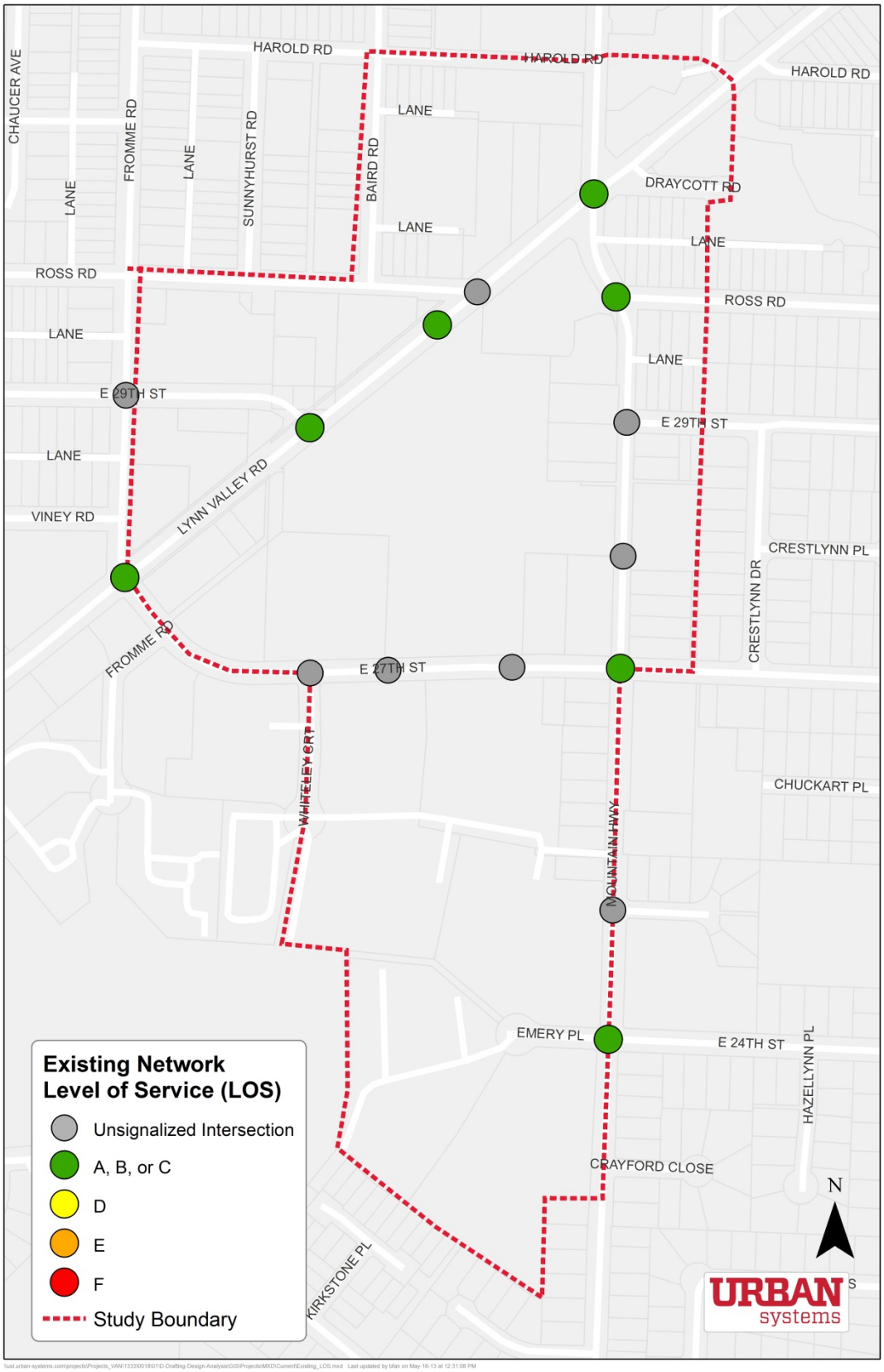


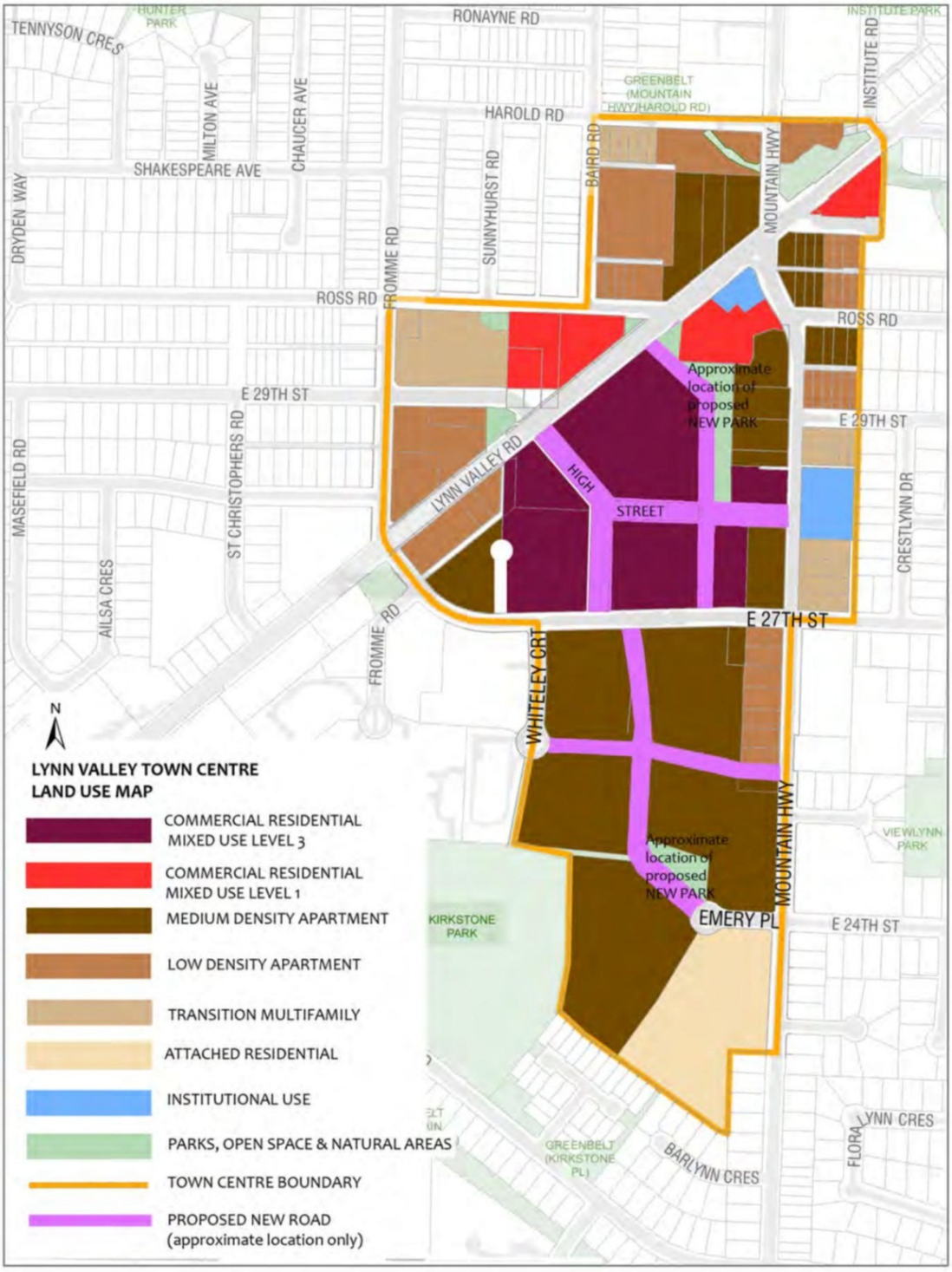
Figure 3-2: Existing traffic level of service (PM Peak)

4.0 Lynn Valley Town Centre by 2031

4.1 Growth and Land Use

The District's Official Community Plan (OCP) was approved by Council in June 2011. The OCP identifies two Town Centres in the District, Lynn Valley and Lower Lynn, both of which will experience growth, development and redevelopment over the next 20 years. Medium and higher densities in Lynn Valley will be located in the core area of the Town Centre and will include commercial, employment, recreational and civic uses as well as approximately 2,500 new residential units by 2031. Because of the growth that is expected, Lynn Valley is also a focus for potential frequent transit service.

According to the OCP, higher densities will be located in the Town Centre core in order to create a walkable environment. Near the outward areas of the Town Centre, the focus will be on ground-oriented multi-family housing. The OCP establishes East 27th Street as a predominantly residential street with the potential for limited retail on the north side. Finally, according to the plan, a gateway to Lynn Valley is to be established at the intersection of Mountain Highway and Lynn Valley Road. The Lynn Valley Town Centre Land Use Map, which also shows the approximate locations of proposed roads, is provided in Figure 4-1**.**



Source: DNV Official Community Plan

Figure 4-1: Lynn Valley Town Centre Land Use Map

The proposed changes in land use for the interim and ultimate horizons are summarized in Table 4-1. These land use changes were used to estimate future traffic in order to complete the future conditions assessment.

Table 4-1: Proposed changes in Study Area land use

	Residential	Gas Station	Commercial
	Units)	(pumps)	(sq ft)
20 Year Horizon			
New development	3,910	-	253,049
Existing to be removed	546	22	238,823
Net development	3,365	(22)	14,226
Ultimate Horizon			
New development	4,633	-	320,062
Existing to be removed	546	22	306,961
Net development	4,088	(22)	13,101

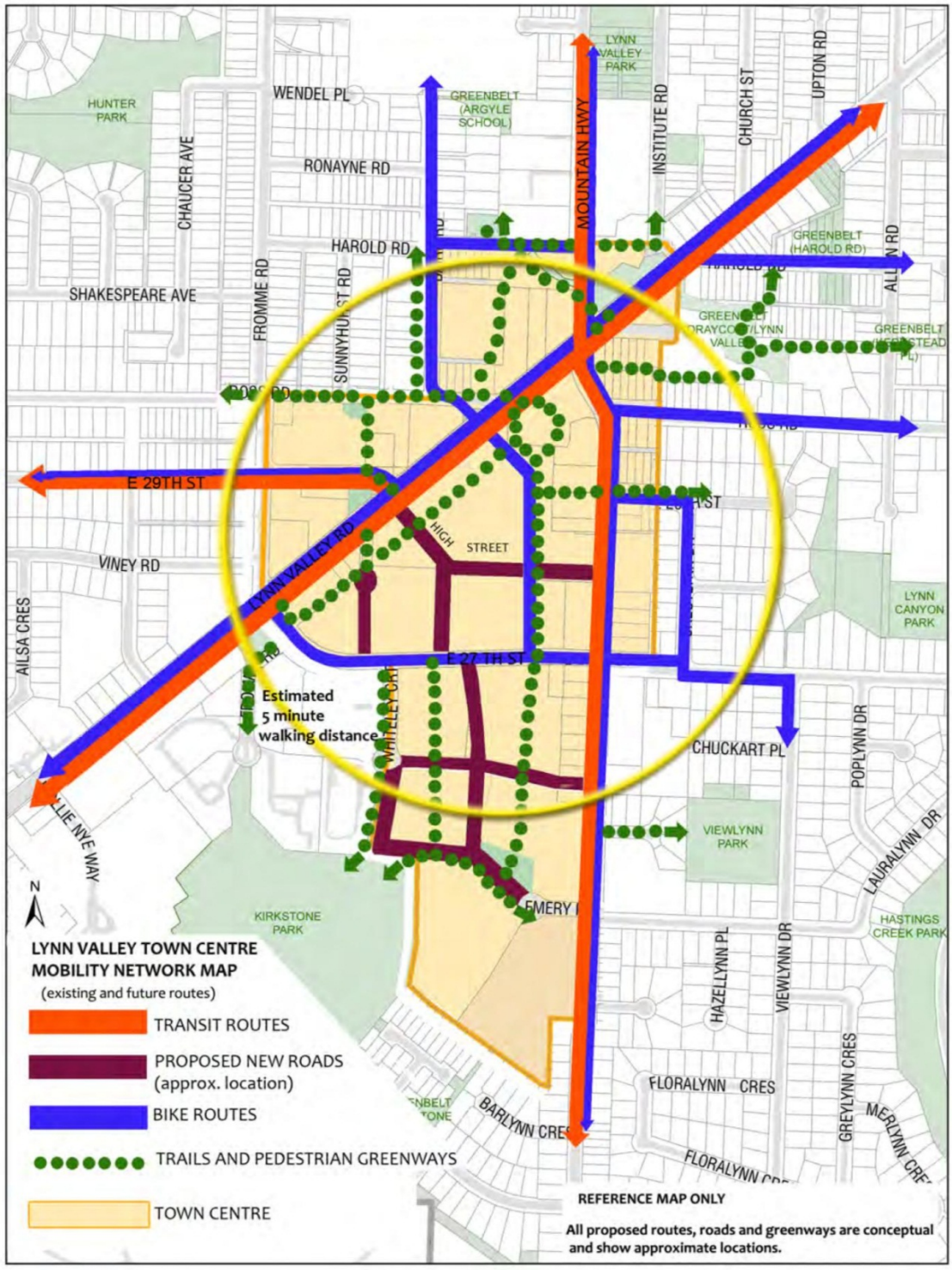
The summary above shows that growth in commercial is expected to increase modestly as commercial uses transition over time from large format retail with no residential to mixed use with the inclusion of residential components, while the number of residential units is expected to grow more significantly within the study area. This will allow for improved neighbourhood and economic vibrancy by increasing the number of residents, pedestrians, cyclists, and local shoppers in the area. At the same time, existing low-density “big box” commercial is expected to be augmented with higher value street-facing commercial along the High Street. For both the residential and commercial space, existing land uses that are high trip generators per unit are being replaced with more sustainable land use that typically generates fewer trips per unit. This type of development also typically results in a higher mode share for walking, cycling, and transit and a lower mode share for driving.

4.2 Vision and Mobility Network

Part of the Vision for the community, as described in the OCP, includes well-designed pedestrian and cycling facilities as well as transit-oriented mixed uses in the heart of the community. In order to achieve its transportation-related vision, Mobility Network Policies and a Mobility Network Map were prepared for the OCP. The policies are listed below and the Mobility Network Map is provided in Figure 4-2**.**

Mobility Network Policies – DNV Official Community Plan

1. Support a safe and integrated transportation network that includes all modes of transportation with an emphasis on walkability and strong pedestrian connections and plan road, transit, bike and pedestrian routes in accordance with the Lynn Valley Town Centre Mobility Network Map
2. Connect the Town Centre to outside destinations and explore opportunities to establish a north-south pedestrian/cycle route east of Mountain Highway
3. Maintain Lynn Valley Road and Mountain Highway as primary vehicular routes for Lynn Valley
4. Establish a pedestrian and vehicle oriented High Street in the core of the Town Centre to include generous sidewalks, weather protection, bike facilities and on-street parking
5. Encourage the majority of parking to be located underground, and explore opportunities for reduced parking standards and shared residential/commercial parking in concert with enhanced pedestrian, cycling and transit facilities
6. Work with the regional transportation authority to support the provision of frequent transit service to and from the Town Centre and support transit service with appropriately located lay-by areas and accessible, safe and attractive transit stops
7. Provide accessible and comfortable sidewalks in the Town Centre and provide safe and attractive pedestrian crossings of Lynn Valley Road, Mountain Highway and East 27th Street at strategic locations
8. Continue to explore innovative transit choices in the long-term



Source: DNV Official Community Plan

Figure 4-2: Lynn Valley Town Centre Mobility Network Map

The OCP acknowledges that implementation plans may be required in order for the District to achieve the concepts and objectives in the OCP. This Transportation Assessment is a key input into the development of the Lynn Valley implementation plan, which is being developed to align with the policies and objectives set out in the OCP.

Other plans and visions influence the future of transportation in Lynn Valley. These include the North Shore Area Transit Plan, the District of North Vancouver Transportation Plan, and the North Vancouver Bicycle Master Plan. The application of these plans is outlined in the paragraphs below.

The North Shore Area Transit Plan was completed by TransLink in consultation with the North Shore communities between fall 2010 and fall 2012. The report was finalized in October 2012. Through investigation of existing conditions, anticipated growth, and the community vision identified, a 2040 transit network vision for the north shore was developed. Relevant highlights from this plan for Lynn Valley Town Centre are as follows:

- New or Improved Transit Exchange located at Lynn Valley Town Centre
- Frequent Transit Service along Lynn Valley Road
- Frequent Transit Service along Mountain Highway
- Frequent Transit Service along E 29th Street west to Lonsdale Avenue
- Rapid Transit Service along E 29th Street west to Capilano Road

The District's vision for future bus routes and stop locations, which has been developed in consultation with TransLink, is shown in Figure 4-3 below.

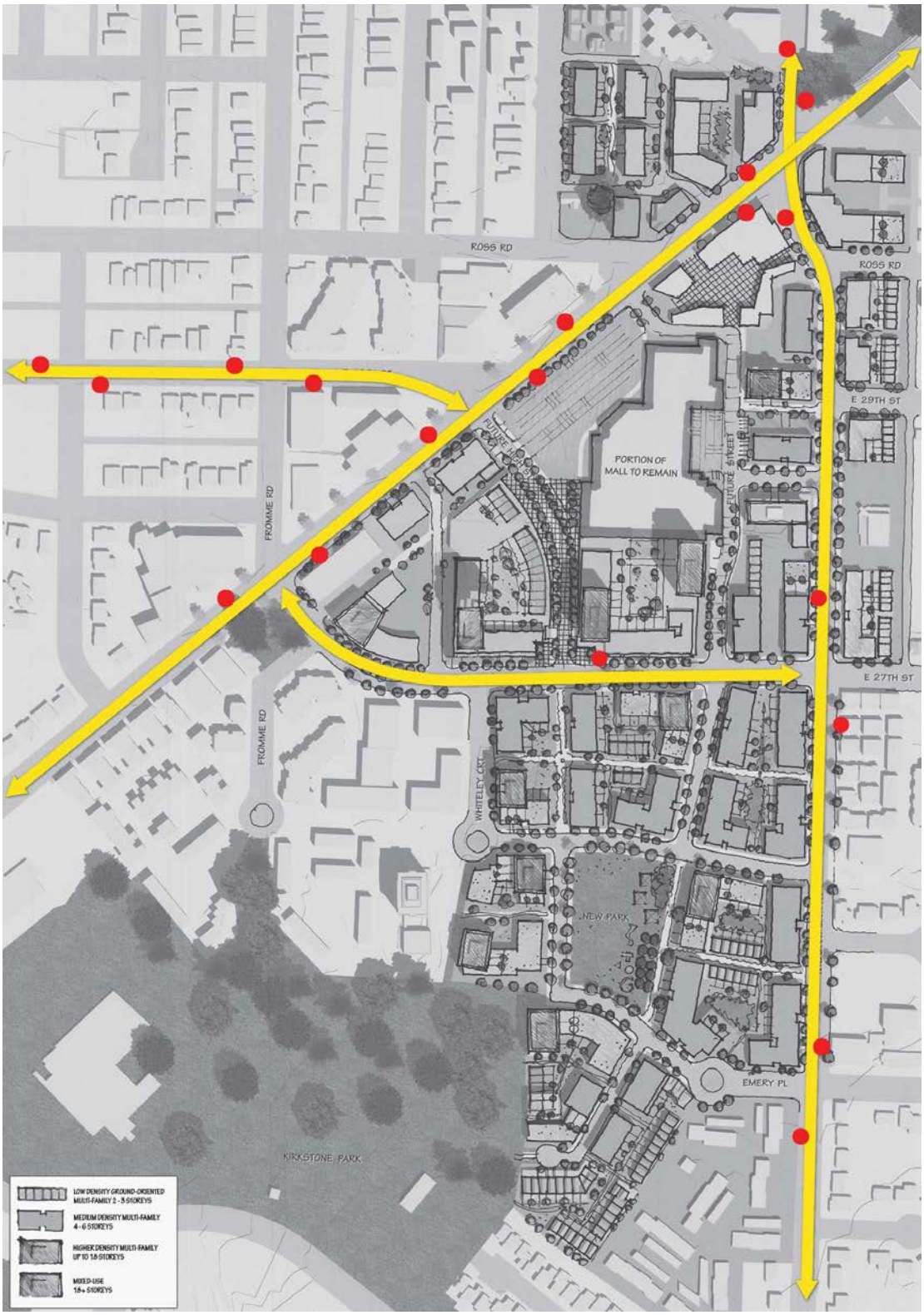


Figure 4-3: District's Vision for Future Route and Stop Locations

Outlining priorities for improving the transportation network in support of the OCP, the District of North Vancouver Transportation Plan was approved by Council in 2012. As part of this study of the Lynn Valley Town Centre, consideration was provided to how the transportation priorities identified within this plan could be incorporated into the Lynn Valley Town Centre network. Relevant outcomes were identified in the pedestrian, bicycle, and road safety sections of the transportation plan, and are summarized as follows:

High priority sidewalks were identified as part of the transportation plan in the following locations:

- Ross Road, east of Mountain Highway
- Mountain Highway, north of E 27th Street to E 29th Street
- E 29th Street, west of Fromme Road

High priority bike improvements were identified as part of the transportation plan in the following locations:

- E 27th Street between Mountain Highway and Lynn Valley Road
- Lynn Valley Road, south of Mountain Highway
- E 29th Street, west of Lynn Valley Road

These cycling improvements are integral to the implementation of the North Vancouver Bicycle Master Plan. As shown in Figure 4-4, these improvements are particularly important in a regional context, as they connect missing linkages in both the east-west and north-south directions to enable greater accessibility by bicycle for all residents and visitors in the District of North Vancouver. The improved on street connection along E 27th Street will connect to both Mountain Highway and Viewlynn Drive, important north-south corridors within the region. E 27th Street also provides an important connection for less confident cyclists who may use the trail network to connect to Fromme Road and on to the Lynn Valley Main Library and other destinations in Lynn Valley. The improved on street connection along Lynn Valley Road will provide a future connection from Dempsey Road in the north of the District all the way to Grand Boulevard south of Highway 1.The improved connection to E 29th Street will provide an east-west linkage in the northern segment of the district.

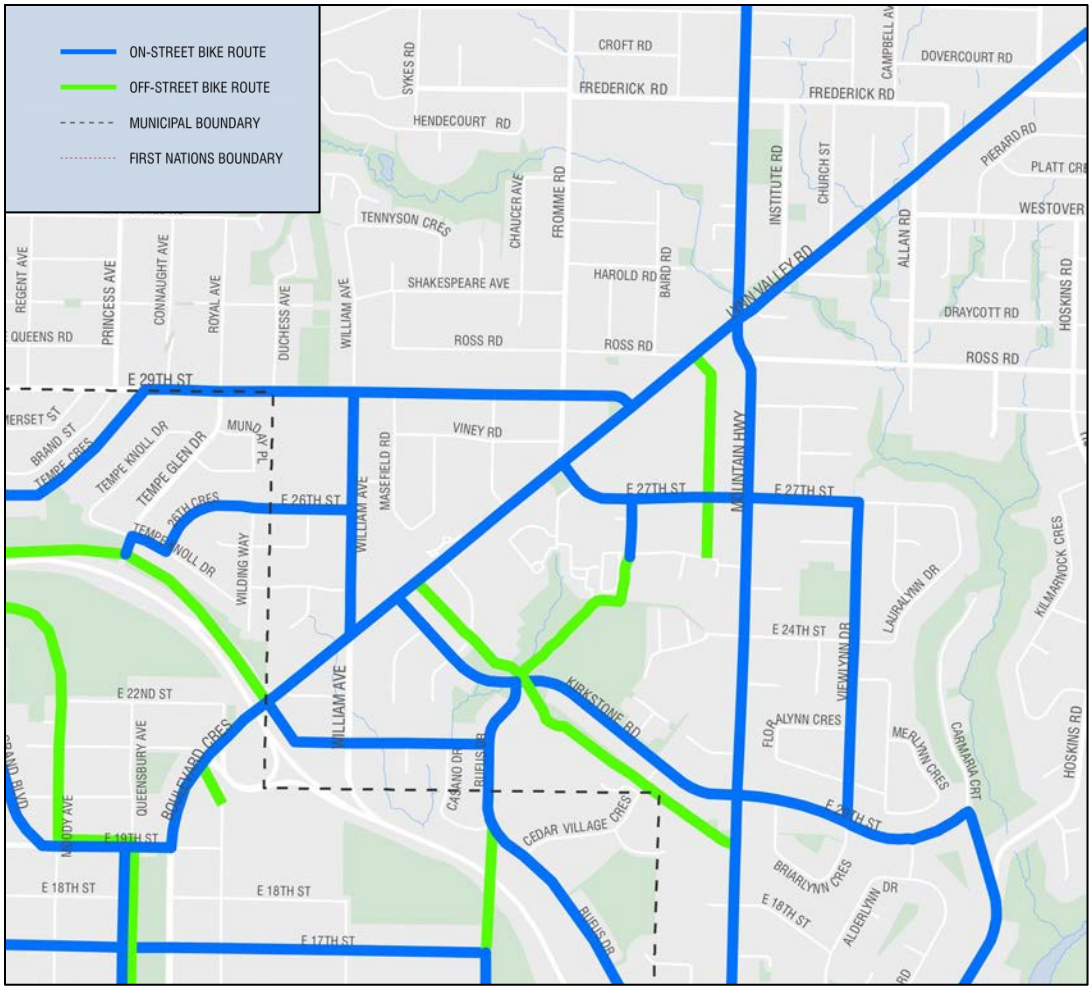


Figure 4-4: Portion of North Vancouver Bicycle Master Plan

High priority intersection improvements were identified as part of the transportation plan in the following locations:

- Lynn Valley Road and Mountain Highway
- Lynn Valley Road and E 29th Street
- Lynn Valley Road and E 27th Street/Fromme Road

The vision and priorities set forth in the Transportation Plan, North Shore Area Transit Plan, and North Vancouver Bicycle Master Plan were all incorporated into the study process to enable redevelopment within the Lynn Valley Town Centre to help achieve community aspirations already identified.

5.0 Future Conditions Assessment

The future conditions assessment included a review of all modes along the corridors in the Study Area. The assessment included traffic forecasting, intersection operations, bicycle and pedestrian connectivity, site access, internal circulation, and other measures.

5.1 Background Traffic Conditions

A growth rate of 0.3% was determined based on a review of the District's EMME transportation demand forecasting model and was applied to existing traffic in order to determine background traffic volumes in the 20 year horizon. The background was modified to reflect the redevelopment of Lynn Valley as an infill area. Because Lynn Valley has existing development that will be transformed and replaced over time, some existing trips must be removed from the network. The trips associated with these buildings must be deleted from the analysis. The existing built area expected to be removed to permit new development is summarized in Table 5-1. Trips generated by this built area were estimated using the methodology summarized in Appendix A. No internal trip reduction factor was applied, however a non-auto mode share shift of 20% was applied to the total person trips to reflect the District's current share of sustainable modes. Pass-by was assumed to be 30% for retail uses. Pass-by trips are those that would have travelled on the study area road network without the development being in place. For example, a driver that stops to get a coffee at a local shop on their way to work is a pass-by trip; they are not a "new" trip generated by the development, they are an existing trip that is 'passing by' and decides to stop at the development. A value of 30% was chosen based on information provided in the Institute of Transportation Engineers (ITE) Trip Generation reference book. The total trips deleted from the background condition to account for existing buildings that will be removed by 2031 are summarized in Table 5-2. These are the total vehicle trips, adjusted for mode share and pass-by assumptions.

Table 5-1: Existing built area to be removed

Land Use	Unit	Total Built Area to be Removed
Single Family Dwelling	(Dwelling Units)	32
Low Density Apartment	(Dwelling Units)	435
Mid-Rise Apartment	(Dwelling Units)	64
Low Rise Residential Condominium/Townhouse	(Dwelling Units)	9
Residential Condominium/Townhouse	(Dwelling Units)	6
Gasoline/Service Station w/ Convenience Market	(Vehicle Fueling Positions)	14
Gasoline/Service Station with Convenience market and Car Wash	(Vehicle Fueling Positions)	8
Old Lynn Valley Library[1]	(sq ft)	19,443
Shopping Centre[2]	(sq ft)	154,110
Supermarket	(sq ft)	33,274
Church	(sq ft)	8,271
Specialty Retail Centre	(sq ft)	5,545
Nursery (Garden Centre)	(sq ft)	14,168
Walk in Bank	(sq ft)	5,214
Coffee Shop	(sq ft)	6,685
Building Materials and Lumber Store	(sq ft)	9,519
Fast food restaurant	(sq ft)	2,037

Table 5-2: Trips to be deleted from background

Horizon	Inbound	Outbound	Total
20 Year	877	818	1,695
Ultimate	941	885	1,826

As discussed earlier, a number of land uses with high trip generation per unit are expected to be removed to allow for more compact development, which is expected to generate fewer trips per unit For example, low density apartments typically generate around 0.58 trips per unit in the p.m. peak period, while medium and high density apartments typically generate about 65% of that (0.38 trips per unit). This is because people living in medium and high density apartments are less likely to drive or own vehicles. These types of residential developments may also have a different mix of demographics, with fewer people per household and more seniors and / or students; all of these factors may result in fewer trips per

[1] The Old Lynn Valley Library was already closed at the time of the traffic counts and no trips were removed from the network to account for the redevelopment of this site. It is listed here for completeness.
[2] This is the full amount to be removed to accommodate the Ultimate horizon. Approximately 68,128 square feet of Shopping Centre Land Use is expected to remain in the 20 Year horizon, but be removed before the Ultimate horizon.

unit More information about expected future traffic is provided in the next section. As noted above, 1,826 existing trips were deleted from the network in the Ultimate horizon to account for the removal of these existing land uses.

5.2 Future Traffic Forecast

Traffic forecasts were completed for the 20-year and ultimate horizons in the p.m. A four-step traffic forecast model was used to complete the analysis. This model was based on a number of key assumptions at each step. The trip generation for the 20 year and Ultimate horizons are shown in Table 5-3 and Table 5-4. The trip generation is based on the land use shown earlier in Table 4-1. The trip generation assumptions included an internal reduction of 10% to account for travel within the Study Area that will not result in vehicle trips on the road network. They also include a non-auto mode share reduction of 20% of person-trips, which is the same reduction that was used in the estimation of existing network trips to be removed. This non-auto modes share is consistent with the existing non-auto mode share of 21% across the District of North Vancouver. This estimate is conservative, as the percentage of internal trips and the non-auto mode share are both expected to increase over time as Lynn Valley develops into a more vibrant, pedestrian focused village centre. Increases in either the internal trip share or the non-auto mode share will decrease the total number of trips generated by the site. Pass-by trips were assumed to be 30% for the shopping centre land use. This is consistent with the rate used for the existing network trips to be removed. Future trip distribution was estimated using the District of North Vancouver's EMME model and engineering judgement. Trip distribution assumptions are summarized in Error! Reference source not found.. Finally, trips were assigned based on most likely route.

Table 5-3: 20 Year horizon trip generation summary (PM Peak)

	Quantity	Units	Total Trips	Reduction	Pass-by	New Trips	
						IN	OUT
Low Density Apt	425	# of dwelling units	247	54	-	126	67
Medium Density Apt	2,494	# of dwelling units	973	178	-	461	333
Medium Rise Apartment	188	# of dwelling units	73	18	-	32	23
High Rise Townhouse	691	# of dwelling units	263	64	-	123	75
Shopping Centre	253	1000 sq ft	1,625	328	388	448	461
Transition Multifamily	111	# of dwelling units	42	10	-	20	12
TOTAL			3,222	651	388	1,210	973

Table 5-4: Ultimate Horizon trip generation summary (PM Peak)

	Quantity	Units	Total Trips	Reduction	Pass-by	New Trips	
						IN	OUT
Low Density Apt	425	# of dwelling units	247	54	-	126	67
Medium Density Apt	2,494	# of dwelling units	973	178	-	461	333
Medium Rise Apartment	188	# of dwelling units	73	18	-	32	23
High Rise Townhouse	691	# of dwelling units	263	64	-	123	75
Shopping Centre	320	1000 sq ft	1,855	364	446	514	531
Transition Multifamily	111	# of dwelling units	42	10	-	20	12
TOTAL			3,452	688	446	1,276	1,042

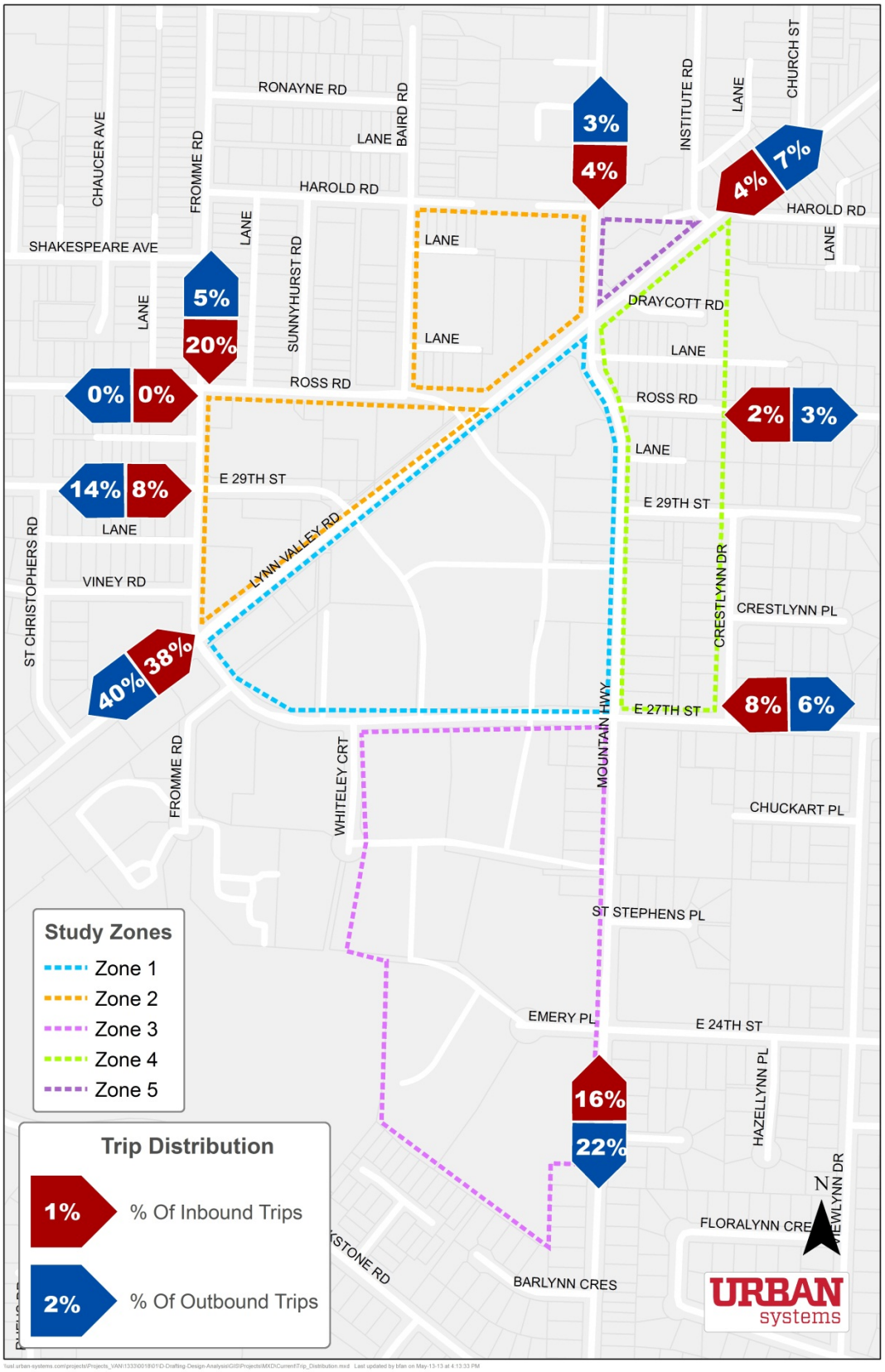


Figure 5-1: Trip distribution assumptions (PM Peak)

The new trips generated by the study area in the 20-year and Ultimate Horizons are shown in Figure 5-2 and Figure 5-3. The new trips are added to the modified background trips to determine future total trips for analysis. The future total trips are illustrated in Figure 5-4 and Figure 5-5**.**

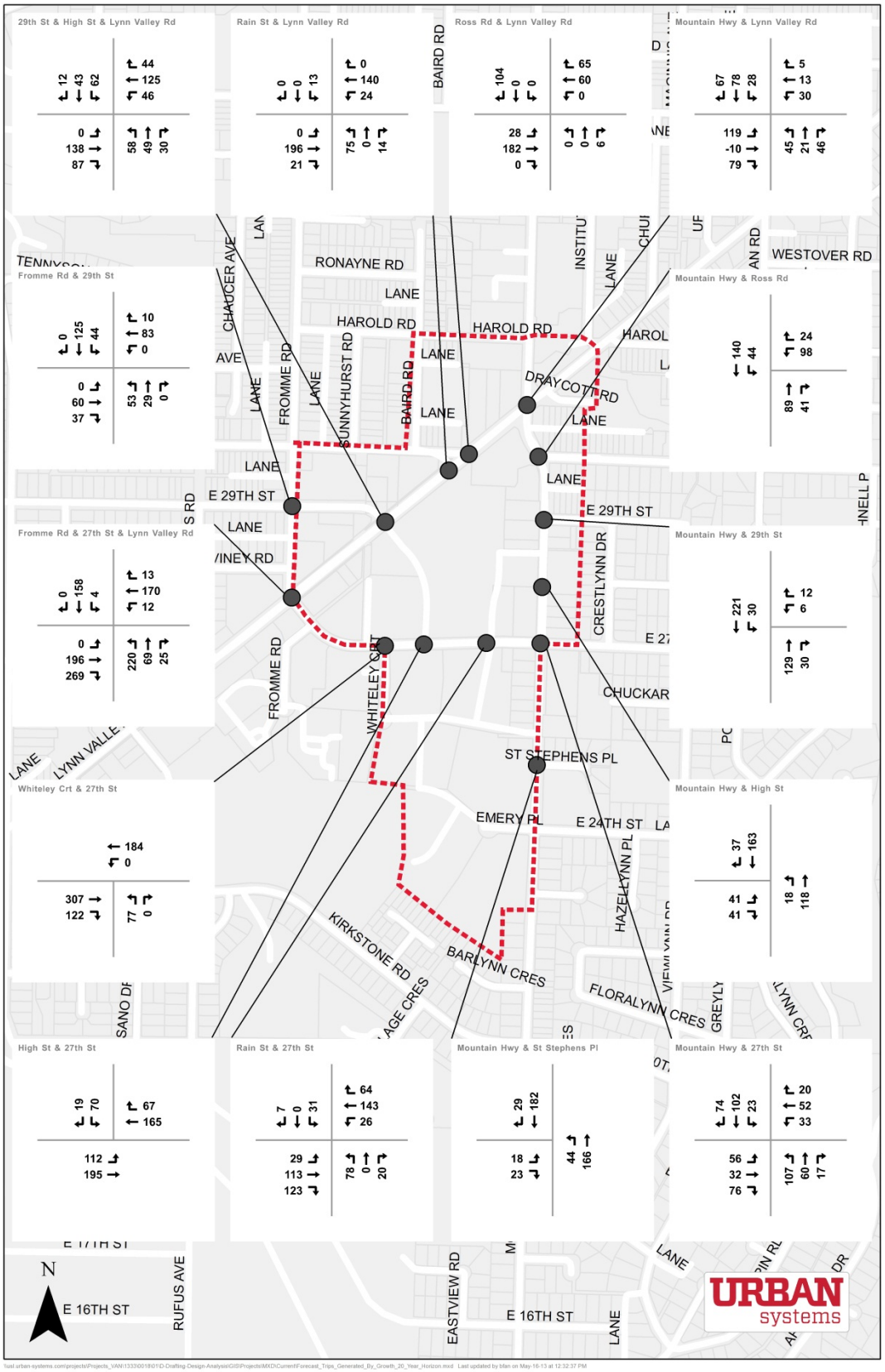


Figure 5-2: Forecast Trips Generated by Growth – 20 Year Horizon (PM Peak)

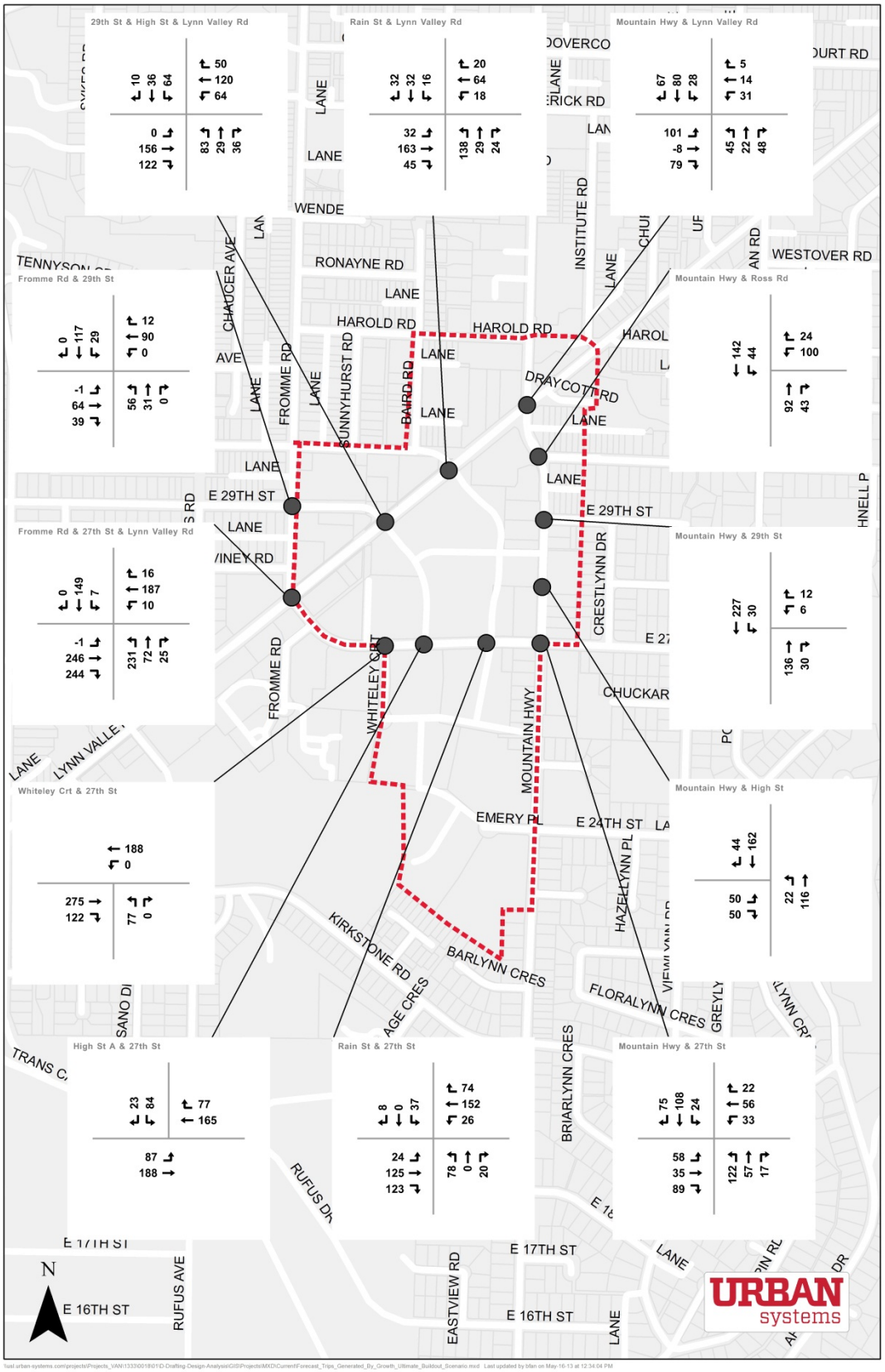


Figure 5-3: Forecast Trips Generated by Growth – Ultimate Horizon (PM Peak)

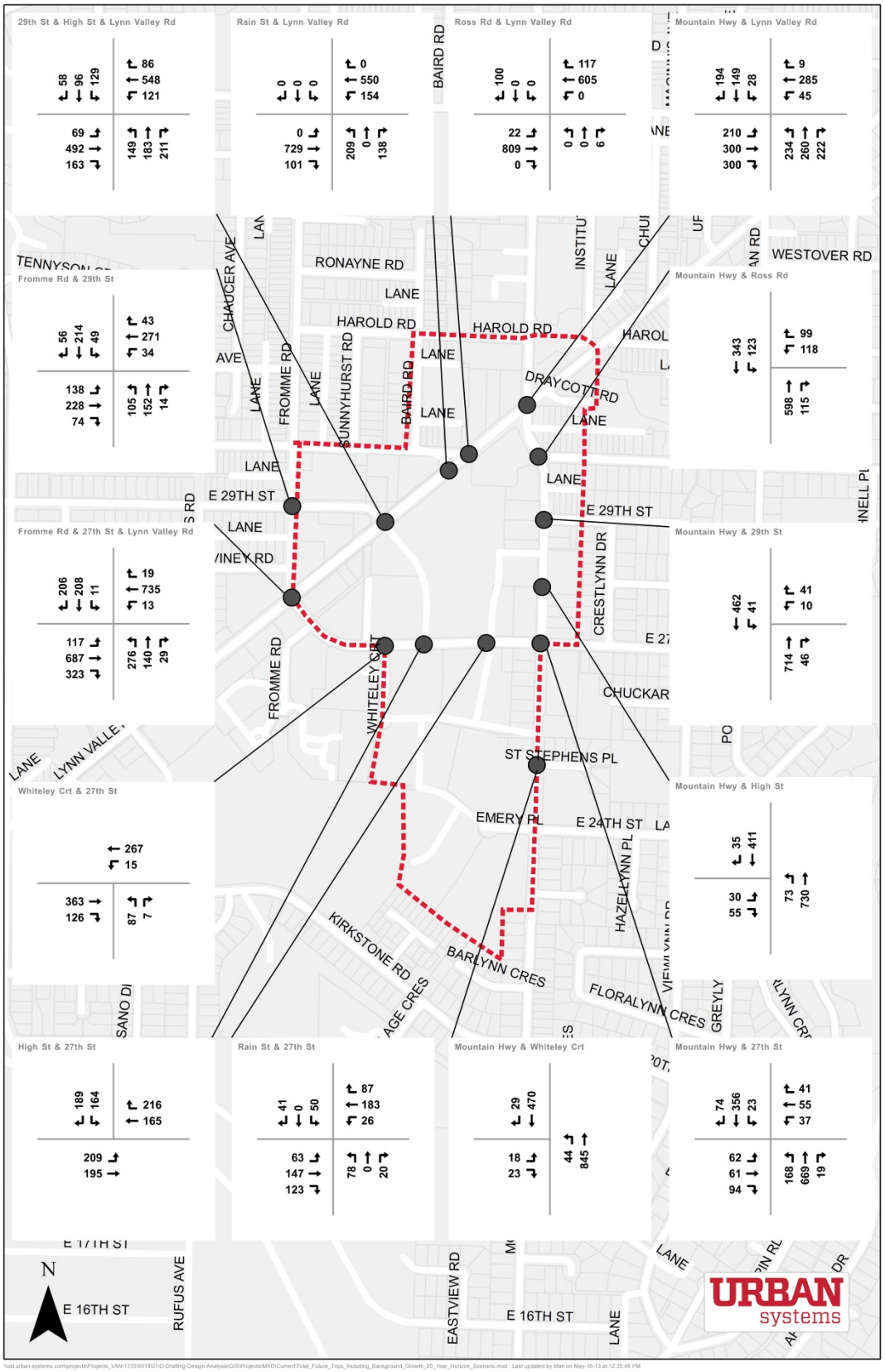


Figure 5-4: Total Future Trips (Including Background Growth) – 20 Year Horizon (PM Peak)

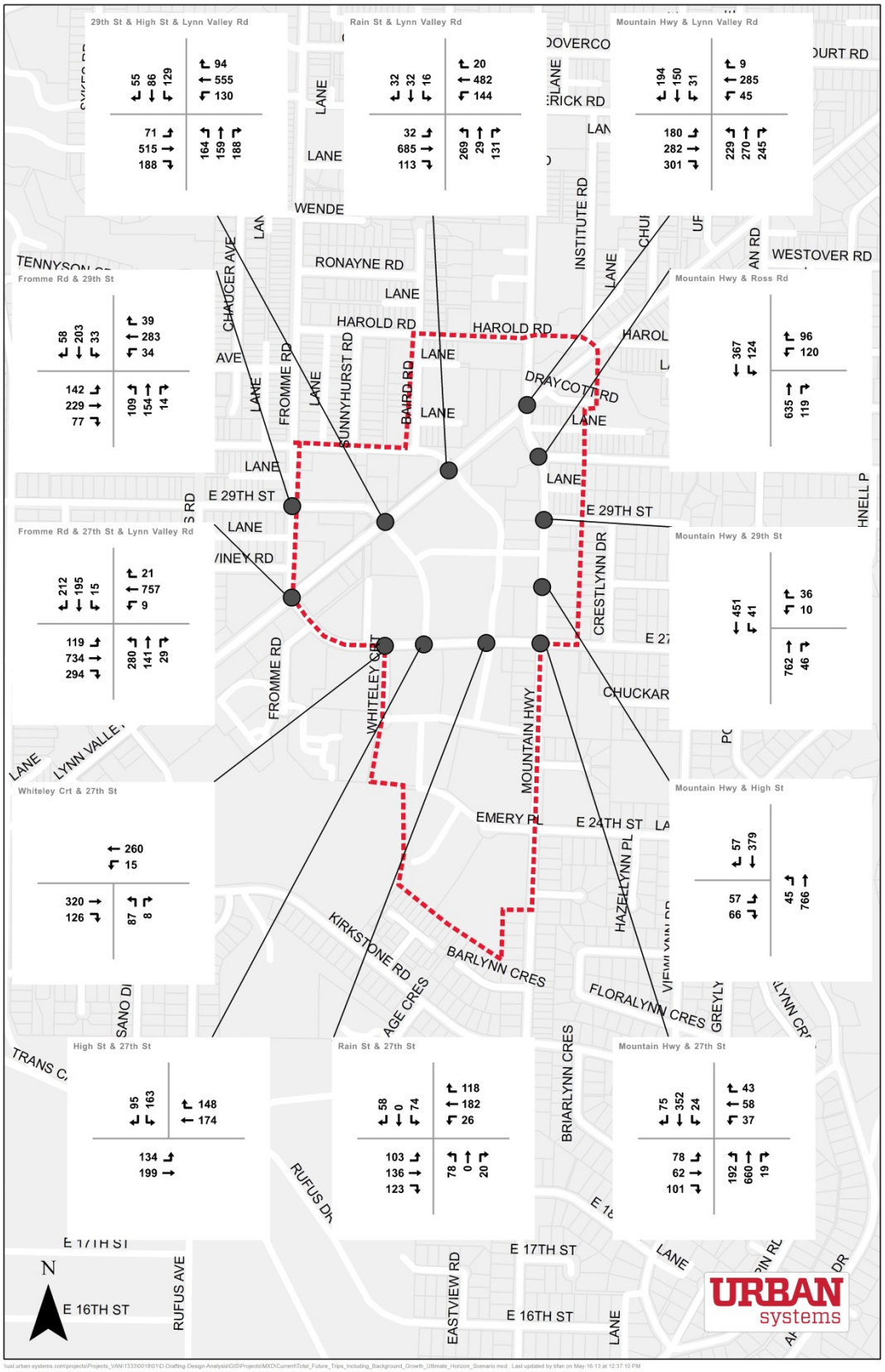


Figure 5-5: Total Future Trips (Including Background Growth) – Ultimate Horizon (PM Peak)

5.3 Future Transit Needs

As previously discussed, the North Shore Area Transit Plan was completed in 2012 after extensive consultation with the North Shore Communities. Through this process, a network vision was identified to serve projected land use on the North Shore and achieve a 50 percent increase in transit mode share from 10 to 15 percent for the entire North Shore by 2040. The vision for the North Shore Area Transit Network is illustrated in Figure 5-6.

Based on the projected population growth at Lynn Valley Town Centre, substantial transit improvements connecting to this area were prioritized as part of the plan. These improvements can be summarized into three categories as noted below:

- **Improved transit exchanges.** Lynn Valley Town Centre has been designated with an improved transit exchange. This should provide appropriate transit infrastructure to facilitate efficient exchange operation, along with urban design and land use to provide a high quality customer experience

- **Frequent transit service**. Metro Vancouver's Frequent Transit Network (FTN) is a network of corridors where transit service runs at least every 15 minutes in both directions throughout the day and into the evening, every day of the week. . Lynn Valley Road, Mountain Highway, and E 29th Street (west to Lonsdale Avenue) have all been designated as frequent transit service routes as part of this plan.
- **Rapid transit service.** The North Shore Area Transit Plan defines rapid transit service as frequent transit service with faster, more reliable travel times in order to be more competitive with the private automobile. E 29 Street was identified in the long-term vision as a potential corridor for east-west transit service.
- **Improved east-west mobility.** A new route connecting Lynn Valley Town Centre to Park Royal via Edgemont Village has been identified as a priority to facilitate the demand for an additional east-west connection within the area. This will introduce additional transit arrivals and departures terminating at Lynn Valley Town Centre to the frequent transit service routes already identified.

Through District discussions with TransLink representatives in December 2011, it was identified that an on-street transit exchange along the north side of E 27th Street would be desirable. This would involve reintroducing transit service on 27th Street to better integrate with a clockwise delivery and departure of buses arriving from and departing to Lynn Valley Road, Mountain Highway, and E 29th Street. Room for two standard 12.44 m buses complete with bike rack installation independently arriving and departing from the on-street transit exchange is likely needed. The space should be flexible to also potentially accommodate an 18.50 m articulated bus, should longer buses be introduced on buses servicing Lynn Valley Town Centre.

In addition to the forecast improvements to service identified, it is expected that existing local bus routes with stops in the study area will be maintained.

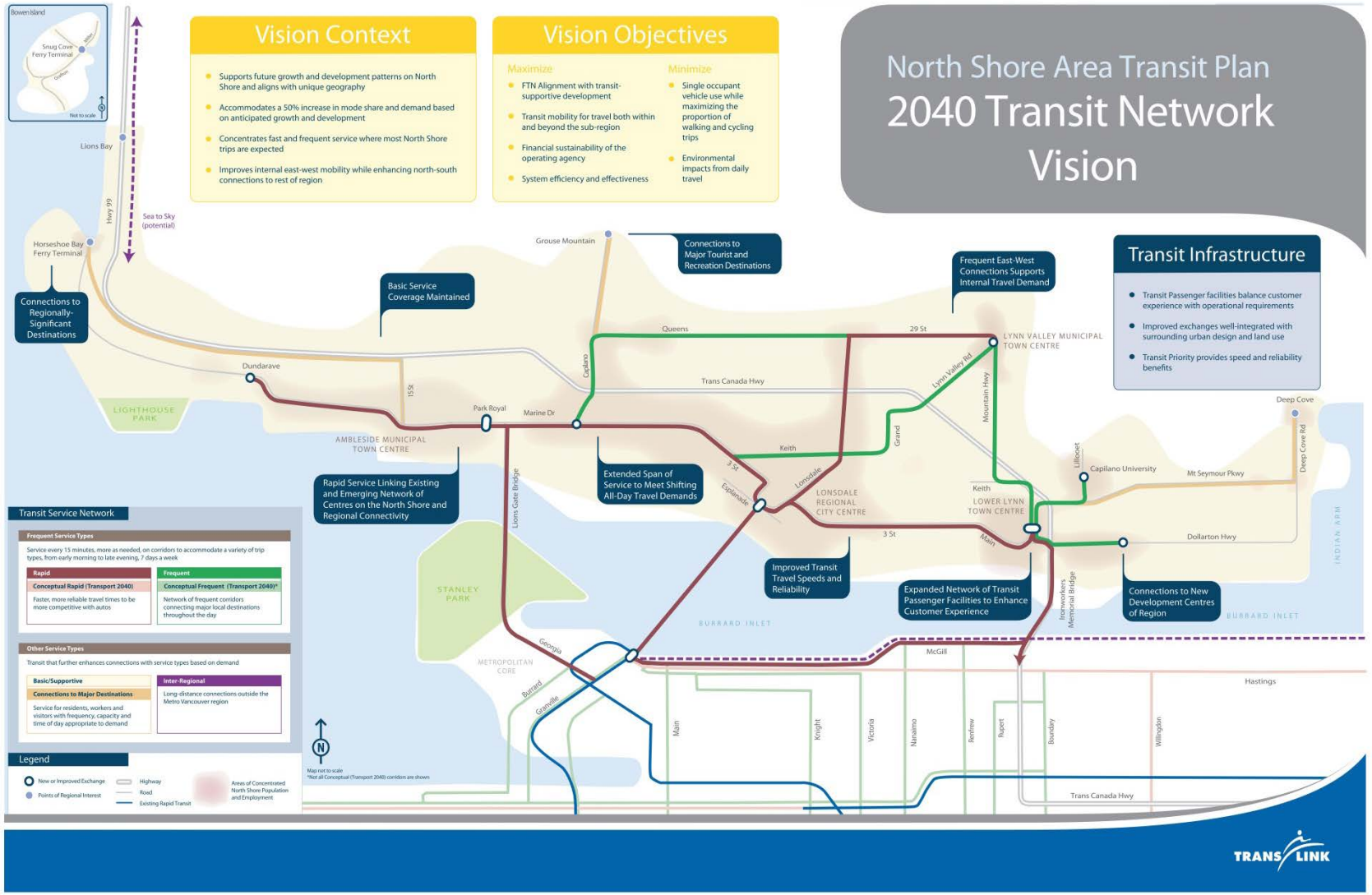


Figure 5-6: North Shore Transit Vision

5.4 Future Pedestrian and Cycling Needs

As previously identified, the OCP, Transportation Plan, and North Vancouver Bicycle Master Plan all emphasize infrastructure improvements for pedestrians and bicycles within the Town Centre. The specific road, sidewalk, and intersection upgrades identified in these studies should be paired with a design philosophy which emphasizes consideration for vulnerable road users. This approach will encourage multiple modes of transportation utilized within the town centre. Regionally, Lynn Valley Road, E 29th Street, E 27th Street, and Mountain Highway are all designated as important bicycle connections. Therefore, incorporating road network improvements which will encourage bicycle users of all ages and abilities along these improved routes will enable a safer and more comfortable environment.

The proposed land use changes are expected to result in an improved pedestrian and cycling environment and related infrastructure. Within the existing road right-of-way, there is minimal space to provide improved walking and cycling connectivity or to improve quality of experience and safety for cyclists and pedestrians. The proposed land use changes add new trips to this area, but they also provide property and resources to allow for improved cycling and pedestrian space. Density is also expected to increase the number of pedestrians and cyclists in the area. Simply increasing the number of cyclists is known to make cycling safer. Increasing the number of pedestrians improves livability, safety, and community vibrancy.

5.5 Future Goods Movement and Access Needs

Lynn Valley will continue to be a hub of commercial and economic activity for the area and access for goods movement and passenger vehicles to individual parcels and underground parking lots will continue to be important. Small retail uses and grocery uses have different goods movement needs. Grocery providers typically use large tractor-trailer units and require access to loading bays. Smaller retailers require single unit truck access. To ensure effective goods movement in Lynn Valley, a WB-20 tractor-trailer unit was used as the design vehicle. A travel path for these vehicles was provided via Lynn Valley Road / E 27 Street, with direct access from the lane between Lynn Valley Road and High Street. Access for a Heavy Single Unit (HSU) design vehicle was maintained from Mountain Highway to E 27th Street and Rain Street.

Accesses to underground parking should be concentrated to four-way intersections wherever possible. Accesses should be provided midblock to reduce conflicts with intersection traffic operations and queues.

6.0 Guiding Principles

A number of guiding principles were established to help inform the development of improvement options for the Town Centre. These principles were considered across the four main transportation modes within this area: pedestrians, cyclists, transit and motor vehicles.

6.1 Pedestrians

- **Improve permeability and connections to the town centre.** Greater connectivity through safe and appealing pedestrian crosswalks shall be established along the appropriate desire lines to connect pedestrians from surrounding neighbourhoods to the Town Centre.
- **Ensure safe and comfortable mobility for all road users.** The road cross section features and landscape improvements should consider the safety and comfort of the most vulnerable road users. This should emphasize children, elderly people, and those with mobility impairments.
- **Transform the network into a great space.** In line with the District's vision to create a well-designed pedestrian, biking and transit-oriented mixed use centre in the heart of Lynn Valley that celebrates its natural and cultural setting and strong sense of community, Lynn Valley Town Centre should become an attraction and destination in and of itself to live, work, play and learn.
- **Reduce crossing distances at all intersections.**

6.2 Cyclists

- **Complete the envisioned bicycle network.** Improvements to transportation infrastructure should incorporate routes identified in the North Vancouver Bicycle Master Plan (2012). Where applicable, and in conjunction with the redevelopment taking place, regional connections on 27th Street, 29th Street, Mountain Highway, and Lynn Valley Road should be made more direct ; considering major road crossings, left turns, and route continuity.
- **Ensure a safe and comfortable transportation network for both commuter and recreational cyclists.** Provisions should be made to attract recreational cyclists with pleasing pathways that allow for "conversational cycling" at moderate travel speeds. In addition, consideration of connection for higher speed cyclists should be provided for daily commuter needs within the area.
- **Design bicycle facilities to attract new riders of all ages and abilities.** All bicycle facilities should be designed to attract new cyclists and increase cycling mode share within the District. Where possible, facilities should be physically separated from automobile traffic and wide enough to allow for safe passing.
- **Incorporate clear and consistent wayfinding signage for bicycle users.** As part of the implementation of the enhanced bicycle network within the Town Centre, clear signage

should be introduced along all routes and at all decision points to direct cyclists to their intended destination in a safe and direct manner. Where changes to existing travel routes are introduced, additional temporary signage is recommended to emphasize new routes within the transportation network. Signage should be consistent in format and approach with the remainder of the District; however, it is recommended that signage provides direction, distance, and time to reach important destinations on the North Shore.

6.3 Transit

- **Facilitate efficient transit vehicle operation.** Design transit facilities in accordance with TransLink's Bus Infrastructure Design Guidelines.
- **Create an exceptional customer service experience for transit passengers.** This includes developing livable communities and supportive cycling and pedestrian infrastructure around transit centres. The Transit-Oriented Communities Design Guidelines shall be used as a basis for design.
- **Establish a short connection between the transit exchange and the town centre.** Through consideration of any alternate location for a transit exchange along 27th Street, prioritization should be given to maintain a short walking distance between the intersection of High Street and High Street B.
- **Facilitate intermodal travel.** Accommodation should be provided within the transit passenger area for different means of access to the transit exchange. Referencing TransLink's Transit Passenger Facility Design Guidelines (201X) Strategy 02: Support transit by integrating with other modes, enhanced access for pedestrians, cyclists, taxis, and drop off should be considered. This includes the provision of convenient, multiple, and direct pedestrian access points for all origins and destinations; both short term and long term bicycle parking in safe and well-lit areas; and clear signage for separate passenger pick-up and drop off areas for taxis and private vehicles.

6.4 Motor Vehicles

- **Provide satisfactory level of service for all vehicle movements at all Town Centre intersections.** Maintain level of service (LOS) D or better for all signalized intersections with volume to capacity (v/c) ratios for all individual movements less than or equal to 0.90. Minimize delays at unsignalized intersections.
- **Establish safe intersection operations through laning, geometry, and signalization.**
- **Ensure turning movements accommodate the appropriate design vehicles at all locations.** Provide access to the site for appropriate design vehicles through specified routes. Accommodation for a WB-20 Tractor-Semitrailer should be provided only for access to the laneway immediately east Lynn Valley Road on 27th Street. Accommodation for a Heavy Single Unit (HSU) truck should be provided only for access to Rain Street.

7.0 Recommendations by 2031

7.1 Planned Network

A planned network was developed based on the Guiding Principles above and the analysis presented in earlier sections.

The recommended network provides a number of key benefits, while mitigating the impacts of increased traffic due to development. Some of these benefits are:

- Walkable neighbourhood with improved pedestrian connectivity and urban streetscape. The increase in residents, combined with street-facing shops and well designed pedestrian spaces will contribute to a vibrant community.
- Improved facilities for cyclists of all ages and abilities, including a separated two-way cycle track along E 27 Street, an important connection for local and regional cyclist.
- Better intermodal and transit facilities, with an accessible bus exchange area that can accommodate TransLink's plans for increased service to Lynn Valley.
- Continued access for local delivery of goods.
- Enhanced traffic operations through better lane continuity and the introduction of an improved grid network. Although the number of vehicle trips is expected to increase, the impacts on the road network are expected to be minimal.

The proposed Study Area network with all improvements is illustrated in Exhibit 1. More detailed plans are included in Exhibit 2**,** Exhibit 3**,** and Exhibit 4. This is the ultimate concept, which includes a realigned Ross Road / Rain Street & Lynn Valley Road intersection. The full extension of Rain Street and completion of High Street B will not be complete within the 20 Year horizon. A memo describing the typical cross sections for streets within the Study Area is included as Appendix B.

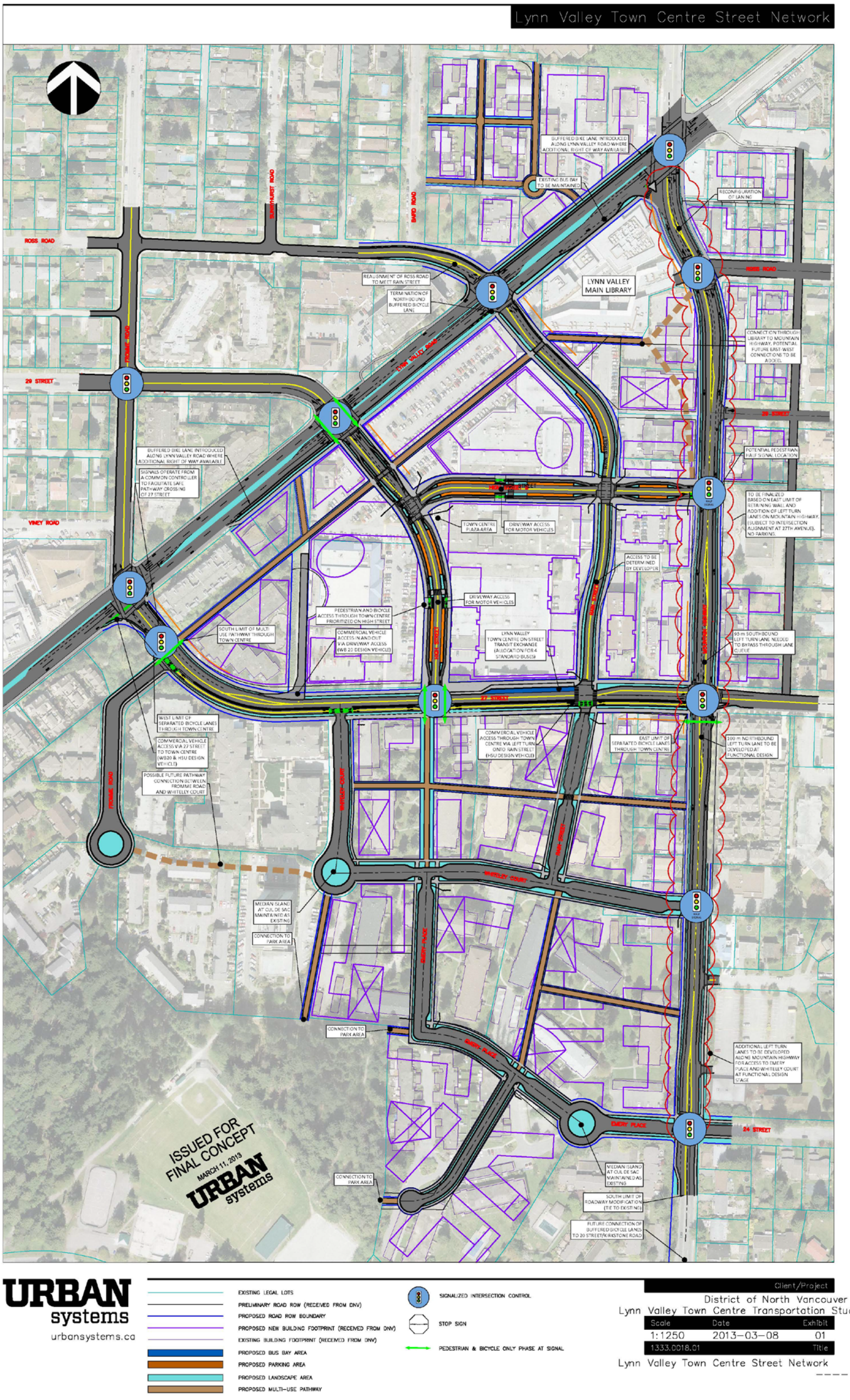
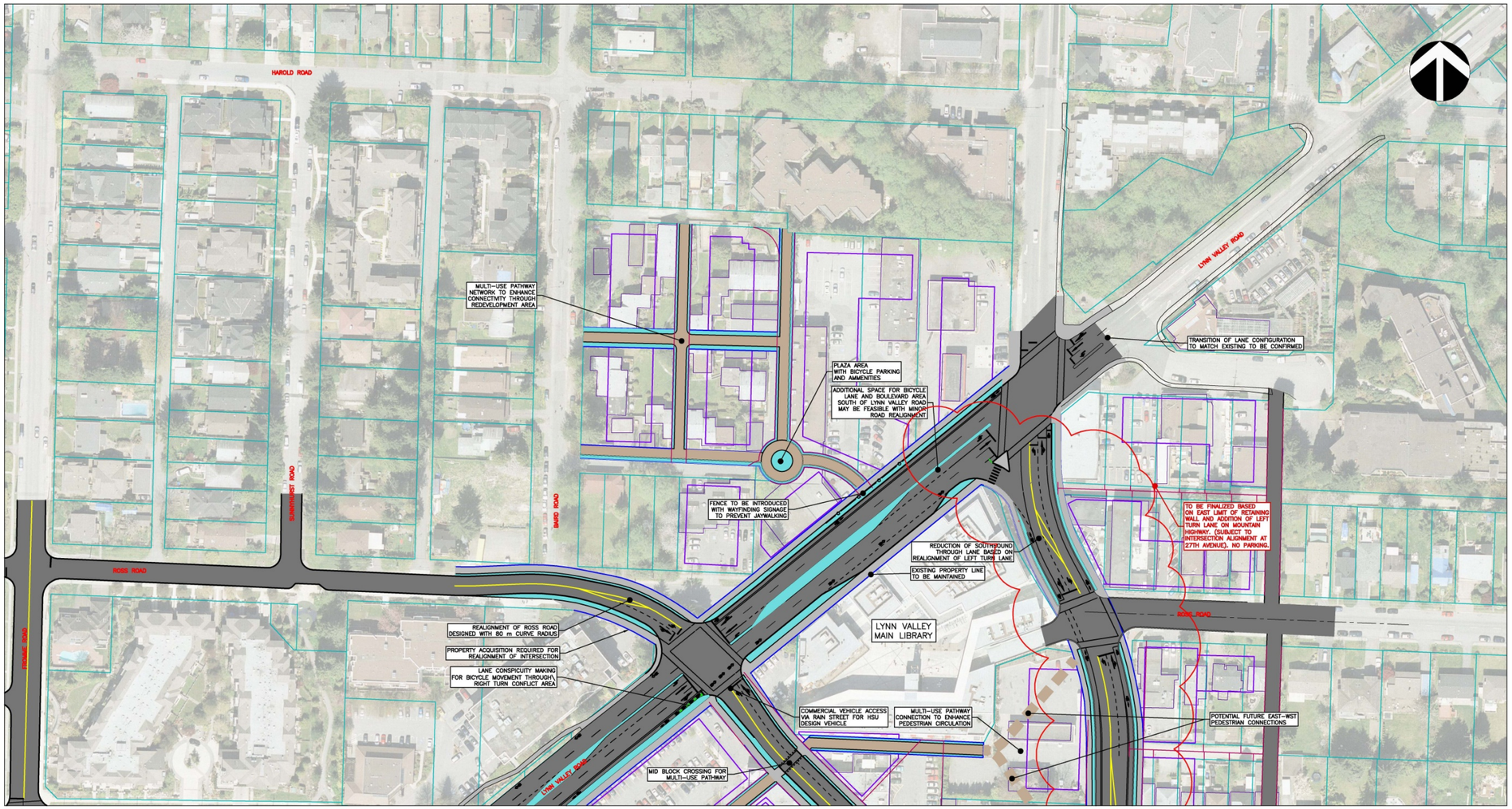


Exhibit 1: Proposed Study Area transportation network

Street Network – North



URBAN systems
urbansystems.ca

EXISTING LEGAL LOTS
PRELIMINARY ROAD ROW (RECEIVED FROM DNV)
PROPOSED ROAD ROW BOUNDARY
PROPOSED NEW BUILDING FOOTPRINT (RECEIVED FROM DNV)
EXISTING BUILDING FOOTPRINT (RECEIVED FROM DNV)
PROPOSED BUS BAY AREA
PROPOSED PARKING AREA
PROPOSED MULTI-USE PATHWAY
PROPOSED LANDSCAPE AREA
STOP SIGN

ISSUED FOR FINAL CONCEPT
MARCH 11, 2013
URBAN systems

Client/Project
District of North Vancouver
Lynn Valley Town Centre Transportation Study

Scale	Date	Exhibit
1: 750	2013-03-13	02
1333.0018.01		Title

Street Network – North

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Exhibit 2: North Section

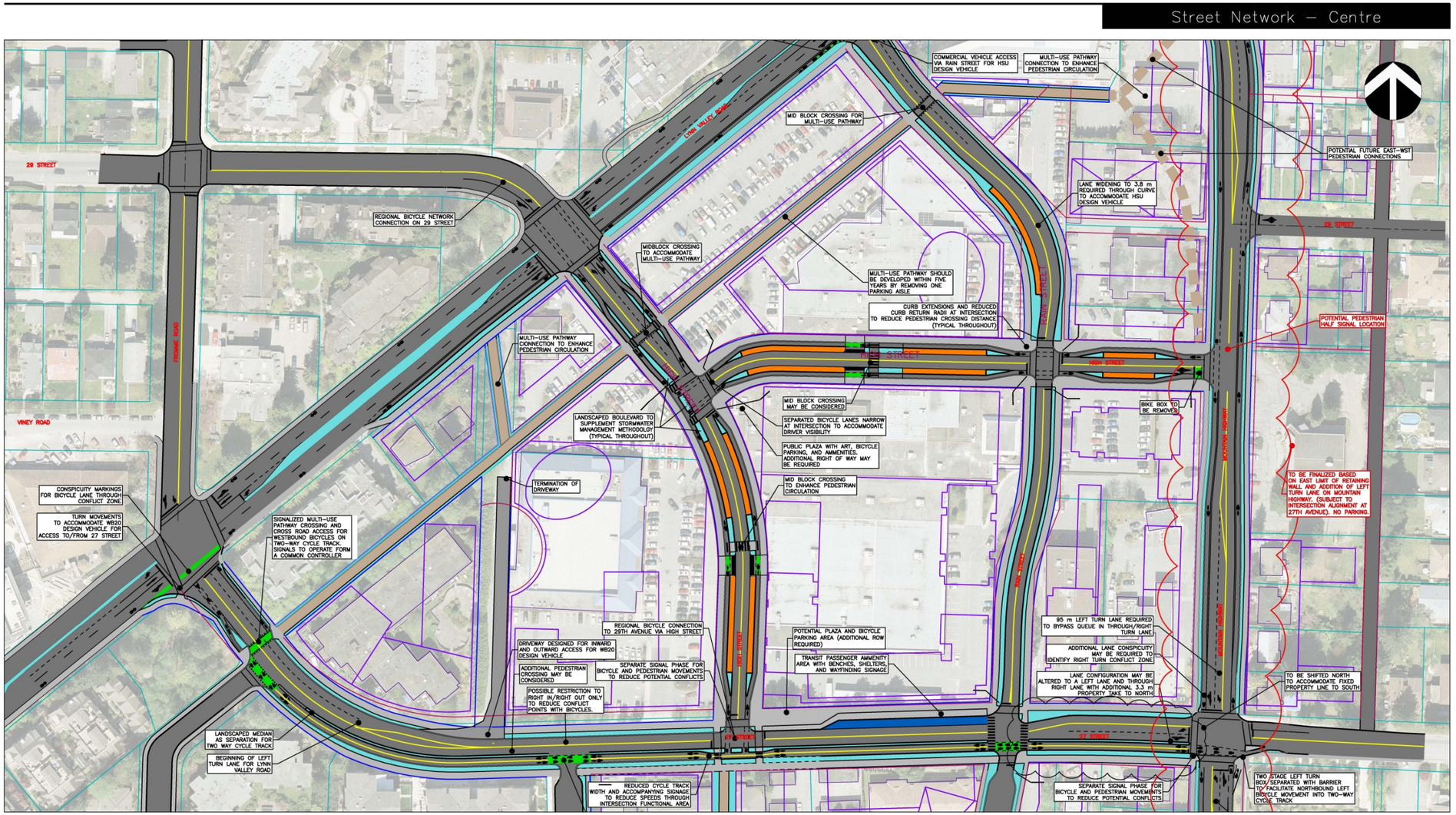


Exhibit 3: Central Section

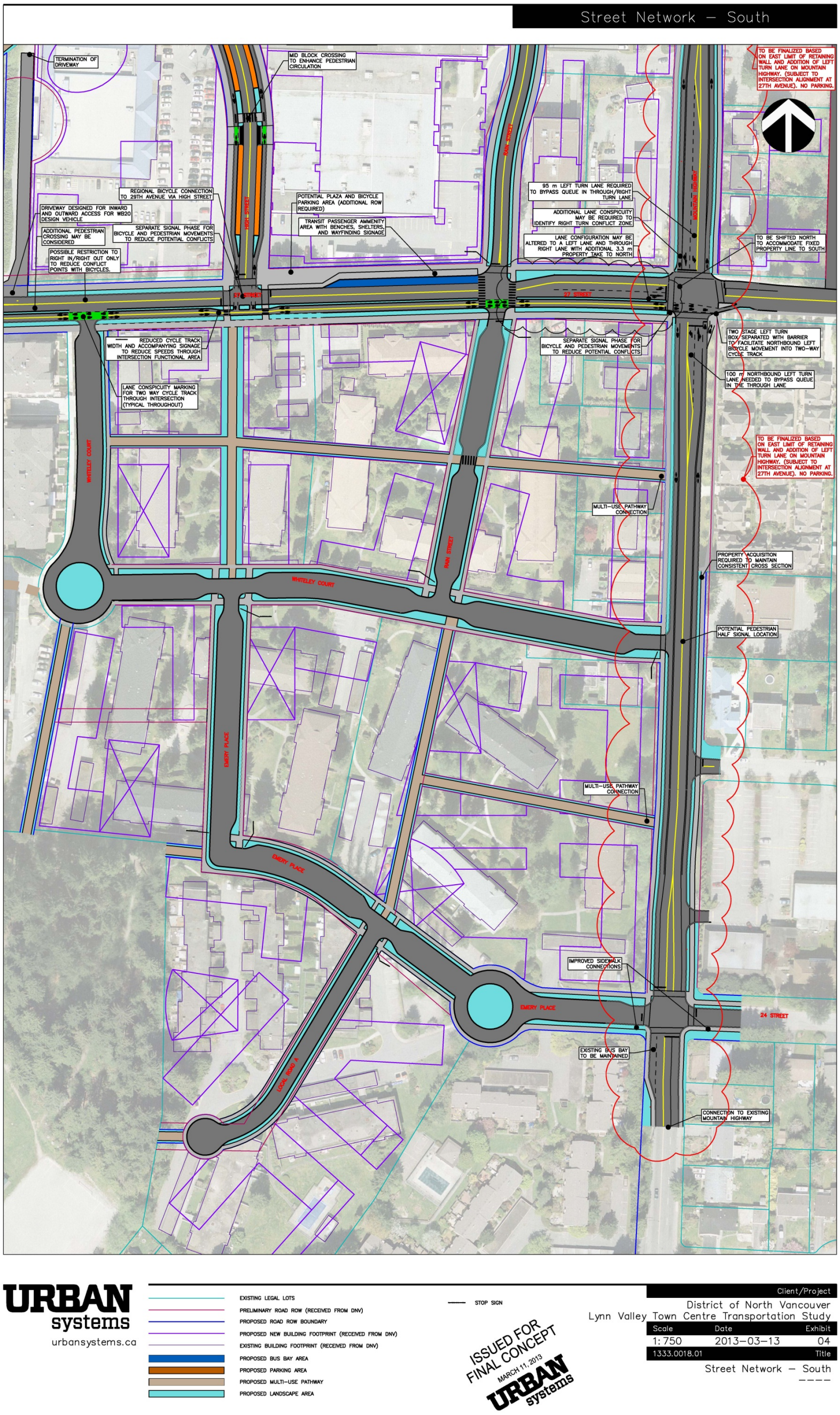


Exhibit 4: South Section

7.1.1 *PEDESTRIANS*

Specific changes/enhancements for pedestrians.

- Improved access and shorter walking distances due to grid network of new local streets and a multi-use pathway network.
- Two new pedestrian signals crossing Mountain Highway – one midblock between Lynn Valley Road and E 27th Street and a second between E 27th Street and E 24th Street – shortening long blocks for pedestrian, and connecting anticipated desire lines to the Lynn Valley Town Centre with the surrounding residential areas.
- New crossing of E 27th Street at Fromme Road facilitates pedestrian connectivity. Provide a pedestrian and cyclist-activated signal at Fromme Road and E 27th Street. This signal facilitates safe pedestrian crossing from the park connections at Fromme Road and Whiteley Court to the proposed pathway that connects to the Lynn Valley Main Library. Enabling safe crossing at this location is an important component of the pedestrian network. The signal must be operated jointly with Lynn Valley Road / E 27 Street / Fromme Road from a single controller. This is the recommended configuration for this crossing location and will require further study to confirm sight lines and traffic operation details.
- Reduced crossing distances through the use of curb bulges.
- Crosswalks on both sides of all intersection crossings.

7.1.2 *CYCLISTS*

Specific changes/enhancements for bicycles include:

- Two-way cycle track on south side of E 27th Street connects cyclists to Lynn Valley Town Centre and provides an essential link in the North Shore cycling network. This treatment is recommended for two reasons:
    - To provide maximum separation from motor vehicle traffic to encourage bicycle travel to Lynn Valley Town Centre for riders of **all ages and abilities.** A fully separated link is essential over this short stretch. E 27 Street is a key link in the cycling network. In addition to its function joining two commuter cyclist routes (Mountain Highway and Lynn Valley Road), it also serves a special function for less confident cyclists. Fromme Road and Whiteley Crescent, two low volume, local roads, connect E 27 Street to the network of trails in Kirkstone Park. With a separated facility on E 27 Street, residents between Kirkstone Road and Lynn Valley can easily travel without being exposed to vehicles on a major road. E 27 is an important link in the District of North Vancouver's network for cyclists of all ages and abilities and must be constructed in a way that maximizes separation from vehicle traffic.

- To significantly reduce the number of conflict points with vehicles on the north side of E 27th Street. The specific treatment proposed for Lynn Valley is a two-way separated cycle track; although this type of facility is less common, this configuration provides special benefits in the context of E 27 Street. In particular, it is anticipated that a bike lane or separated bike lane on the north side of the road would experience a high level of conflict with buses and pedestrians at the on street transit exchange. By providing a separated facility with appropriate traffic controls, signage, and travel space, 27th Street will become a more attractive corridor for cyclists, pedestrians, and transit passengers.

- New crossing of E 27th Street at Fromme Road facilitates pedestrian connectivity. Provide a pedestrian and cyclist-activated signal at Fromme Road and E 27th Street. This signal facilitates safe cyclist crossing from the park connections at Fromme Road and Whiteley Court to the proposed pathway that connects to the Lynn Valley Main Library. Enabling safe crossing at this location is an important component of the cycling network. The signal must be operated jointly with Lynn Valley Road / E 27 Street / Fromme Road from a single controller. Operation of the joint controller may present a challenge for the District. The recommended configuration for this crossing location requires further study to confirm sight lines and traffic operation details.
- One way cycle tracks on High Street provide access from bike routes south of Lynn Valley to the key E 29th Street bicycle route.
- Opportunities for improved bicycle parking in public areas due to the creation of parks and plazas.

7.1.3 *Transit Users*

Specific changes/enhancements for transit include:

- New bus layover area on north side of E 27th Street can accommodate up to 4 standard buses (12.4 metres) and provides sufficient space for two articulated buses (18.6 metres).
- A total width of 3.0 m provided for passenger waiting areas within the bus exchange area on E 27th Street provides the preferred space identified in TransLink's Bus Infrastructure Design Guidelines to ensure accessibility, waiting areas, and wayfinding features.
- More street facing commercial will improve 'eyes on the street' and augment services available for transit passengers.
- Street-side space was designed utilizing five zones of the sidewalk as recommended in TransLink's Transit Oriented Development Design Guidelines. This provides space for an edge zone, extension zone, furnishings, throughway, and frontage.
- Existing bus pull-out on Lynn Valley Road in front of the Lynn Valley Main Library will be maintained for future use.
- Intersections were designed to accommodate articulated buses moving clockwise around the Study Area along Lynn Valley Road, Mountain Highway and E 27th Street. All right turn

movements in the clockwise direction around the town centre accessing the E 27th Street Bus Stop were designed using the most conservative bus turn template; the 12.4 m Standard Bus with a bike rack in use. (It is noted that articulated bus turn templates are less restrictive than the standard bus turn template).

- Lane width and length for the on-street transit exchange were developed based on guidance from the TransLink Bus Infrastructure Design Guidelines. A minimum width of 6.5 m from the edge of curb to the centreline was used as the guiding criteria for the on-street bus space allocation. This includes both the bus layover width as well as through lane width. Existing bus stops for local transit access will be maintained on Lynn Valley Road, Mountain Highway and E 29th Street. Required stop locations for frequent transit service envisioned within the area outside of the E 27th Street Transit Exchange should be confirmed with TransLink at the next stage of design.
- Enhance opportunities for bike and ride with secure bike parking.

7.1.4 *MOTORISTS*

Specific changes/enhancements for motorists include:

- New signal at Fromme Road and E 29th Street improves operations and safety at this key intersection. This signal could be coordinated with the signal at the intersection of Lynn Valley Road and Fromme Road; however, further study is needed.
- New signal at High Street and E 27th Street provides access to the main commercial area.
- New protected / permitted left turn phases to improve safety and operations at E 29th Street and Lynn Valley Road (southbound left) and at Fromme Street and Lynn Valley Road (eastbound left). The protected / permitted left turn phases for the opposing movements (northbound left at E 29 Street and Lynn Valley Road and westbound left at Fromme Street and Lynn valley Road) are not required from an operational perspective, but may be included to improve safety.
- Overall improvement in access due to the new internal grid network created by High Street and Rain Street.
- Consolidated intersection of Ross Road (west) and Rain Street allows for removal of turning restrictions, better circulation, and improved operations.
- Improved lane continuity throughout, with existing shared through-left lanes replaced by exclusive left turn lanes with accompanying shared through-right lanes.
- Signal timing improvements as required to accommodate forecasted traffic volumes.
- Reconfiguration of Mountain Highway to reduce driver confusion and provide road space for cyclists. The recommended configuration for Mountain Highway requires further study at the feasibility and functional design stages to resolve challenges related to retaining walls, road space, and property needs.

Assessing future total trips on the planned network shows that all intersections operate with LOS D or better, in accordance with the design principles. LOS for signalized intersections for the 20 Year and Ultimate horizons are shown in Figure 7-1 and Figure 7-2. All individual movements at signalized intersections are expected to operate with v/c less than or equal to 0.90. All movements at unsignalized intersections also operate with v/c less than or equal to 0.90. The LOS for the eastbound movement at the unsignalized intersection of Mountain Highway and E 29th Street operates with LOS 'E'. Operations for this movement should be improved with the planned addition of a pedestrian half-signal (described below) and vehicles have the option of using alternative signalized accesses. All other movements at unsignalized intersections operate with LOS 'D' or better.

Despite the addition of density to the Lynn Valley area, traffic operations are expected to improve at some locations and the overall network is expected to experience minimal additional delay. As discussed above, no operational issues are expected for any movements within the study area. SimTraffic analysis for the network as a whole shows a reduction in stops per vehicle from 2.02 in the Existing horizon to 1.97 in the Ultimate. Delay per vehicle is expected to increase from 85.2 second to 114.5 seconds, which is acceptable given background growth of 0.3% annually.

As a result of the signal operation improvements, lane continuity, removal of turning restrictions, and overall circulation enhancements, it is anticipated that safety benefits will result at many intersections within the study area. Further evaluation of safety benefits may be undertaken at the functional design stage. This is in alignment with the vision for intersection safety improvement set forth in the District of North Vancouver Transportation Plan.

The analysis does not show the need to provide left turn bays for unsignalized intersections on Mountain Highway; however, these may be added at the functional design stage to remove left turning vehicles from the path of through traffic and provide a separate queuing zone for these vehicles. The District prefers to provide left turn bays at unsignalized intersections. The final alignment and cross-section of Mountain Highway should be determined at the functional design stage.



Figure 7-1: 20 Year Signalized Intersection LOS



Figure 7-2: Ultimate Signalized Intersection LOS

7.1.5 *Goods Movement and Access Needs*

Specific changes/enhancements for goods/vehicle movement include:

- WB-20 design vehicle used to secure access to loading bays between High Street and Lynn Valley Road. Intersections designed to provide sufficient space for WB-20 vehicles. The access path to the site was assumed to be on / off of Lynn Valley Road.
- Access to Rain Street designed to permit minor truck access (HSU) to Rain Street from Mountain Highway.

7.2 Design Outcomes

Some key design outcomes will influence the District's approach as this area develops. The Ultimate network is not possible in the short-term, as it requires a new north-south road through the site of the existing mall. The full network will not be possible until that site redevelops. Development of the full Ultimate network also requires land acquisition along key roadways. Land acquisition for the Ultimate network is illustrated in

Improvements to the transportation network in the Study Area should be made as developers come forward and land is available. The final steps in the completion of the Ultimate Network rely on the redevelopment of the Lynn Valley Mall and will be:

- Development of High Street B
- Development of Rain Street north of High Street B
- Realignment of the intersection of Ross Road / Rain Street & Lynn Valley Road

All other improvements can be completed over time as land becomes available. When the southern portion of Lynn Valley Mall redevelops, it may be possible to replace one row of above ground parking with a multiuse trail parallel to Lynn Valley Road. This will allow for early completion of a pedestrian and cycling connection from 27th Street to the Lynn Valley Library parallel to Lynn Valley Road.

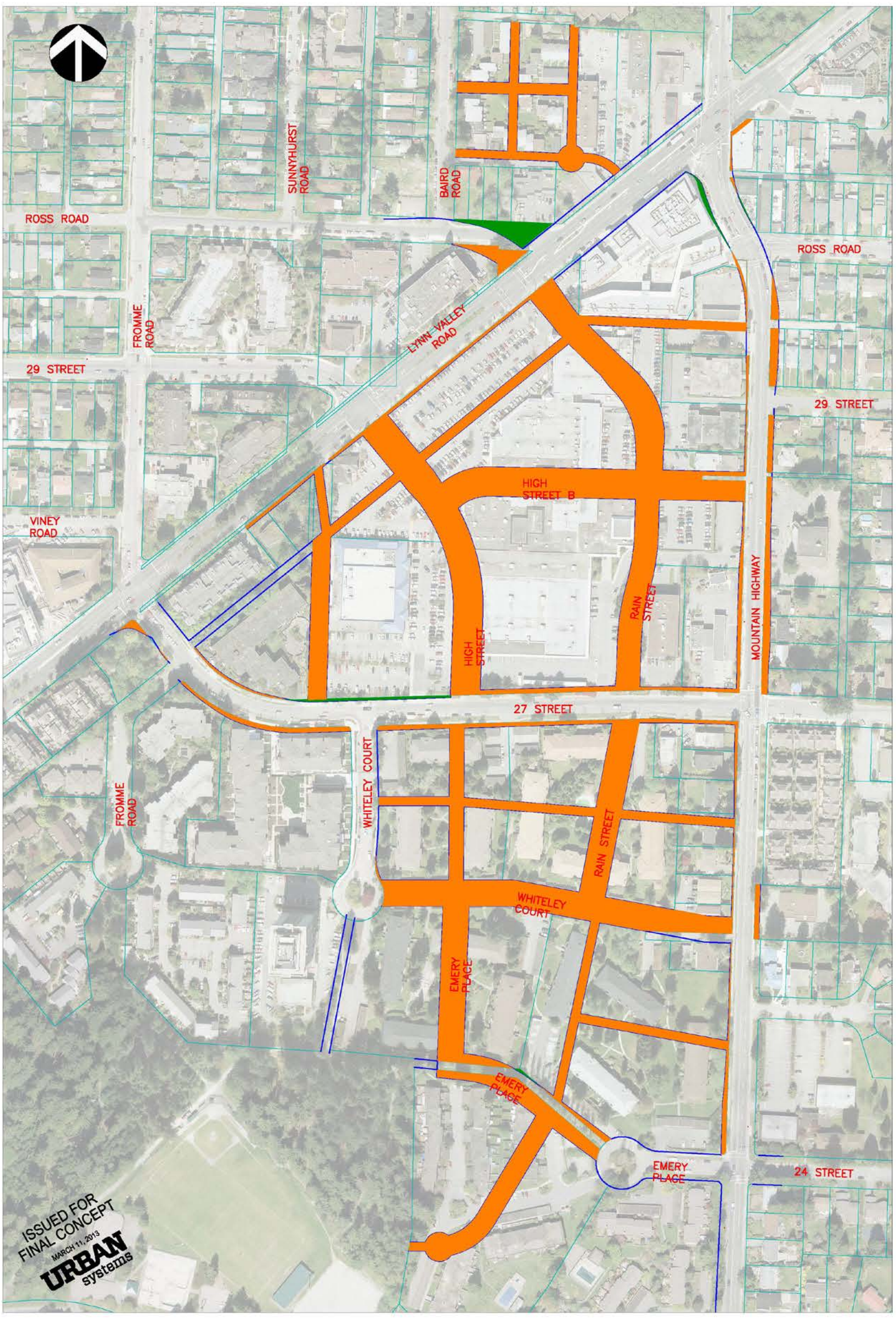


Exhibit 5: Property Acquisition

7.3 Impacts and Further Consideration

The revised Synchro networks containing the 20-Year and Ultimate networks are available for use by developers in the preparation of their Traffic Impact Assessments within the Study Area. Precise locations of accesses and the final design of Mountain Highway are subject to further design and considerations as the Study Area develops.

8.0 Conclusion

The Vision for the Lynn Valley community includes a vibrant and livable Town Centre. This vision can be achieved through changes in the land use and transportation network. This study examined the proposed land use changes and provided a recommended transportation network that provides many benefits, while mitigating the impacts of increased traffic. The overall effect of these changes will be a balanced impact on the vehicle network, with some improvements and some minimal negative impacts.

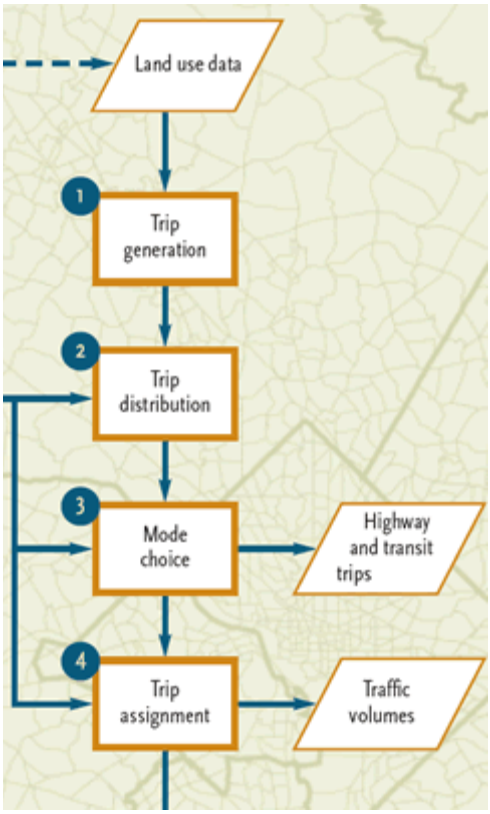
- With the type and levels of development analyzed in this report, the resulting growth in traffic can be accommodated within the proposed transportation network. This is a worst case scenario, as the auto mode share for external trips was not projected to decrease. If the auto mode share decreases, vehicle traffic will be even less than what is shown here.
- New roadways within the study area will improve circulation, allowing for more direct routing for vehicles. The new links will also decrease distance and travel time for pedestrians and cyclists.
- Delays for traffic travelling through Lynn Valley are expected to be minimal.
- The realignment of Ross Road to meet High Street at Lynn Valley Road is expected to improve access, circulation, and safety.
- Street-facing stores, combined with more residents and improved pedestrian space will create a more vibrant, livable neighbourhood.
- Cycling facilities suitable for all ages and abilities will encourage less confident cyclists to cycle more frequently, with positive impacts to access, health, and affordability.
- Transit accessibility will be improved and the changes to property and the road network will enable TransLink to move forward with plans for increased service. With more residents in the area, ridership can be expected to increase.

The changes to Lynn Valley enable valuable improvements to the pedestrian, cycling, transit, and roadway networks. In turn, these improvements will allow the District to achieve the vision for Lynn Valley; however, without development and densification, the improvements recommended here are difficult or impossible to attain.

Appendix A: Four Step Travel Model

The model consists of the following steps:

1. Trip generation;
2. Trip distribution;
3. Mode choice; and,
4. Trip assignment.



Trip Generation

Step one of the process is to determine the number of additional AM and PM peak hour vehicle trips added to the network by the change in land use. The *ITE Trip Generation Manual* were used to determine vehicle trip generation rates for different land use types. ITE trip rates represent land-use specific averages that have been determined through years of case studies and background research. Rates are tied to the number of dwelling units, square footage, acres of land, or employees (i.e. average number of trips per employee in the AM peak hour).

Directionality is also indicated in the *ITE Trip Generation Manual* and specifies what percentage of generated trips is heading into the development (inbound trips) versus how many trips are leaving the development (outbound trips). Generally residential land uses have significantly more outbound trips than inbound trips in the AM peak hour; the opposite is true for the PM peak hour. This phenomenon is generally reversed for employment-oriented land uses.

Trip Distribution

Step two of the process establishes where trips generated by the new development are coming from and going to (i.e. 20% of site trips are coming from the north, 30% from the south, 40% from the west, and 10% from the east). The trip distribution pattern for the Study Area was determined through assessment using the District's EMME model and then adjusted based on engineering judgement.

A distribution matrix determines the share of site generated traffic coming from/destined for various zones outside of the study area. Because Lynn Valley is a large area with many different planned land use types, a share of the total trips will be local – e.g. they will both begin and end within the Study Area itself. Because of the size and nature of the Study Area, local trips were assumed to be made by alternative modes (walking and cycling).

Mode Choice

Not all trips are made by automobile. Other modes, such as public transit, walking, and cycling can also be options for travelers, particularly within an urban context. Step three of the process factors in the effect of other modes on projected traffic. The *ITE Trip Generation Manual* trip rates, used in step 1 of the four step process, represent vehicle trips, not total person trips. Most of the survey data in the Trip Generation Manual was collected in suburban locations in North America. Generally, non-auto mode share of 5% and average vehicle occupancy of 1.2 persons per vehicle can be assumed for the rates within the manual. In many cases, the combined non-auto mode share in a study area is significantly higher than 5% and/or carpooling is more widespread.

In order to account for these differences, total vehicle trips generated are reduced to account for location-specific vehicle occupancy and non-auto trips to more accurately reflect the traffic generated by the proposed land use change. This was completed by converting the vehicle trips provide in the ITE Trip Generation Manual to person trips and then recalculating vehicle trips based on local conditions.

For the Study Area, future mode share was assumed to be the same as current mode share. The mode share for the District as a whole was used to complete this estimate. These estimates are conservative – vehicle trips generated by development will likely be lower than those estimated. Mode share is expected to shift away from single occupancy vehicles over time – this change is not reflected in the mode choice reductions in this analysis.

Trip Assignment

The final step in forecasting travel behaviour is determining which roads travelers use within the study area to reach the new site. This step is known as trip assignment. Trip assignment is distinctly different from trip distribution (step 2). While trip distribution determines where travelers are coming from/going to, trip assignment determines which roads travelers use to get between where they are coming from and the site. Once assigned, development traffic is then added to background traffic at the chosen horizon year. Intersection performance is then assessed to determine the impact of the land use change on the surrounding road network.

Appendix B: Supplemental Cross Section Appendix

MEMORANDUM

URBAN systems

Date:	March 13, 2013
To:	Erica Geddes
cc:	Tegan Smith, Annie Chung
From:	Allison Clavelle
File:	1333.0018.01
Subject:	Lynn Valley Road Typical Cross Sections

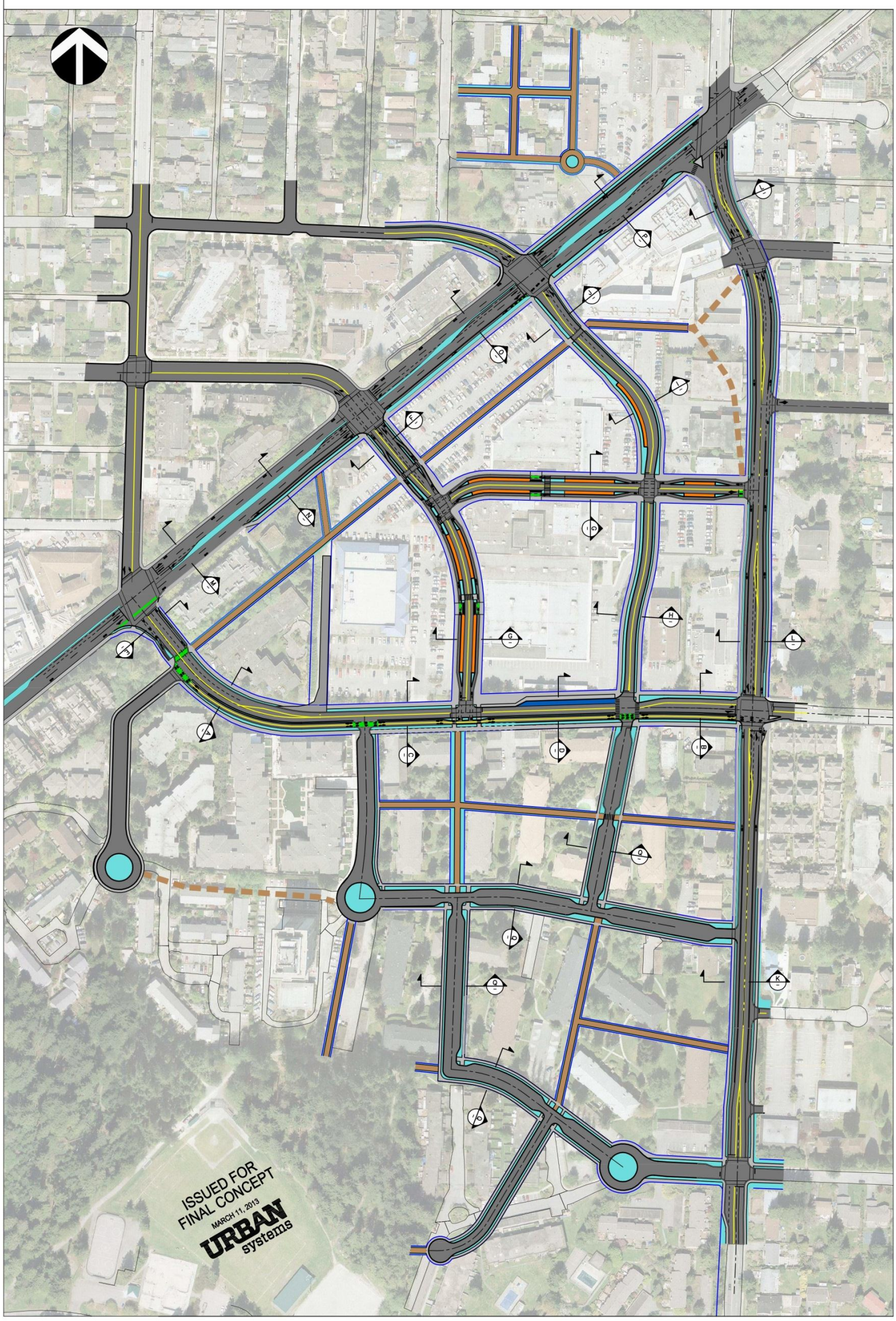
This memo provides additional detail to the *District of North Vancouver Lynn Valley Town Centre Transportation Assessment* (LVTC Transportation Assessment) completed by Urban Systems in March 2013. Typical cross sections are illustrated for streets within the study area. Cross sections for 27th Street, High Street, Rain Street, Mountain Highway, and Lynn Valley Road as well as a typical section that was utilized for all new local roads within the study area. These local roads include Whiteley Court, Rain Street south of 27th Street, and Emery Place.

The design philosophy and impacts associated with these cross sections are consistent with the discussion provided in the LVTC Transportation Assessment.

All cross sections provided herein are associated with Exhibit 1 – Cross Section Locations.

URBAN systems

Cross Section Locations



URBAN systems
urbansystems.ca

EXISTING LEGAL LOTS

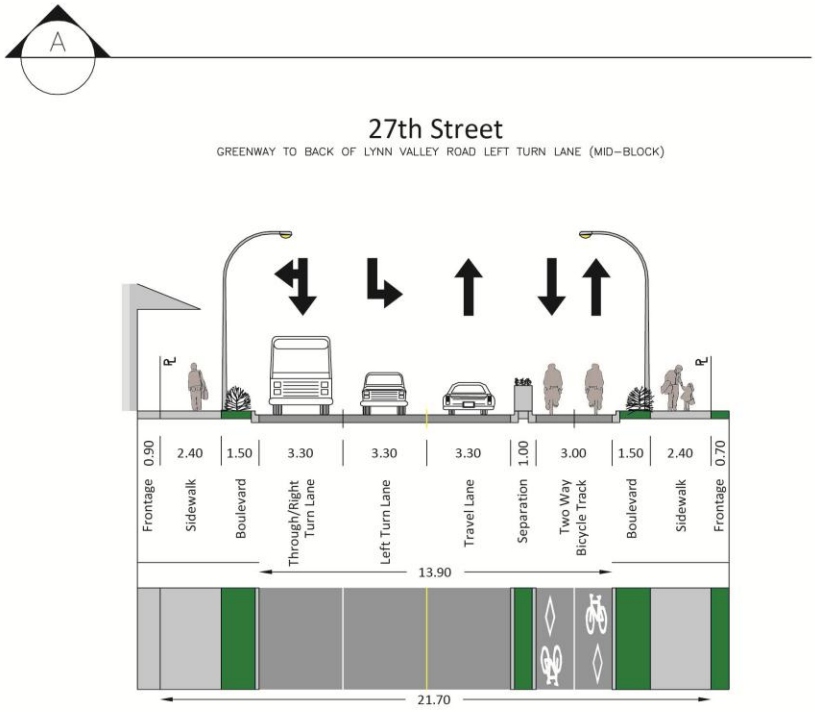
Client/Project
District of North Vancouver
Lynn Valley Town Centre Transportation Study

Scale	Date	Exhibit
1:1250	2013-03-08	01
1333.0018.01		Title

Lynn Valley Town Centre Street Network

\\sat.urban-systems.com\projects\projects_van\1333\0018\01\d-drafting-design-analysis\CADD\CURRENT\production\P09-1333-0018-01 - Cross Section Legend.dwg, P03-1, 2013/03/17 07:06 pm jworkman

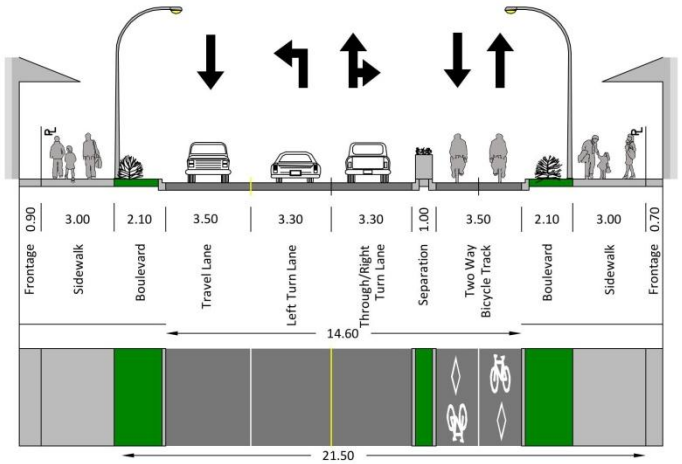
1.0 27TH STREET



B

27th Street

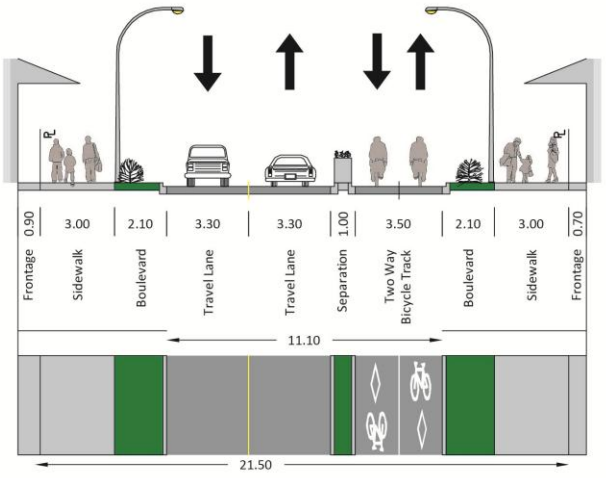
RAIN STREET TO MOUNTAIN HIGHWAY (INTERSECTION)



C

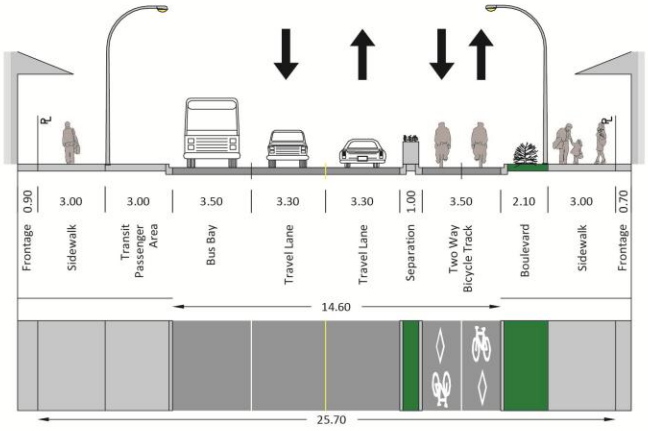
27th Street

LYNN VALLEY ROAD TO MOUNTAIN HIGHWAY (MID-BLOCK)



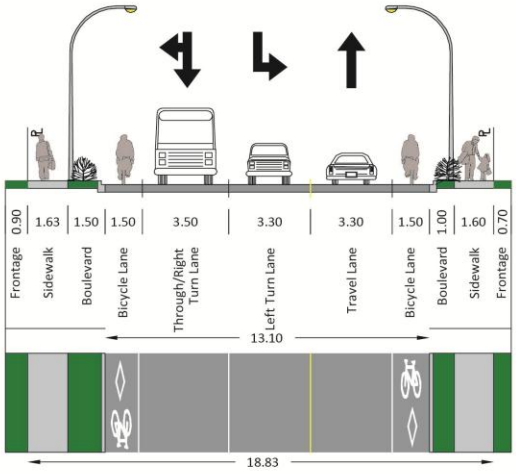
D

27th Street
LYNN VALLEY ROAD TO MOUNTAIN HIGHWAY (BUS BAY)



E

27th Street
LYNN VALLEY ROAD GREENWAY (INTERSECTION)

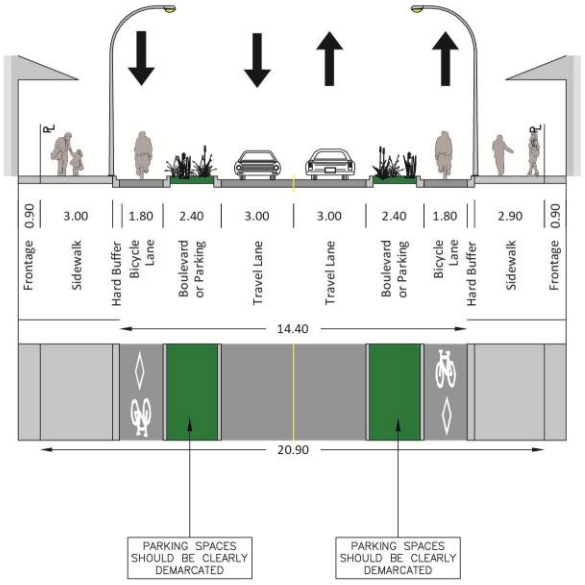


2.0 HIGH STREET

G

High Street

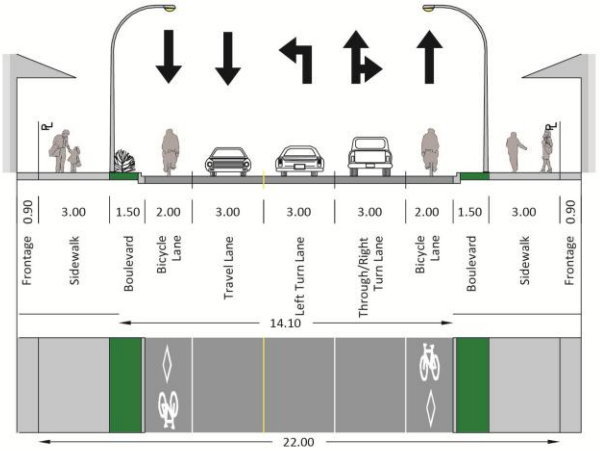
HIGH STREET A: 27th STREET TO HIGH STREET B (MID-BLOCK)
HIGH STREET B: HIGH STREET A TO MOUNTAIN HIGHWAY (MID-BLOCK)



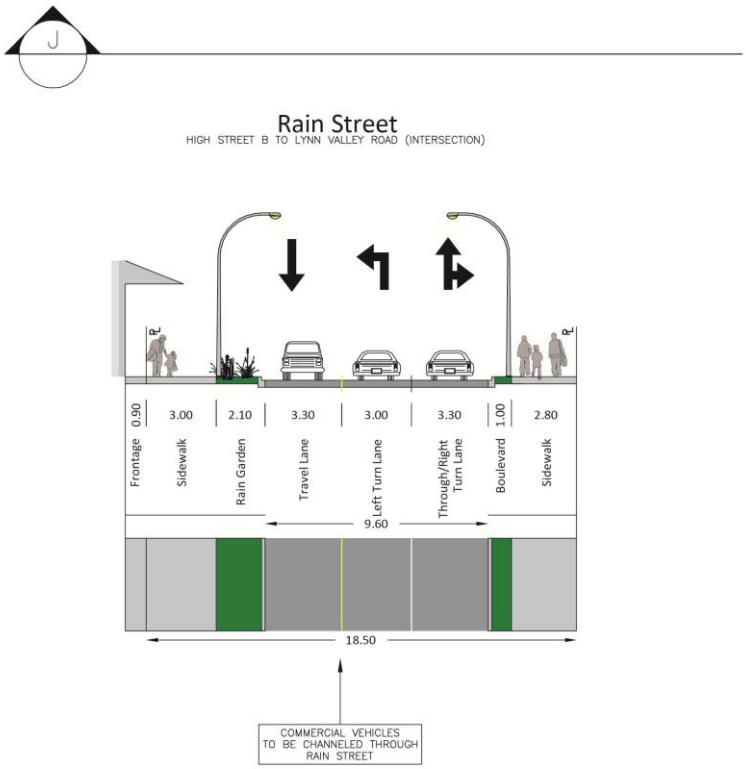
F

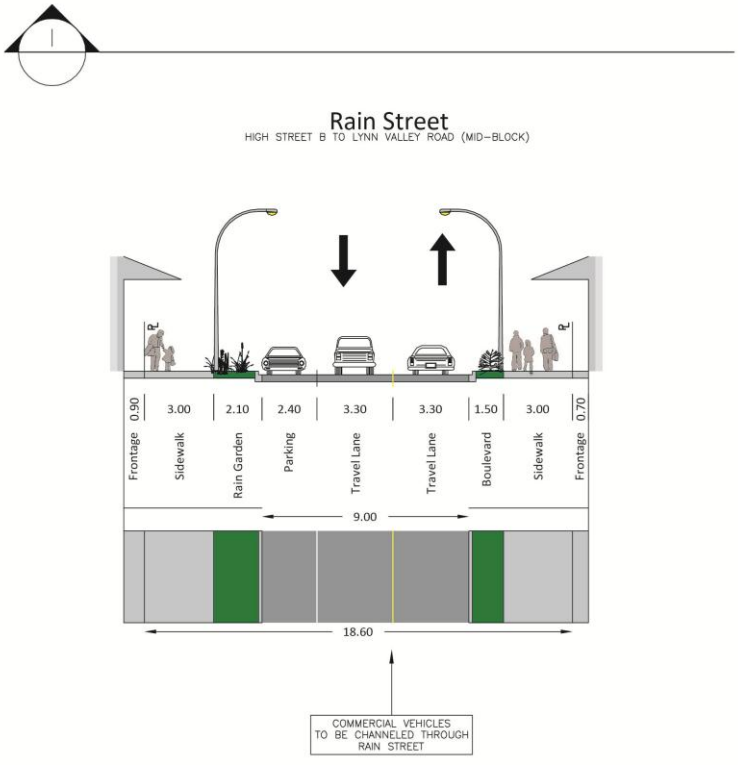
High Street A

HIGH STREET B TO LYNN VALLEY ROAD (INTERSECTION)



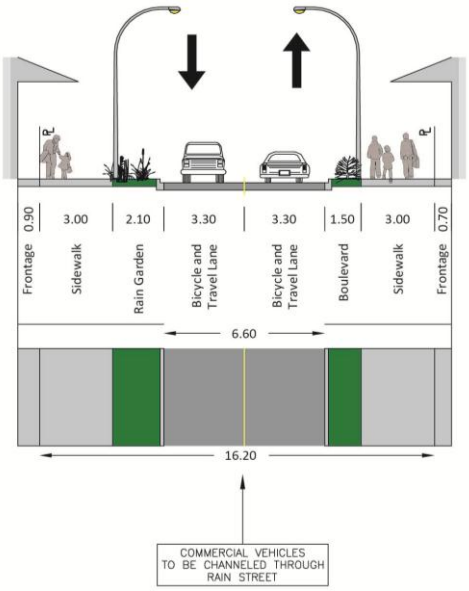
3.0 RAIN STREET







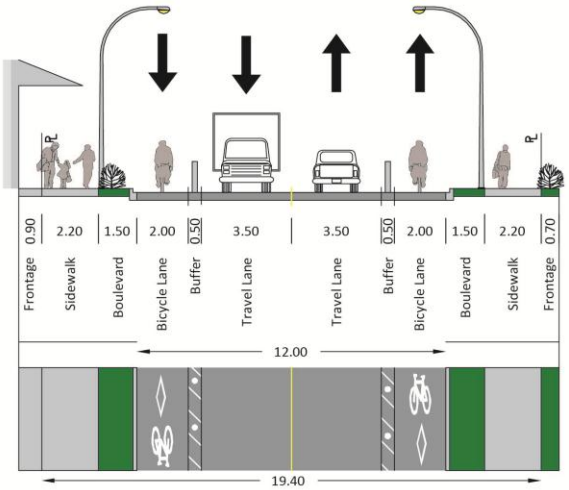
Rain Street
27TH STREET TO HIGH STREET B (MID-BLOCK)



4.0 MOUNTAIN HIGHWAY

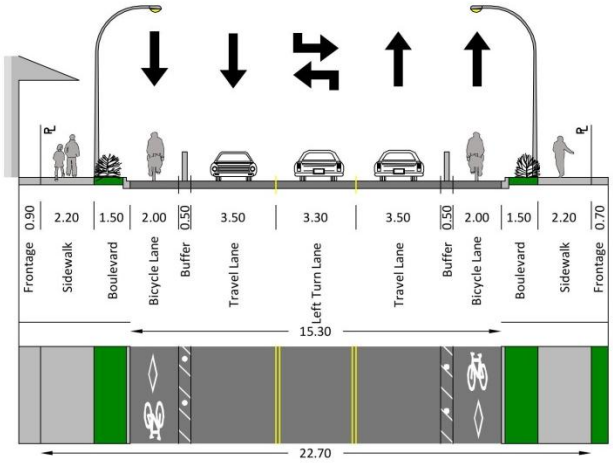


Mountain Highway
24TH STREET TO ROSS ROAD (MID-BLOCK)





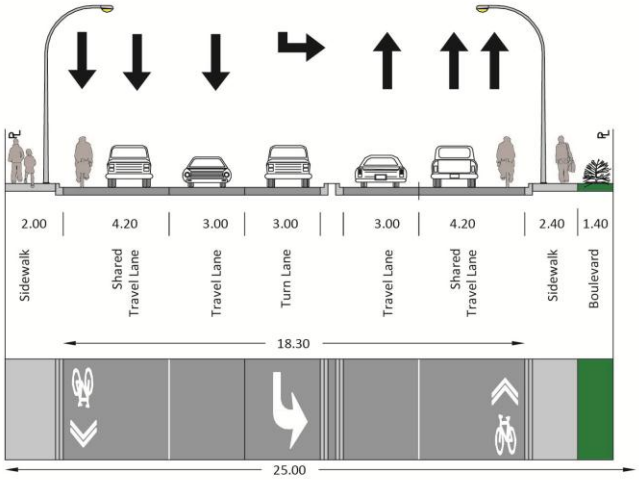
Mountain Highway
ROSS ROAD TO LYNN VALLEY ROAD (MID–BLOCK)
27th STREET TO HIGH STREET (MID BLOCK)

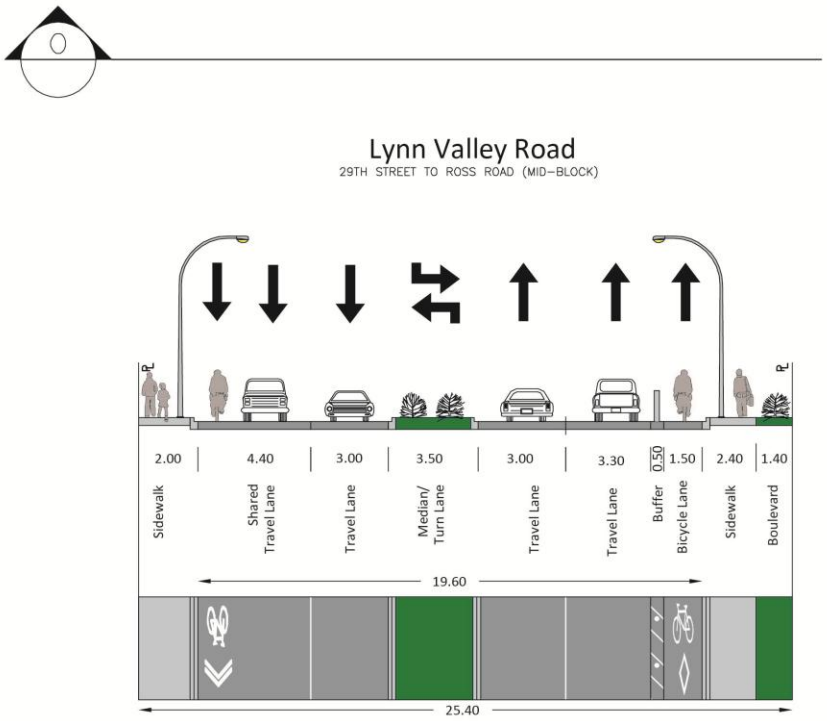


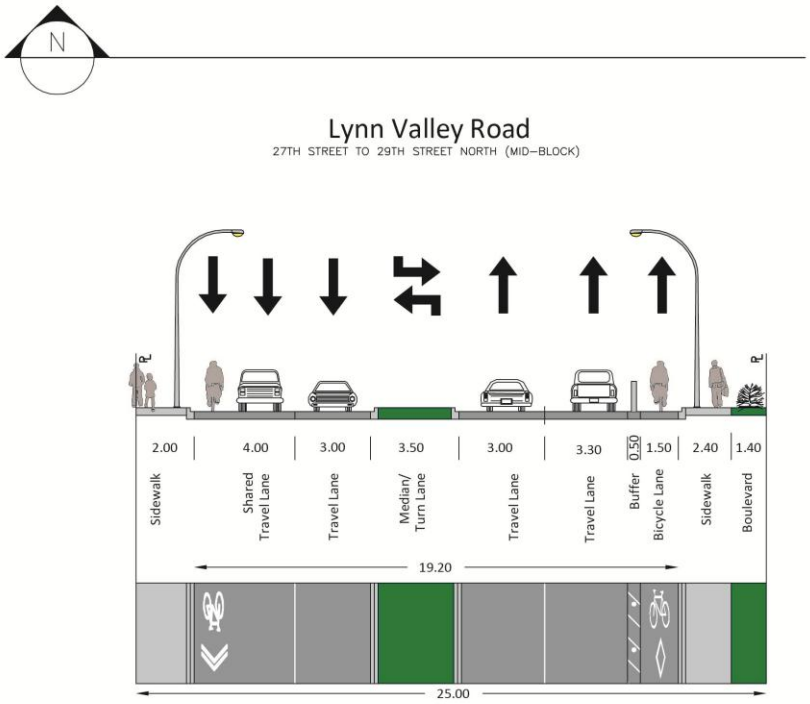
5.0 LYNN VALLEY ROAD



Lynn Valley Road
27TH STREET TO 29TH STREET SOUTH (MID–BLOCK)

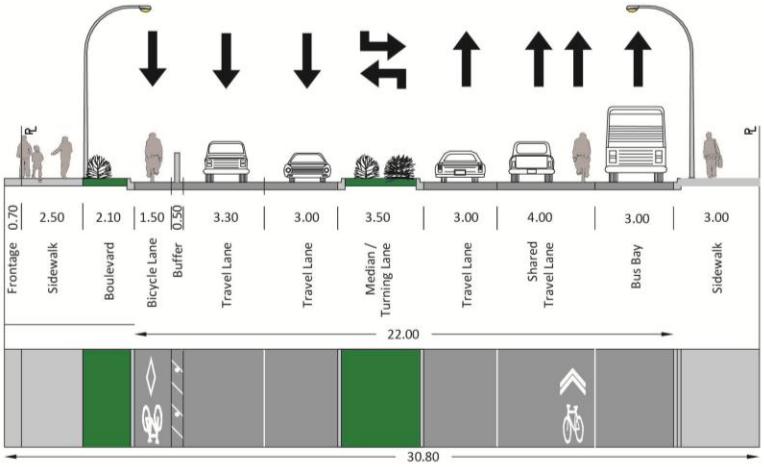



Lynn Valley Road
29TH STREET TO ROSS ROAD (MID-BLOCK)
2.00
4.40
3.00
3.50
3.00
3.30
0.50
1.50
2.40
1.40
Sidewalk
Shared Travel Lane
Travel Lane
Median/ Turn Lane
Travel Lane
Travel Lane
Buffer
Bicycle Lane
Sidewalk
Boulevard
19.60
25.40


Lynn Valley Road
27TH STREET TO 29TH STREET NORTH (MID-BLOCK)
2.00
4.00
3.00
3.50
3.00
3.30
0.50
1.50
2.40
1.40
Sidewalk
Shared Travel Lane
Travel Lane
Median/ Turn Lane
Travel Lane
Travel Lane
Buffer
Bicycle Lane
Sidewalk
Boulevard
19.20
25.00



Lynn Valley Road
ROSS ROAD TO MOUNTAIN HIGHWAY (MID–BLOCK)

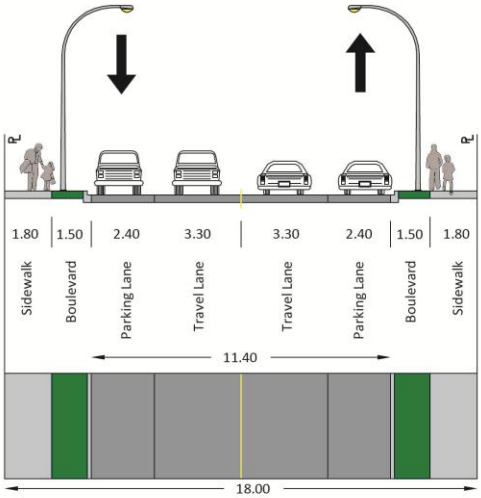


6.0 OTHER ROADS

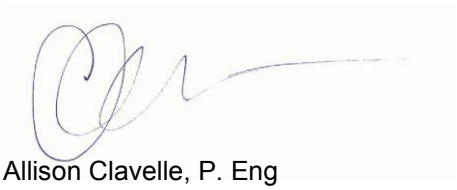
As previously noted, a typical cross section was used for all new or modified local streets within the study area. It was assumed that the cross section for Fromme Road north of 27th Street, 29th Street, and Ross Road would all remain consistent with existing conditions.



Local Street
TYPICAL FOR ALL LOCAL STREETS



URBAN SYSTEMS LTD.



Allison Clavelle, P. Eng
Transportation Engineer

/jw

U:\Projects_VAN\1333\0018\01\R-Reports-Studies-Documents\DRAFT\Appendices\Supplemental Cross Section Appendix\2013-03-13 Supplemental Cross Section Appendix.docx

1325-1335 Draycott Road Traffic Impact Study

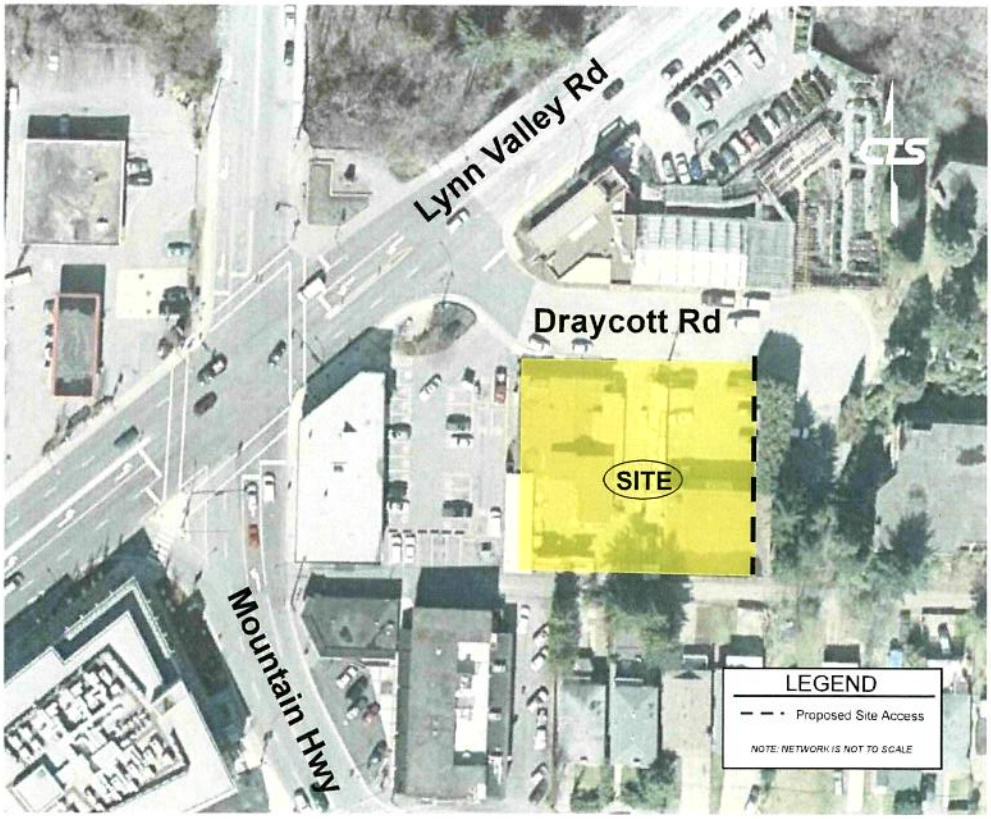
Prepared for

Milori Homes









Prepared by

CTS CREATIVE TRANSPORTATION SOLUTIONS

JUNE 2014

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FAX 604.936.6175
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604.936.6175
www.cts-bc.com

Date: 9 June 2014
Our File No: 5223-01

BY COURIER

Milori Homes
226-998 Harbourside Drive
North Vancouver, BC
V7P 3T2

Dear Mr. Deihimi,

Re: 1325 – 1335 Draycott Road Traffic Impact Study Proposal, District of North Vancouver, BC

Creative Transportation Solutions Ltd. (CTS) is pleased to submit this **FINAL** report summarizing our work on the above study. CTS was retained by Milori Homes on 28 April 2014 to assess the traffic impact of a proposed 35 unit apartment style multi-family development located in the District of North Vancouver, B.C. The primary objectives of this study were as follows:

The primary objectives of this assignment are as follows:

1. To conduct a traffic impact assessment of the proposed development as set out by the CTS in our Revised Terms of Reference, as agreed to by the District of North Vancouver on 6 May 2014; and
2. To document the analysis in a report that meets the requirements of the District of North Vancouver

This report documents our traffic analysis, key findings and recommendations.

EXECUTIVE SUMMARY

CTS was retained by Milori Homes on 28 April 2014 to assess the traffic impact of a proposed 35 unit apartment style multi-family development located in the District of North Vancouver, B.C. The primary objectives of this study were as follows:

The primary objectives of this assignment are as follows:

1. To conduct a traffic impact assessment of the proposed development as set out by the CTS in our Revised Terms of Reference, as agreed to by the District of North Vancouver on 6 May 2014; and
2. To document the analysis in a report that meets the requirements of the District of North Vancouver

Key Findings:

1. The proposed residential development will generate 45% fewer vehicle trips (19 trips versus 35 trips) during the PM peak hour than the Irly Bird Lumber Yard did when it was in operation.

2. The proposed development is estimated to generate 19 vehicle trips during the weekday afternoon peak hour (i.e. 13 veh/hr inbound and 6 veh/hr outbound). The projected volume of additional traffic is not considered to be significant as it represents on average less than 0.32 vehicle movements every minute during the weekday afternoon peak hour.

3. At the intersection of Lynn Valley Road & Draycott Road, the addition of the site traffic to the base 2016 volumes does not result in a noticeable change in operations either as the overall LOS at A (excellent) during the weekday afternoon peak hour. For the year of 2030 (i.e. 14 years post buildout), the intersection is projected to continue to operate at LOS A (excellent) during the weekday afternoon peak hour.

4. Intersection capacity analysis was conducted for all locations in order to determine what, if any, operational and/or geometrical improvements were required for the road network to be able to accommodate the projected site traffic volumes. The capacity analysis determined that no improvements or changes are required.

5. CTS conducted an assessment of the proposed new 4.0 metre laneway and determined that a garbage truck **cannot** circulate through the laneway using the current site plan.

6. CTS conducted an assessment of a partial 6.0 metre laneway and determined that a garbage truck **can** circulate through the laneway using the current site plan.

7. The proposed site is well served by public transit both on Lynn Valley Road and on Mountain Highway.

8. The proposed site is well served with sidewalks to facilitate pedestrian activity.

Recommendations

Based on the findings of this study, the following is recommended:

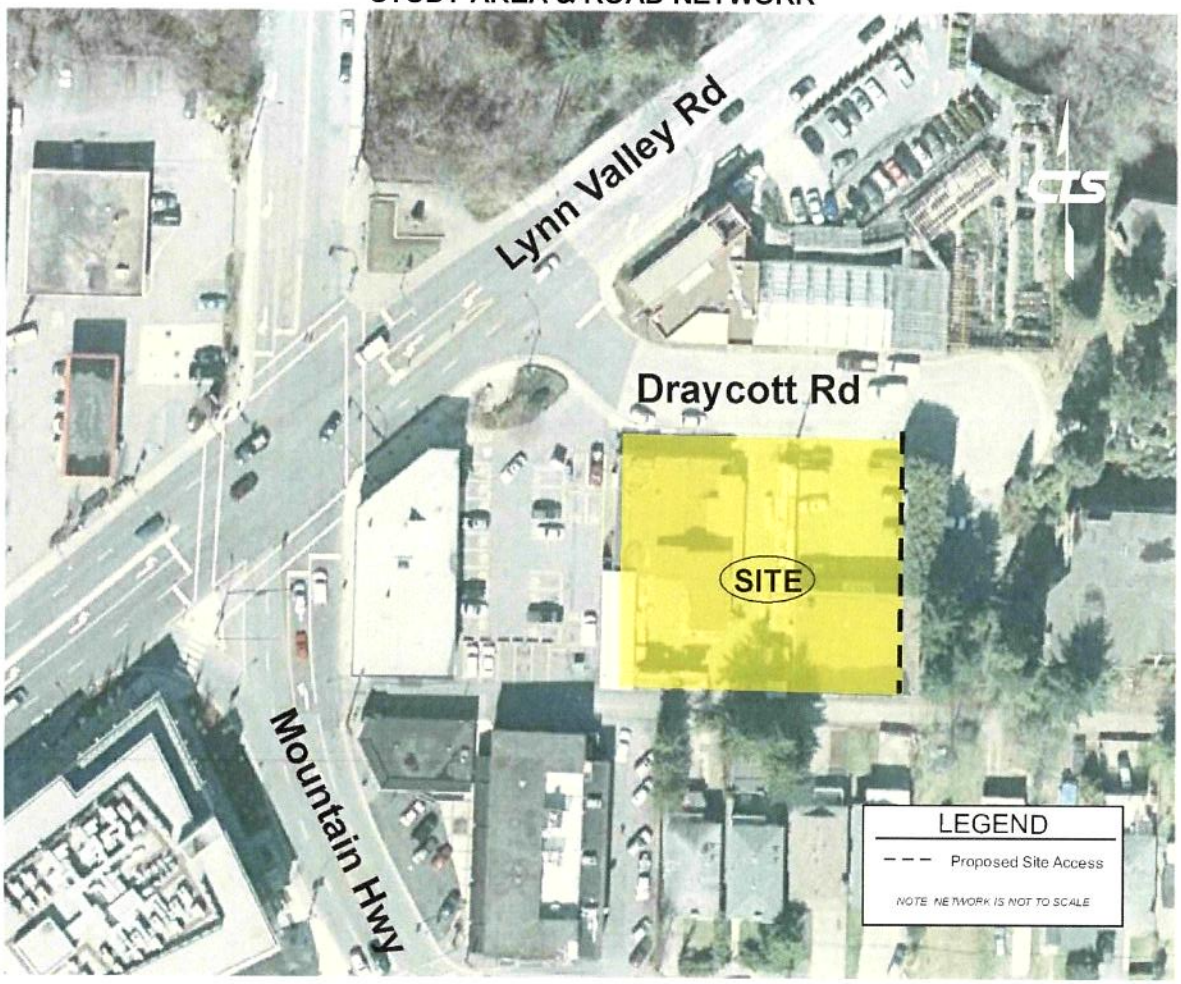
1. That the developer install signage at the entrance to Draycott Road indicating that Draycott Road is a cul-de-sac and indicating that access only to 1325-1335 and 1385 Draycott Road.
2. The site plan be amended to provide a 6.0 metre paved laneway, for a distance of 15 metres as measured northward from the north edge of the existing laneway, on a 6.0 metre road allowance, clear of obstructions to allow a garbage truck to circulate through the laneways. This configuration will maximize the preservation of the hedge.
3. The District of North Vancouver Fire Department be advised that a ladder truck cannot successfully negotiate the 90 degree turn between the laneways.

1.0 BACKGROUND

1.1 The Site

The site at 1325-1335 Draycott Road had been occupied by an Irly Bird Lumber yard that closed on December 31, 2013. The lumber yard client base was primarily local property owners and occasional contractor. All access to the site was from Draycott Road – no access to the abutting laneways. The site and adjacent road network are illustrated in **FIGURE 1:**

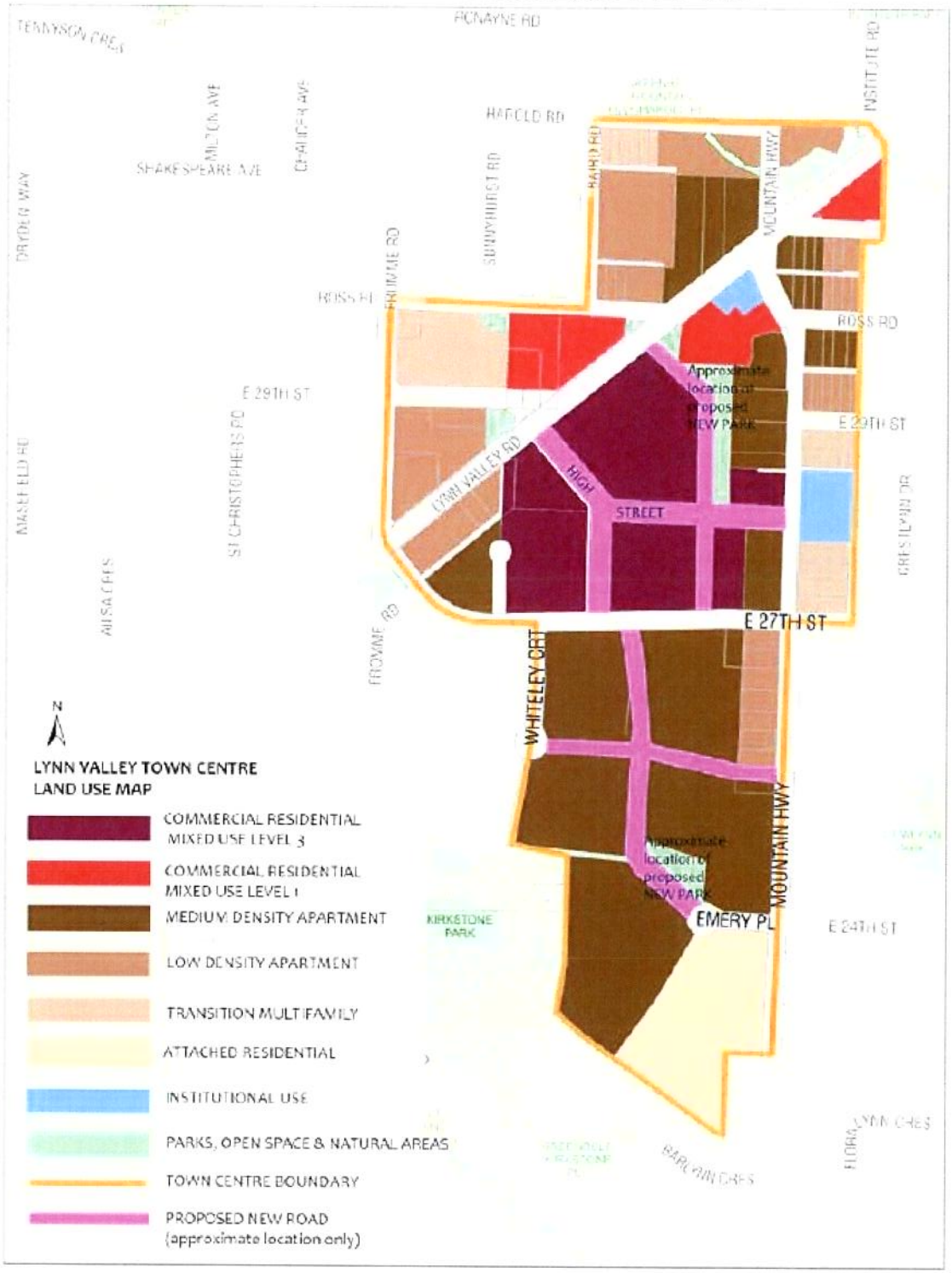
FIGURE 1
STUDY AREA & ROAD NETWORK



Milori Homes is proposing to construct a 35 unit, multi-family apartment style development complete with underground parking and a new north/south laneway along the east property line. This is consistent with the land use plan, illustrated in **FIGURE 2**.

For the purposes of this study, it was assumed that the proposed residential development would be fully developed and occupied by the year 2016. A copy of the proposed site plan is included in **APPENDIX A**.

FIGURE 2
LYNN VALLEY TOWN CENTRE LAND USE PLAN



Map 6. Lynn Valley Town Centre Land Use Map

1.2 Scope of Work

A scope development meeting was held with District of North Vancouver staff on 30 April 2014 to discuss the project and local traffic issues, as well as obtain any relevant background material and confirm the scope of work. A copy of the approved scope of work is included in **APPENDIX B**.

The weekday afternoon peak hour was selected for the design hour of the access study as this time period coincides with the peak traffic generation of both the residential development and the adjacent road network. The DNV recommended that CTS use the traffic volume projections and other data contained in the Lynn Valley Transportation Study to forecast future year conditions. CTS reviewed both the Official Community Plan and the Lynn Valley Transportation Study as part of this assignment.

The following horizon years were selected for the traffic impact assessment:

1. 2014 (i.e. existing base)
2. 2016 (future base, using LVTS projections)
3. 2016 (Future base + site generated)
4. 2030 (future base, using LVTS projections)

2.0 EXISTING CONDITIONS

2.1 The Road Network

In the study area, Lynn Valley Road is a four lane arterial road that changes to two travel lanes plus on-street parking immediately east of Draycott Road. The roadway has curb & gutter, sidewalks and ornamental street lights on both sides. The posted speed limit is 50 km/h.

Mountain Highway is also a four lane arterial roadway with curb & gutter, sidewalks and ornamental street lights on both sides. The posted speed limit is 50 km/h. Parking is not permitted on Mountain Hwy between Ross Road and Lynn Valley Road.

Draycott Road is a two lane local road cul-de-sac with curb & gutter and ornamental street lights on both sides and a sidewalk on the south side only. The speed limit is 50 km/h. Parking is permitted on Mountain Hwy between Ross Road and Lynn Valley Road.

The rear lane currently has direct access to Mountain Highway approximately 30 metres south of Lynn Valley Road. The lane has only one access to Mountain Highway but there is one way (northbound) access from Ross Road through an adjacent property.

2.2 Study Area

The study area is bounded by site property line to the north, the proposed public laneway to the east, Mountain Highway to the south and Lynn Valley Road to the west. The following intersections were included in this assessment as discussed with municipal officials:

1) Proposed East Lane & Draycott Road (*unsignalized*); and
2) Draycott Road and Lynn Valley Road (*unsignalized*)

2.3 Traffic Volumes

In order to obtain current traffic data for the study area, CTS conducted intersection traffic counts at each intersection on Thursday, 1 May 2014 from 0700 to 0900 and from 1500 to 1800 to augment the available historical traffic data. The tabulated traffic movement count data sheets are included in **APPENDIX C**. From the collected data, both the weekday morning and afternoon peak hours were determined.

FIGURE 3A, **FIGURE 3B**, and **FIGURE 3C** illustrate weekday morning peak hour vehicle, pedestrian, and bicycle volumes respectively.

FIGURE 3A
2014 MORNING PEAK HOUR BASE TRAFFIC VOLUMES

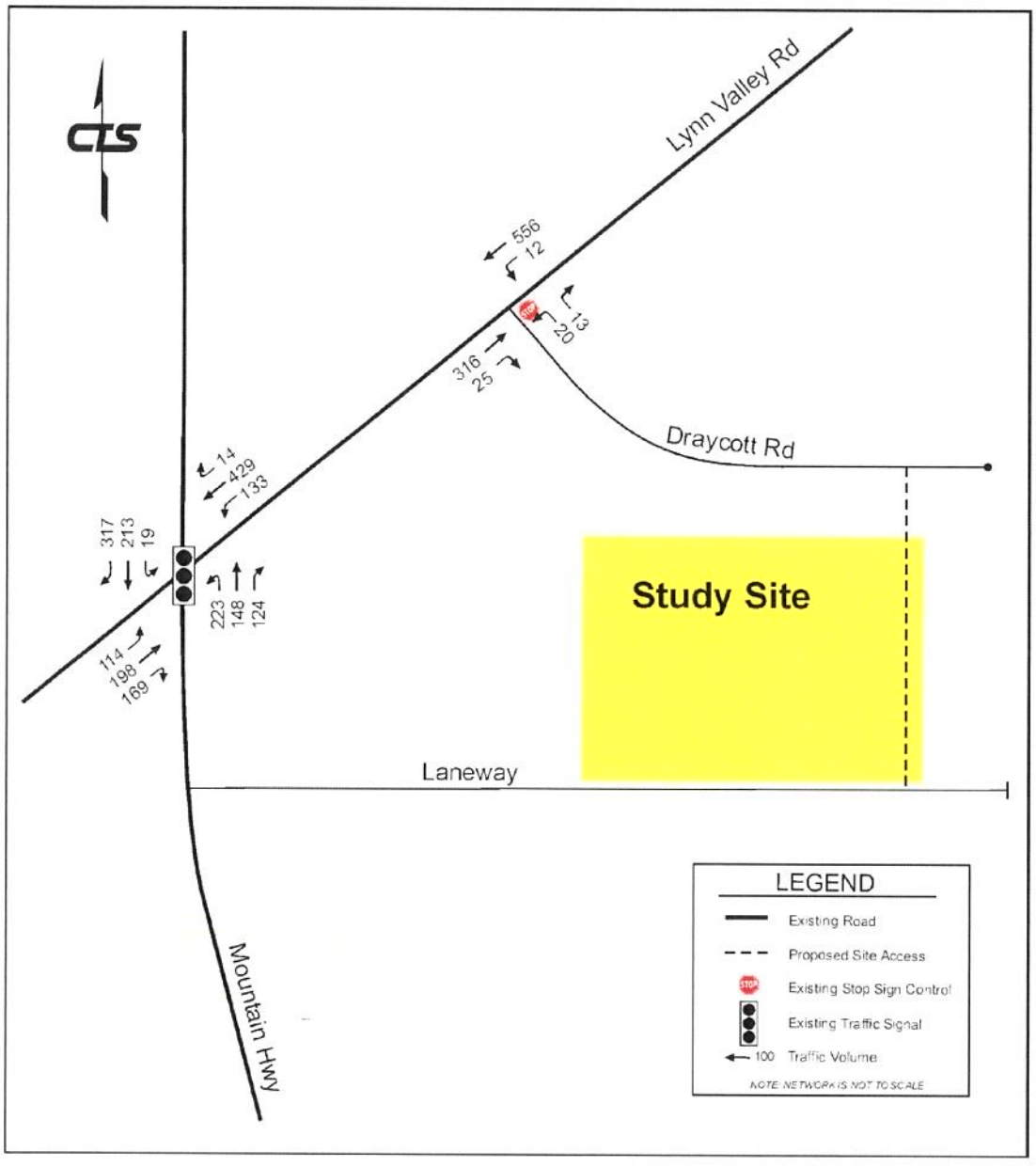


FIGURE 3B
2014 WEEKDAY MORNING PEAK HOUR PEDESTRIAN VOLUMES

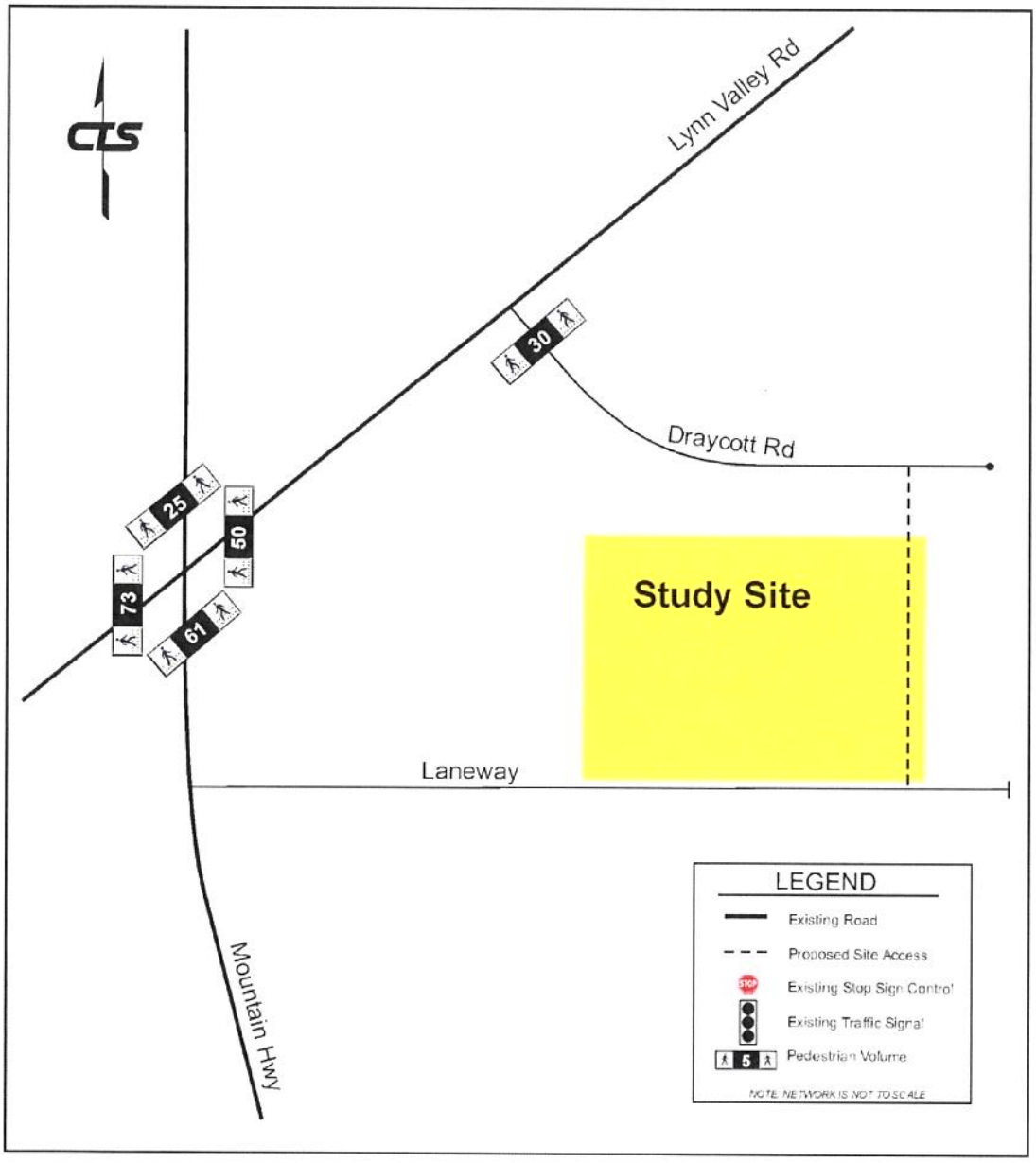
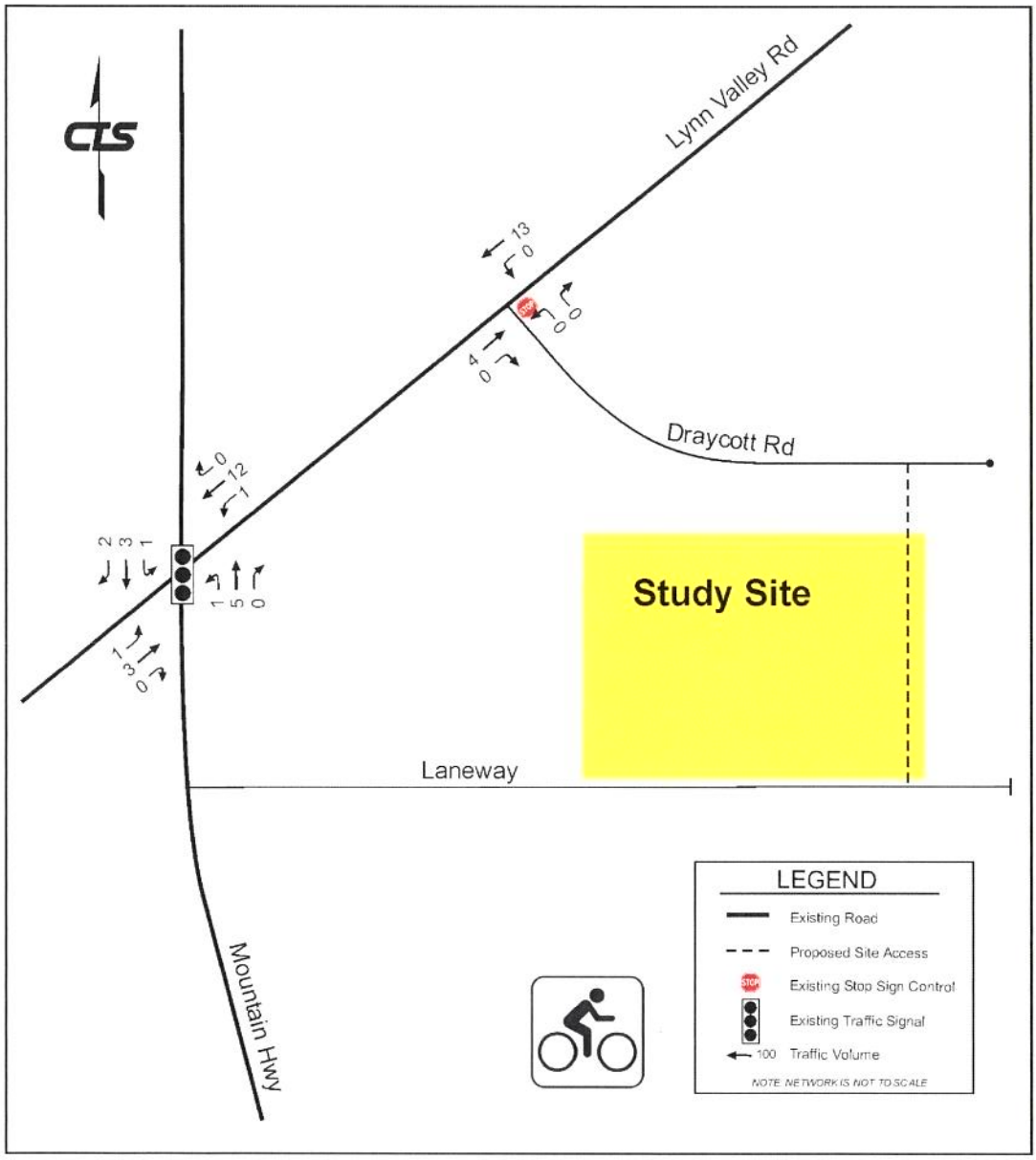


FIGURE 3C
2014 WEEKDAY MORNING PEAK HOUR BICYCLE VOLUMES



Similarly, **FIGURE 4A**, **FIGURE 4B**, and **FIGURE 4C** illustrate weekday afternoon peak hour vehicle, pedestrian, and bicycle volumes respectively.

FIGURE 4A
2014 WEEKDAY AFTERNOON PEAK HOUR BASE TRAFFIC VOLUMES

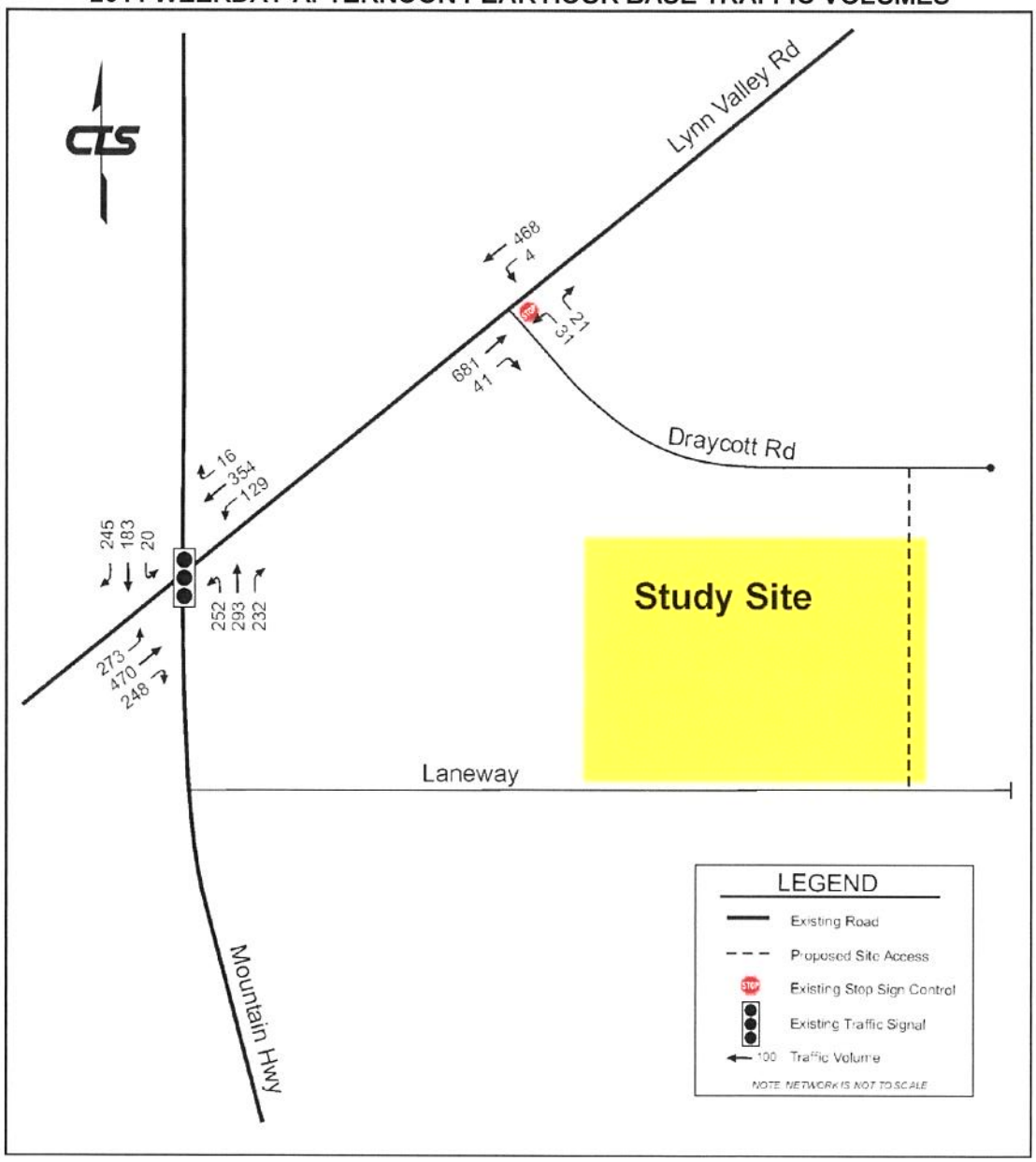


FIGURE 4B
2014 WEEKDAY AFTERNOON PEAK HOUR PEDESTRIAN VOLUMES

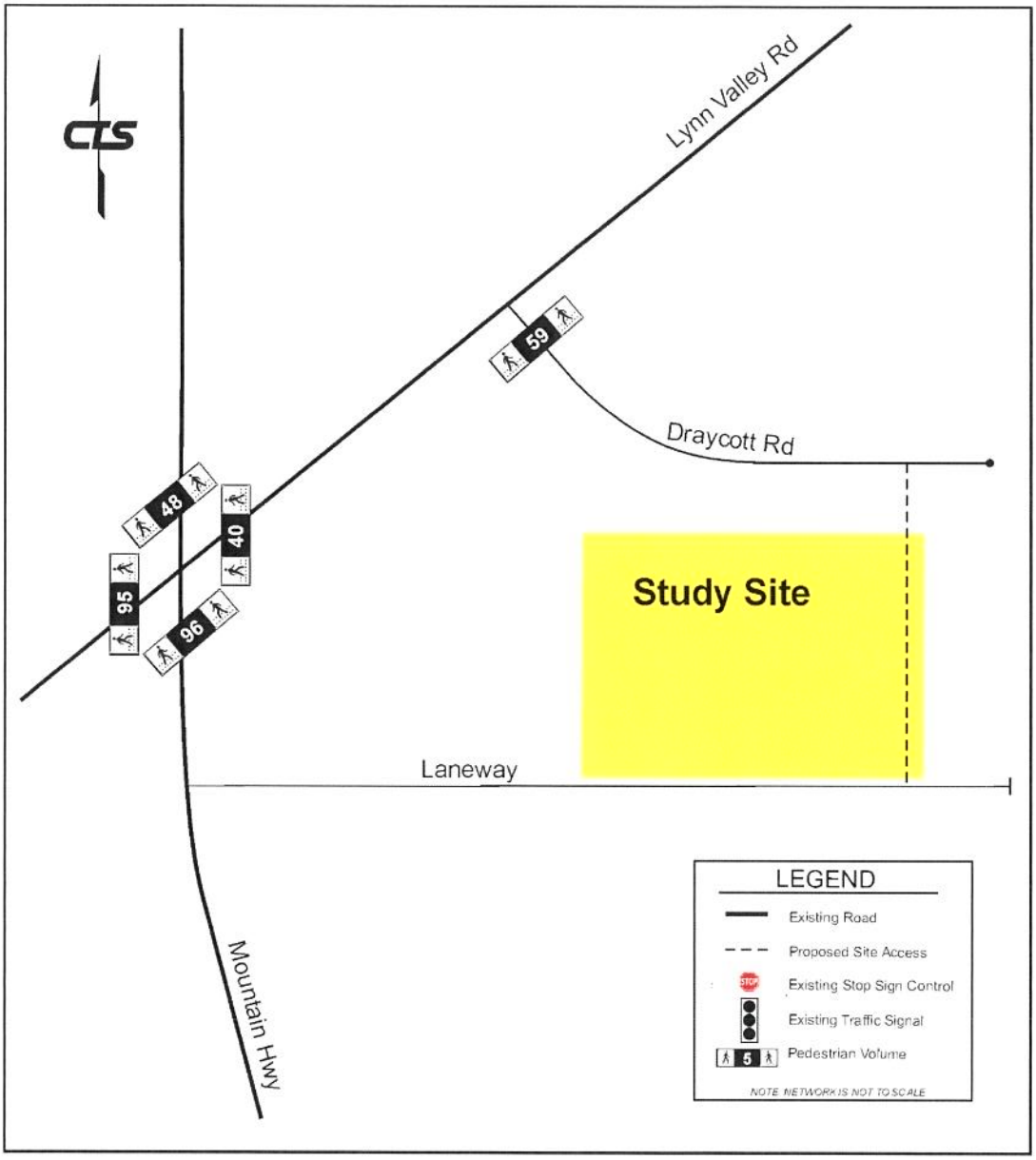
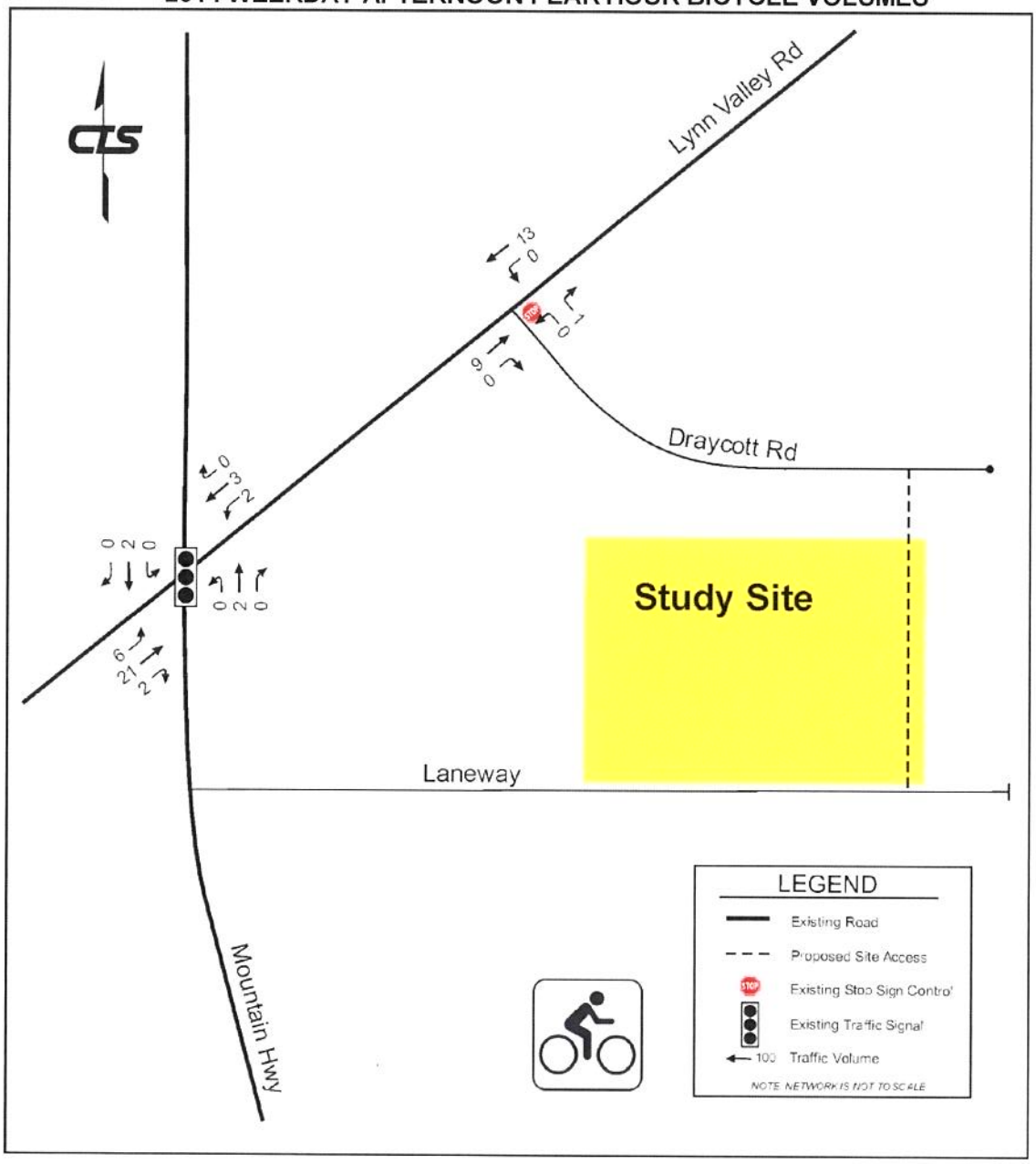


FIGURE 4C
2014 WEEKDAY AFTERNOON PEAK HOUR BICYCLE VOLUMES



As illustrated in the figures above, the AM peak hour volumes are lower than the PM peak hour volumes and therefore the PM peak hour was selected as the design hour

3.0 FUTURE BASE TRAFFIC VOLUMES

Year 2016 is anticipated to be the year of full buildout for the proposed development. Therefore, in order to access the traffic impacts of the proposed development on the base future traffic volumes, the 2014 existing base traffic volumes were factored up based on the Lynn Valley Transportation Study to represent the future horizon year 2016 and 2030. The estimated 2016 base traffic volumes for weekday afternoon peak hour is illustrated on **FIGURE 5**. Similarly, the estimated 2030 base traffic volumes for weekday afternoon peak hour is illustrated on **FIGURE 6.**

FIGURE 5
2016 WEEKDAY AFTERNOON PEAK HOUR BASE TRAFFIC VOLUMES

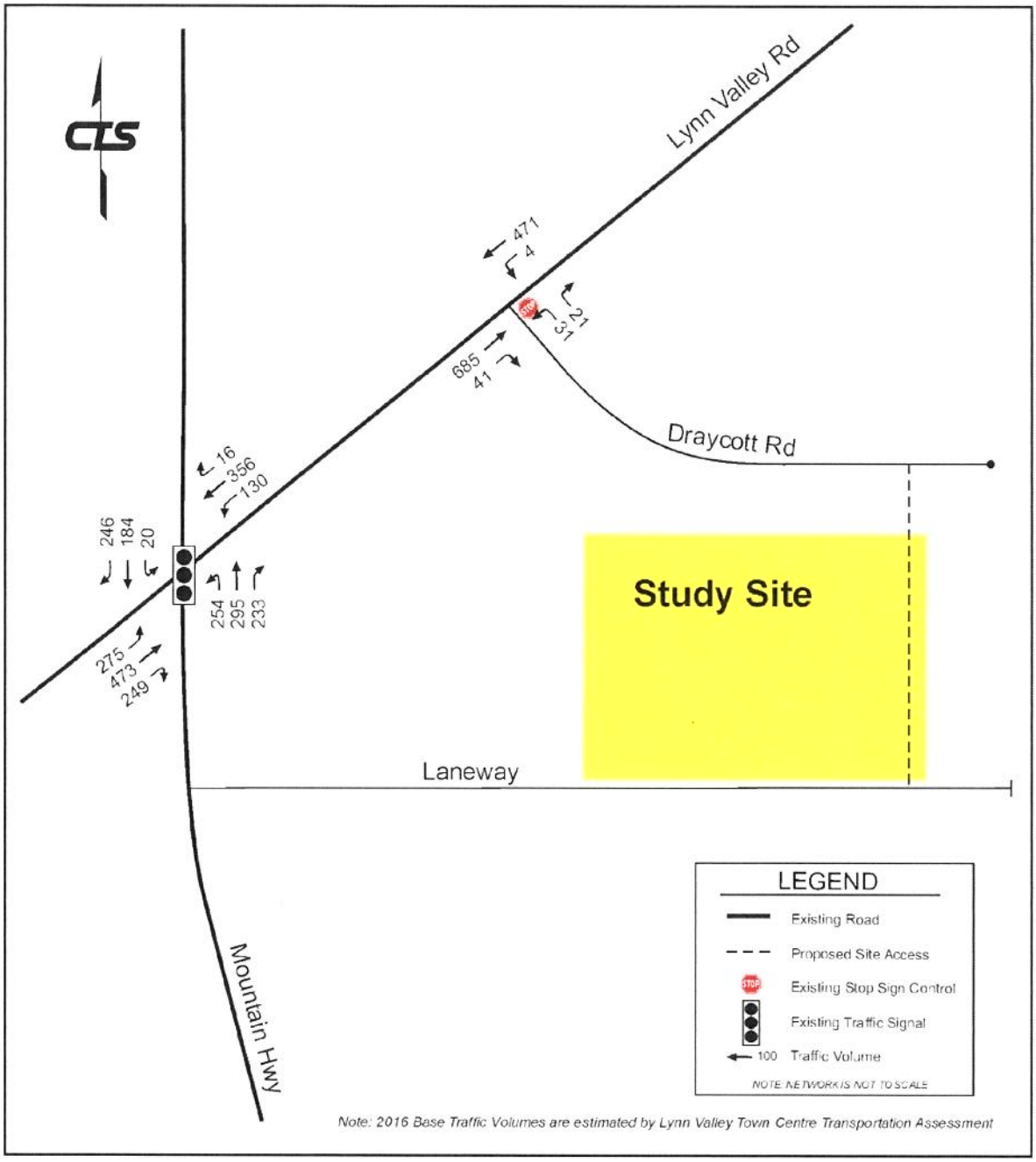
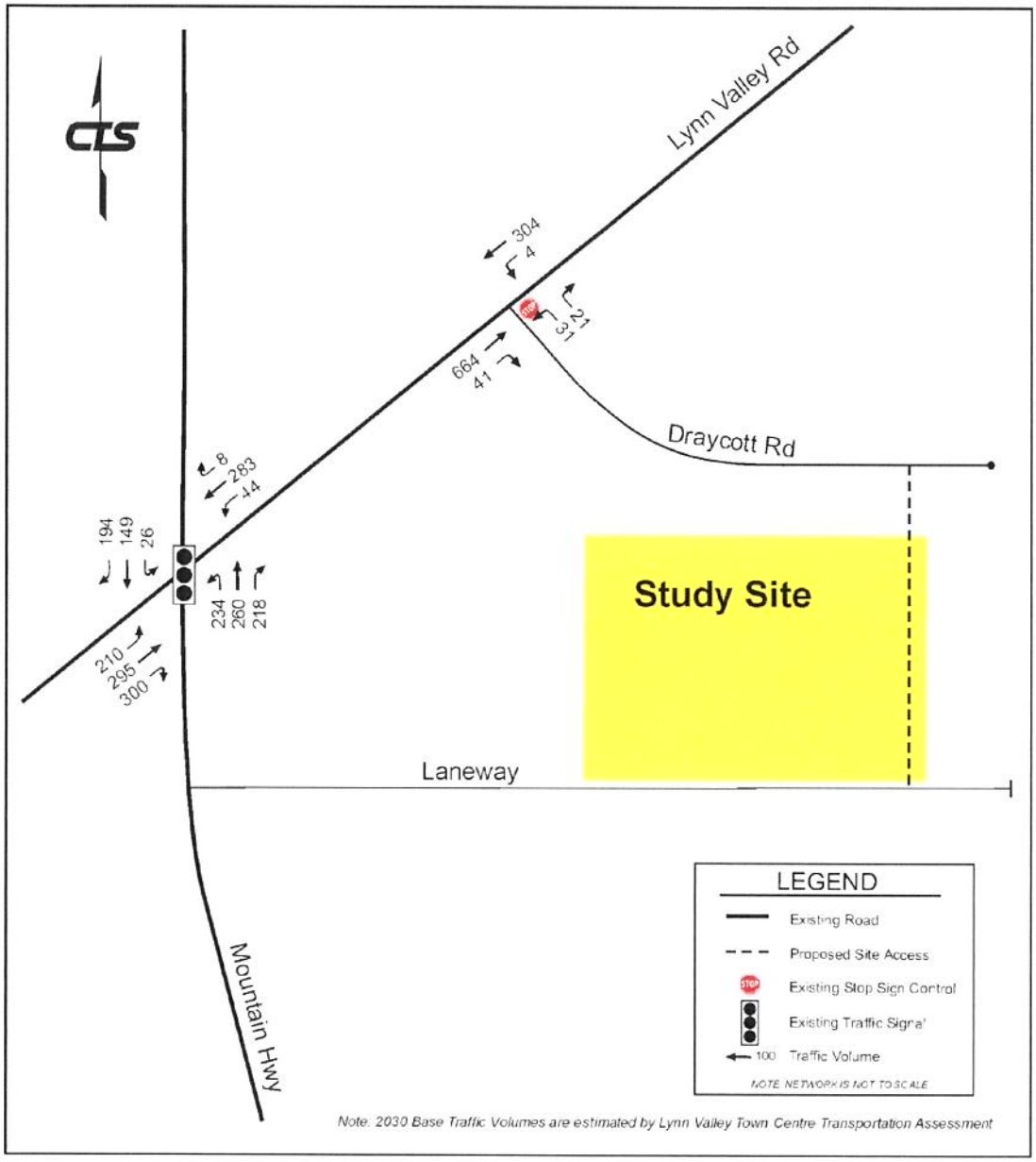


FIGURE 6
2030 WEEKDAY AFTERNOON PEAK HOUR BASE TRAFFIC VOLUMES



4.0 SITE TRAFFIC VOLUMES

4.1 Traffic Generation

CTS estimated the vehicle trip generation from the former Irly Bird Lumber Yard in order to compare to the site generated traffic volumes for the proposed residential development using trip generation rates from the Institute of Transportation Engineers (ITE). **TABLE 1** summarizes the trips generated during the AM and PM peak hours for both land uses.

TABLE 1
SUMMARY OF SITE EXPANSION GENERATED TRAFFIC

Land Use	Peak Hour	Trip Generation Variable	Horizon Year	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Peak Hour Volumes (vph)		
							% in	% out	in	out	total
Bldg Materials and Lumber Store	Weekday Morning	1000 sq ft GFA		7.8	2.60	ITE Edition 9, Code 812	67%	33%	14	7	20
	Weekday Afternoon				4.49		47%	53%	16	19	35
Residential Condominium	Weekday Morning	Dwelling Units	2016	35	0.44	ITE Edition 9, Code 230	17%	83%	3	13	16
	Weekday Afternoon				0.52		67%	33%	13	6	19
					Difference				-11	6	-4
									-3	-13	-16

From above table, the trips generated by the proposed residential development are less than what was generated by the former Irly Bird Lumber Yard. In the PM peak hour, the design hour, the trips generated by the proposed residential development are estimated to be 46% less than what was generated by the Irly Bird Lumber Yard.

The proposed development is estimated to generate 16 vehicle trips during the weekday morning peak hour (i.e. 3 veh/hr inbound and 13 veh/hr outbound) and 19 vehicle trips during the weekday afternoon peak hour (i.e. 13 veh/hr inbound and 6 veh/hr outbound). The projected volume of additional traffic is not considered to be significant as it represents on average less than 0.27 vehicle movements per minute during the weekday morning and less than 0.32 vehicle movements per minute during the weekday afternoon peak hours.

Of note, the Ministry of Transportation & Infrastructure's warrant for triggering a traffic impact assessment is 100 or more vehicles during the design hour. Therefore, the proposed expansion does not meet this requirement as the peak volume of traffic is only 19 vehicles per hour (or 19% of the threshold).

4.2 Trip Distribution

Trip distribution parameters to distribute the site generated vehicle trips to/from the site were developed from existing traffic patterns entering and exiting the study area for the afternoon and midday peak hours. The trip distribution parameters and volumes used in this study are summarized in **TABLE 2** and **TABLE 3** respectively.

TABLE 2
TRIP DISTRIBUTION PARAMETERS
FOR SITE EXPANSION GENERATED TRAFFIC

FROM / TO		FRIDAY AFTERNOON PEAK HOUR	
		INBOUND	OUTBOUND
North	Mountain Hwy	16.7%	21.6%
East	Lynn Valley Rd	17.6%	26.0%
South	Mountain Hwy	28.9%	20.8%
West	Lynn Valley Rd	36.9%	31.6%

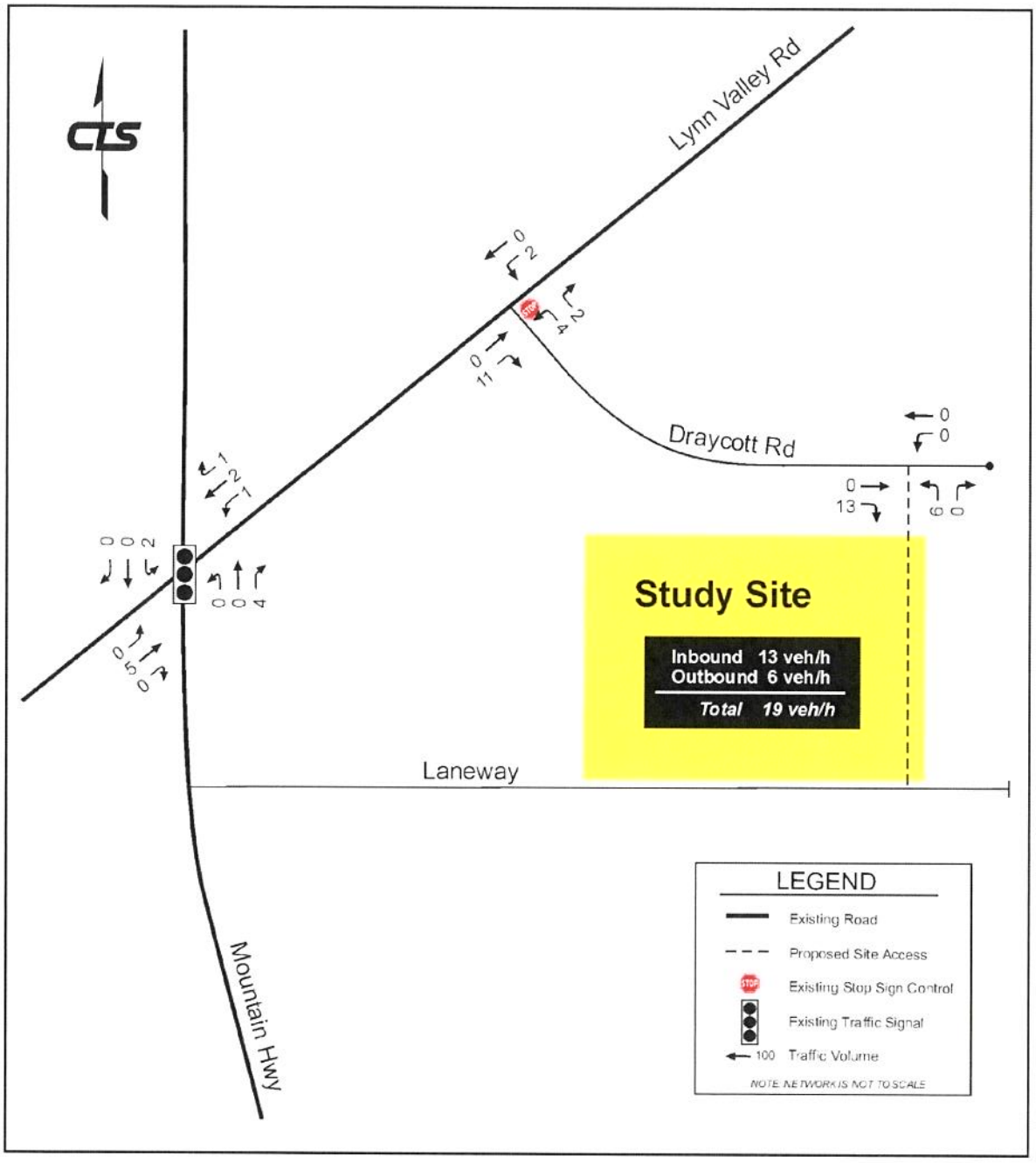
TABLE 3
TRIP DISTRIBUTION VEHICLE VOLUMES
FOR SITE EXPANSION GENERATED TRAFFIC

FROM / TO		WEEKDAY AFTERNOON PEAK HOUR	
		INBOUND	OUTBOUND
North	Mountain Hwy	2	1
East	Lynn Valley Rd	2	2
South	Mountain Hwy	4	1
West	Lynn Valley Rd	5	2
TOTAL		13	6
		19	

4.3 Traffic Assignment

The additional vehicle trips generated from the development were subsequently assigned to the road network using the trip distribution parameters in **TABLE 3**. **FIGURE 7** illustrates the site generated traffic volumes on the road network for the weekday afternoon and peak hour.

FIGURE 7
NET SITE TRAFFIC VOLUMES FOR WEEKDAY AFTERNOON PEAK HOUR

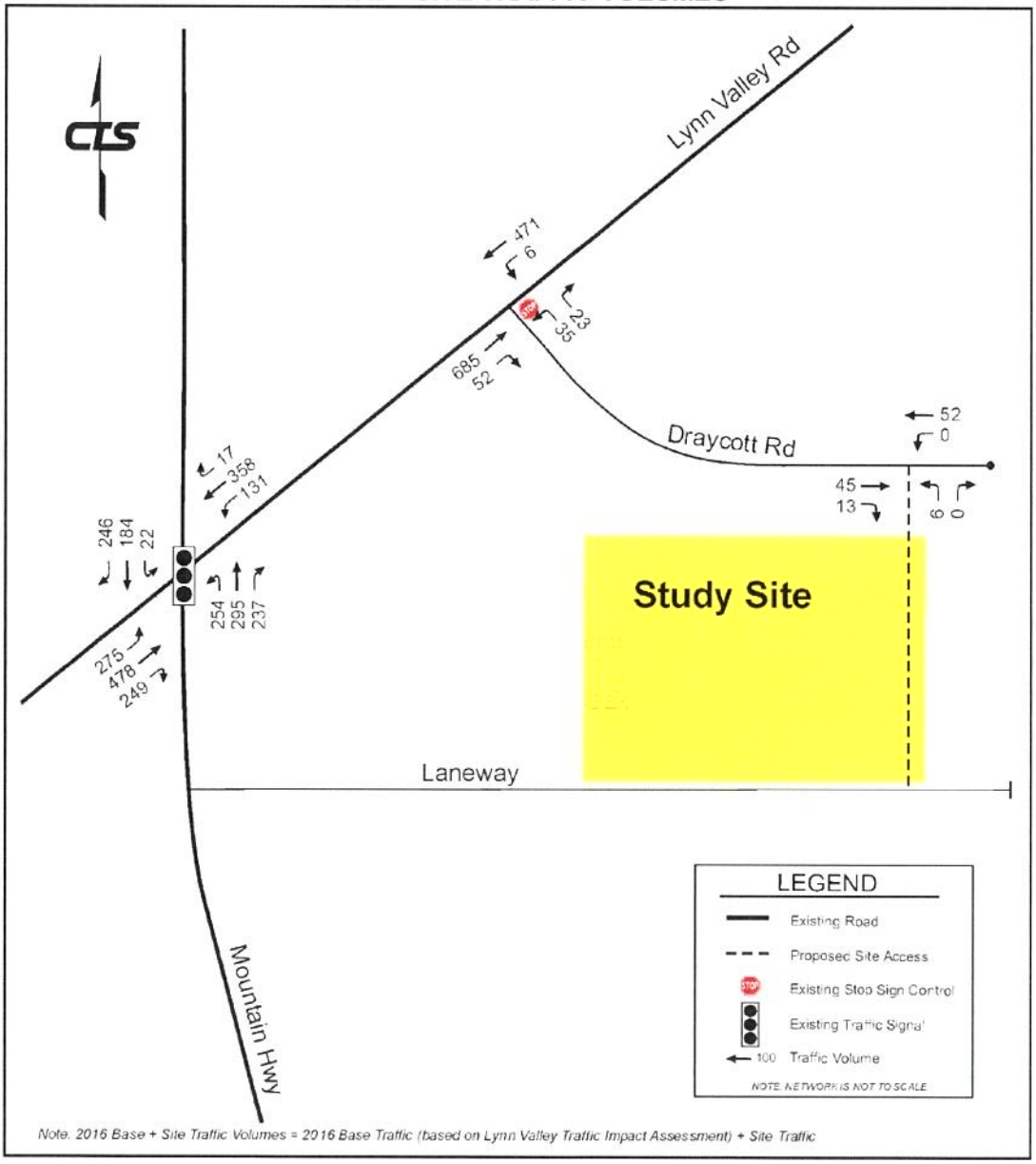


5.0 TOTAL PROJECTED TRAFFIC VOLUMES

FIGURE 8 illustrates the total projected traffic for the year 2016 weekday afternoon peak hour consisting of both base and site traffic resulting from the proposed development. It is the result of superimposing **FIGURE 7** onto **FIGURE 5**.

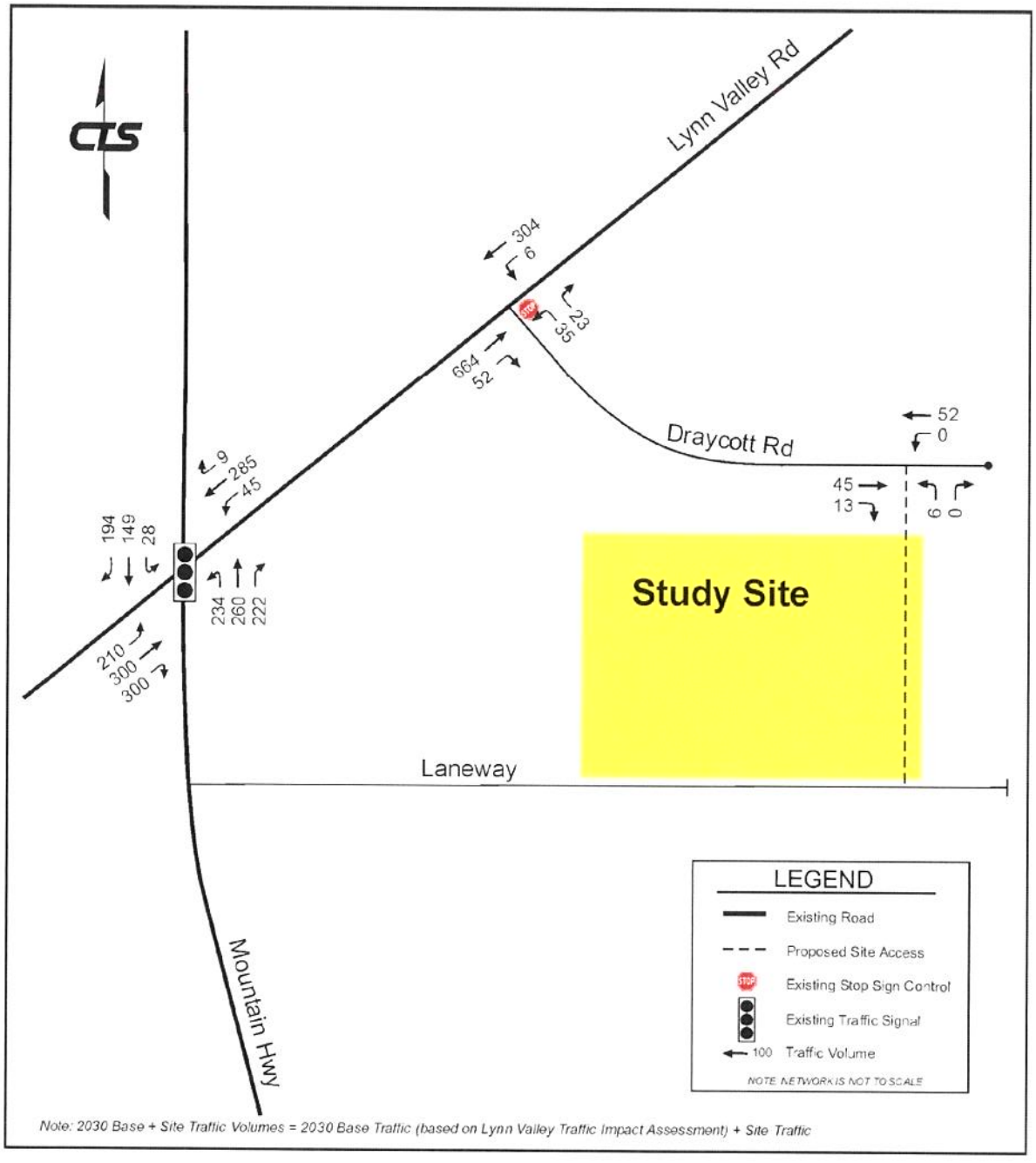
FIGURE 9 illustrates the total projected traffic for the year 2030 weekday afternoon peak hour consisting of both base and site traffic resulting from the proposed development. It is the result of superimposing **FIGURE 7** onto **FIGURE 6**.

FIGURE 8
2016 WEEKDAY AFTERNOON PEAK HOUR
BASE + SITE TRAFFIC VOLUMES



Note. 2016 Base + Site Traffic Volumes = 2016 Base Traffic (based on Lynn Valley Traffic Impact Assessment) + Site Traffic

FIGURE 9
2030 WEEKDAY AFTERNOON PEAK HOUR
BASE + SITE TRAFFIC VOLUMES



Note: 2030 Base + Site Traffic Volumes = 2030 Base Traffic (based on Lynn Valley Traffic Impact Assessment) + Site Traffic

6.0 INTERSECTION CAPACITY ANALYSIS

Capacity analysis was performed at each of the locations in order to determine the intersection levels of service (LOS) that is provided to motorists. LOS for intersections is defined in terms of delay (seconds per vehicle), which is a measure of driver discomfort and frustration, fuel consumption and lost travel time.

An intersection or movement LOS can range from "A" (which is excellent) to "E" (which is capacity). A LOS of "F" indicates that an intersection or movement capacity is failing because vehicle delays are excessive. A LOS of "D" during the critical peak hours is considered acceptable by many public agencies in large urban areas for overall intersection operation and a LOS of "E" or better is considered acceptable for left turn movements.

Volume to capacity (v/c) ratios typically ranges from 0.25 to 1.20 with a v/c ratio of 1.0 indicating the movement, approach or intersection is at capacity.

Highway Capacity Software (HCS) was used for the unsignalized intersection analysis. The following assumptions were made with respect to the intersection capacity analysis:

- Saturation flow rate = 1,900 passenger cars/hour of green time/lane (pcphgpl)
- Heavy vehicle percentage for all roads = 2%
- Peak hour factor (PHF) = 0.93 in the afternoon peak hour which is based on the average PHF from the intersections surveyed.

TABLE 4 summarizes and compare the main performance parameters of the intersection capacity analysis for unsignalised intersections. Delay time in seconds for each lane group is summarized for unsignalised intersections. Wherever necessary, attempts at improvements have been made to maintain intersection and approach movement level of service standards for each of the post-development scenarios. The capacity analysis worksheets are included in **APPENDIX D**.

TABLE 4
VEHICLE DELAY BY INDIVIDUAL MOVEMENTS FOR UNSIGNALISED INTERSECTIONS

INTERSECTION	TIME OF DAY	SCENARIO	PERFORMANCE MEASURE	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			LOS	NOTES
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Lynn Valley Road (N/S) and Draycott Road (E/W)	Weekday Morning Peak Hour	2014 Base	Volumes				20		13		316	25	12	556		A	
			Delay				13.3		13.3		0.0	0.0	8.1	8.1			
	Weekday Afternoon Peak Hour	2014 Base	Volumes				31		21		681	41	4	468		A	
			Delay				18.6		18.6		0.0	0.0	9.3	9.3			
		2016 Base	Volumes				31		21		685	41	4	471		A	
			Delay				18.7		18.7		0.0	0.0	9.3	9.3			
		2016 Base + Site	Volumes				35		23		685	52	6	471		A	
			Delay				19.4		19.4		0.0	0.0	9.4	9.4			
		2030 Base + Site	Volumes				35		23		664	52	6	304		A	
			Delay				17.2		17.2		0.0	0.0	9.3	9.3			
Site Access (N/S) and Draycott Road (E/W)	Weekday Afternoon Peak Hour	2016 Base + Site	Volumes		45	13	0	52		6		0				A	
			Delay		0.0	0.0	0.0	7.3		9.1		0.0					
		2030 Base + Site	Volumes		45	13	0	52		6		0				A	
			Delay		0.0	0.0	0.0	7.3		9.1		0.0					

Delay = Average Delay (seconds/vehicle)
Intersection approaching capacity (LOS 'D' or 'E'); ; or medium approach delays (25sec to <50sec)
Intersection equals or exceeds capacity (LOS 'F'); or high approach delays (=> 50sec)

From **TABLE 4** the following observations can be made:

1. *Lynn Valley Road and Draycott Road*

- This intersection is unsignalised. For existing conditions, the intersection operates at an overall LOS A (excellent) under the year 2014 weekday morning and afternoon peak hour conditions.
- For future base conditions in 2016, the overall intersection is forecast to still operates at LOS A (excellent) during the weekday afternoon and Saturday midday peak hours.
- With the addition of traffic from the proposed new residential development in 2016, the intersection is forecast to continue to operate at LOS A (excellent) during the weekday afternoon peak hour.
- For the year 2030 (i.e. 14 years post buildout), the intersection is projected to remain at LOS A (excellent) during the weekday afternoon peak hour.
- Base on the intersection capacity analysis, no operational and/or geometrical improvements are warranted for this intersection.

2. *Proposed East Lane & Draycott Road*

- The proposed east lane is anticipated to operate at LOS A (excellent) for both the 2016 and 2030 horizon years and no capacity problems were noted for the afternoon peak hour.

- It should be noted that the proposed east lane analysis was very conservative by assuming that all of the traffic on Draycott Road passed by the lane.

7.0 ADDITIONAL ANALYSIS

7.2 Swept Path Analysis

As requested by municipal staff, CTS also examined how garbage trucks and fire trucks can circulate through the laneway. **FIGURE 10** illustrates the swept path for a garbage truck and **FIGURE 11** illustrates the swept path for a fire truck entering from Draycott Road based on a 4.0 metre wide laneway. **FIGURE 12** illustrates the swept path for a garbage truck and **FIGURE 13** illustrates the swept path for a fire truck entering from Draycott Road based on a 6.0 metre wide laneway.

FIGURE 10
GARBAGE TRUCK SWEPT PATH 4.0 metre LANE

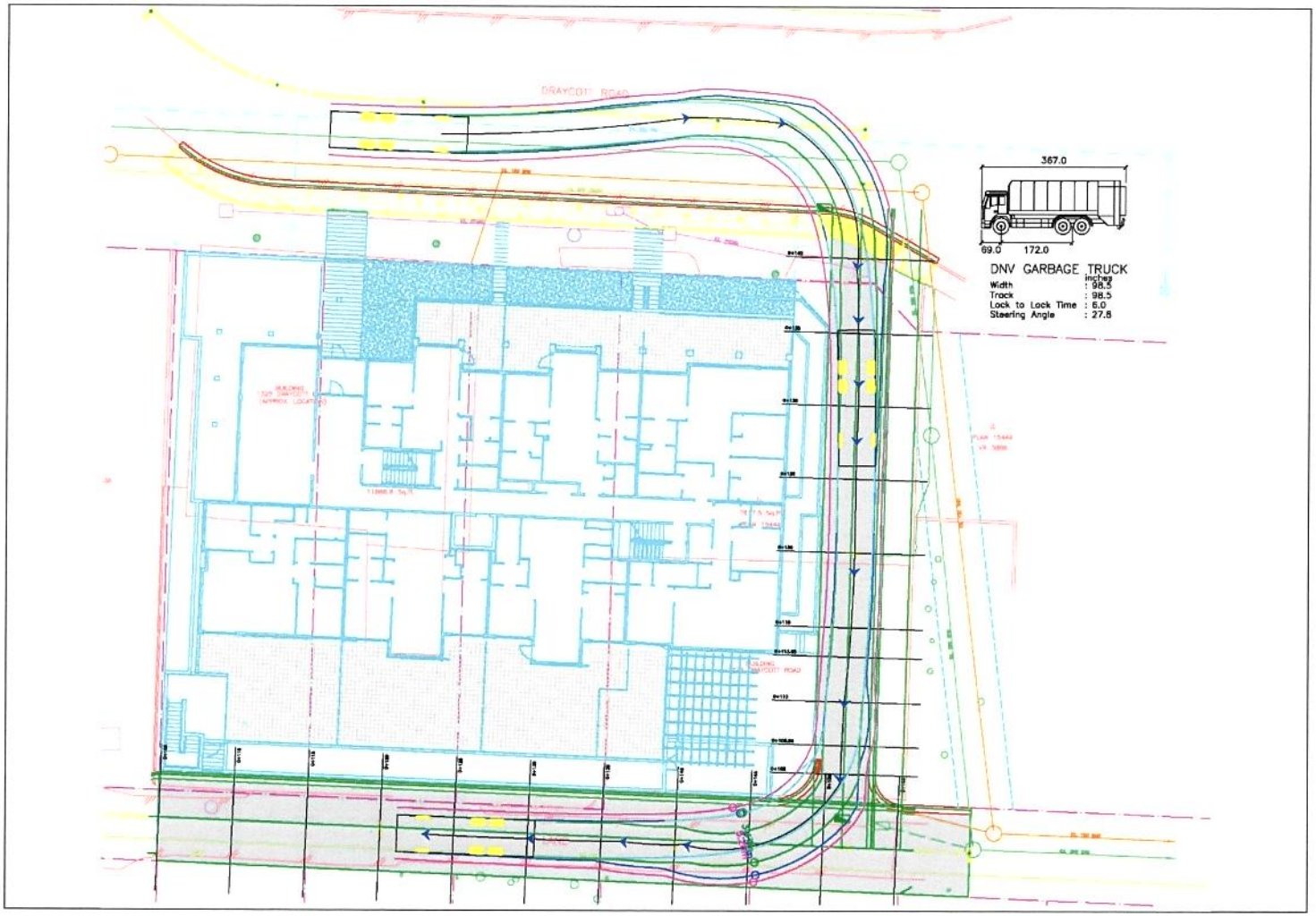


FIGURE 11
FIRE TRUCK SWEPT PATH 4.0 metre LANE

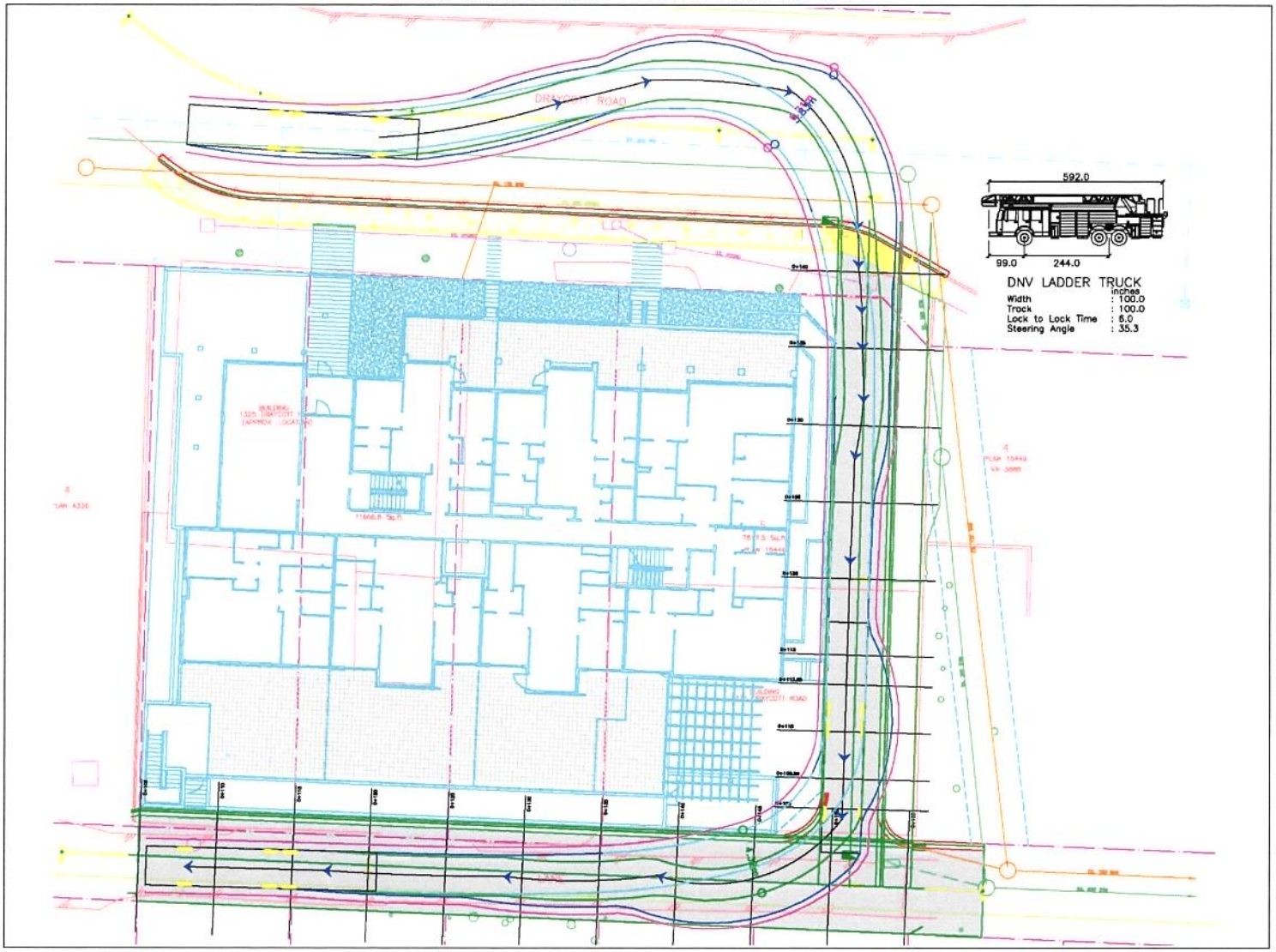


FIGURE 12
GARBAGE TRUCK SWEPT PATH 6.0 metre LANE

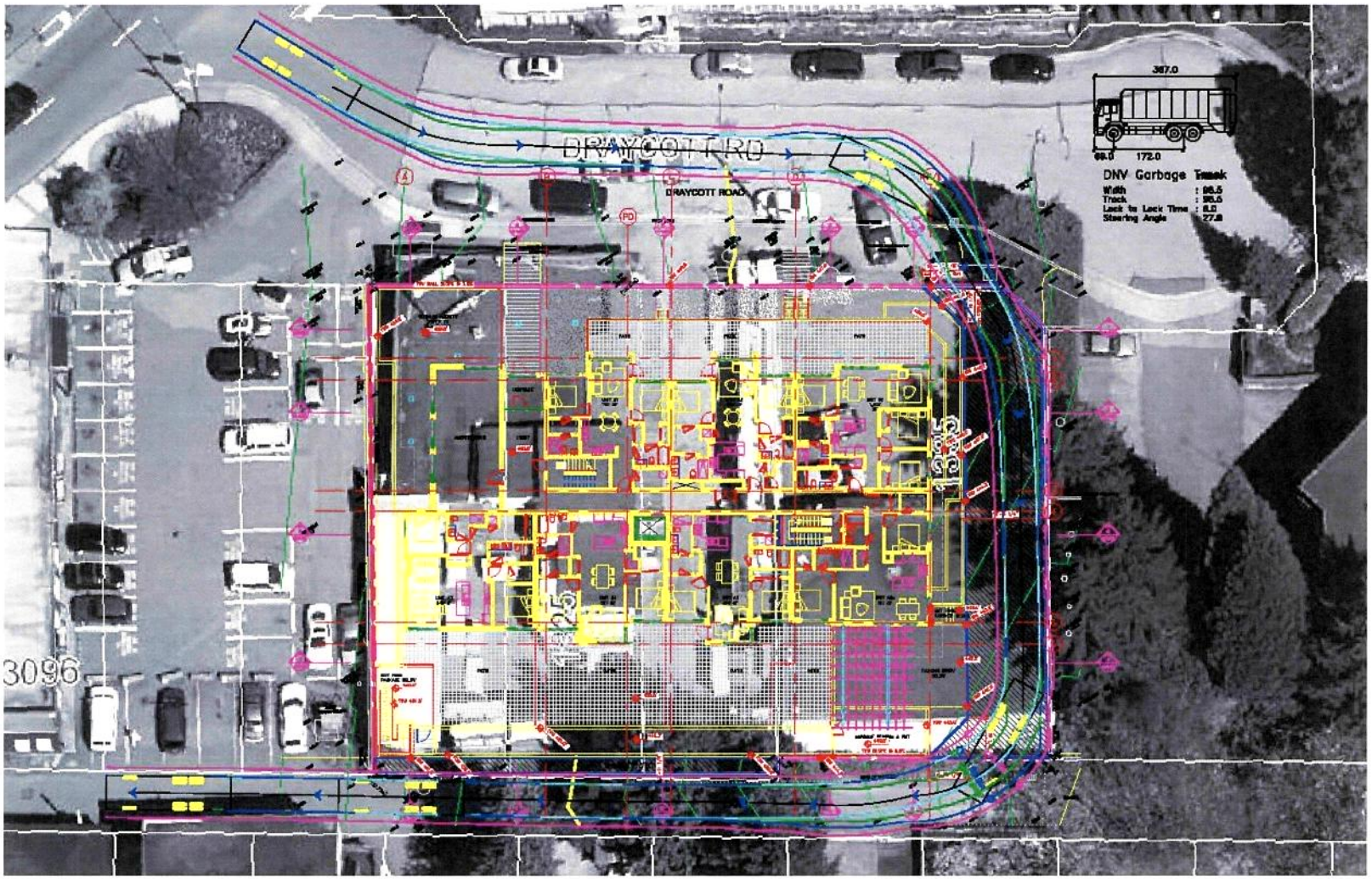


FIGURE 13
FIRE TRUCK SWEPT PATH – ENTERING FROM DRAYCOTT ROAD
6.0 metre LANE

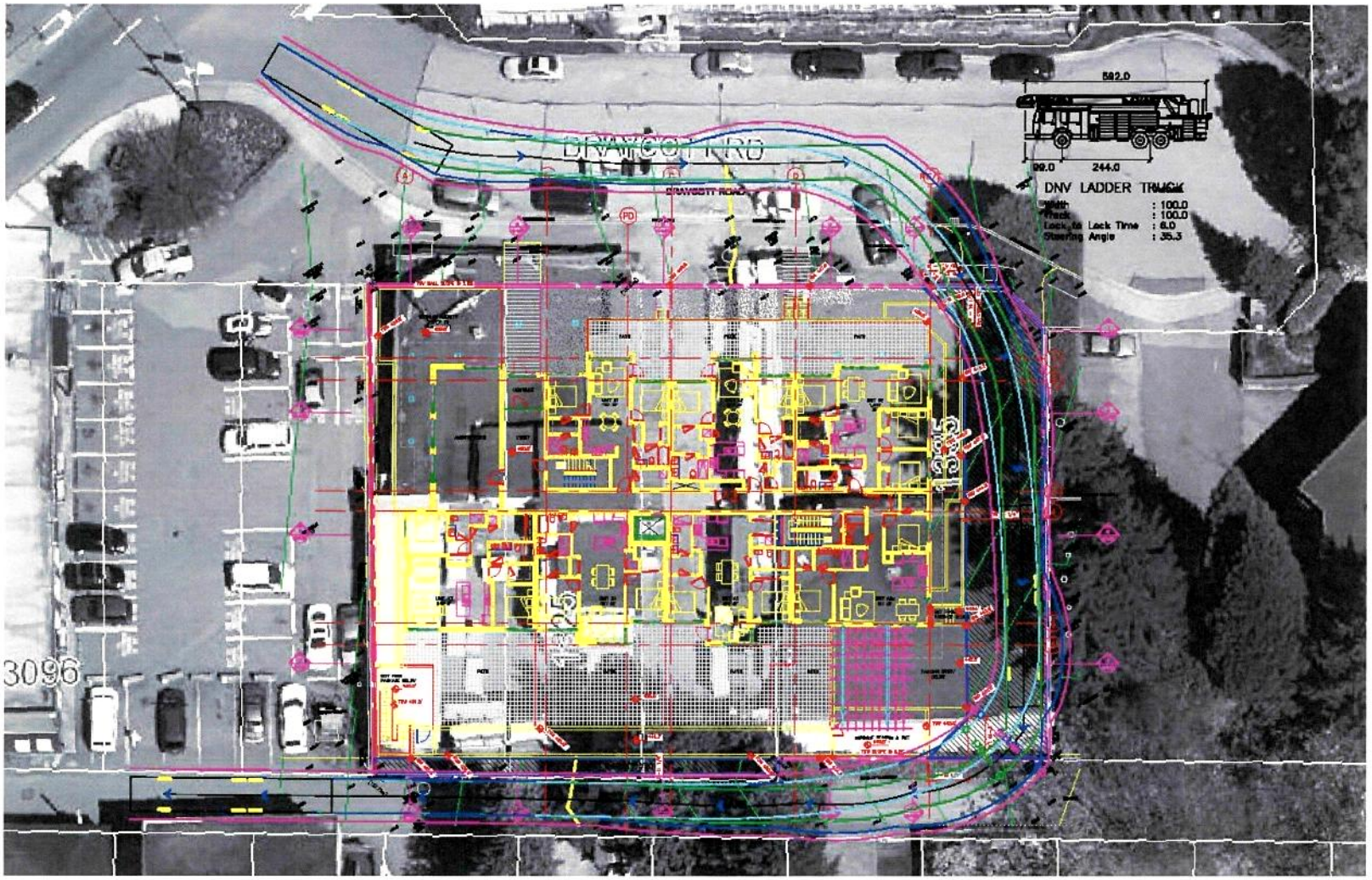
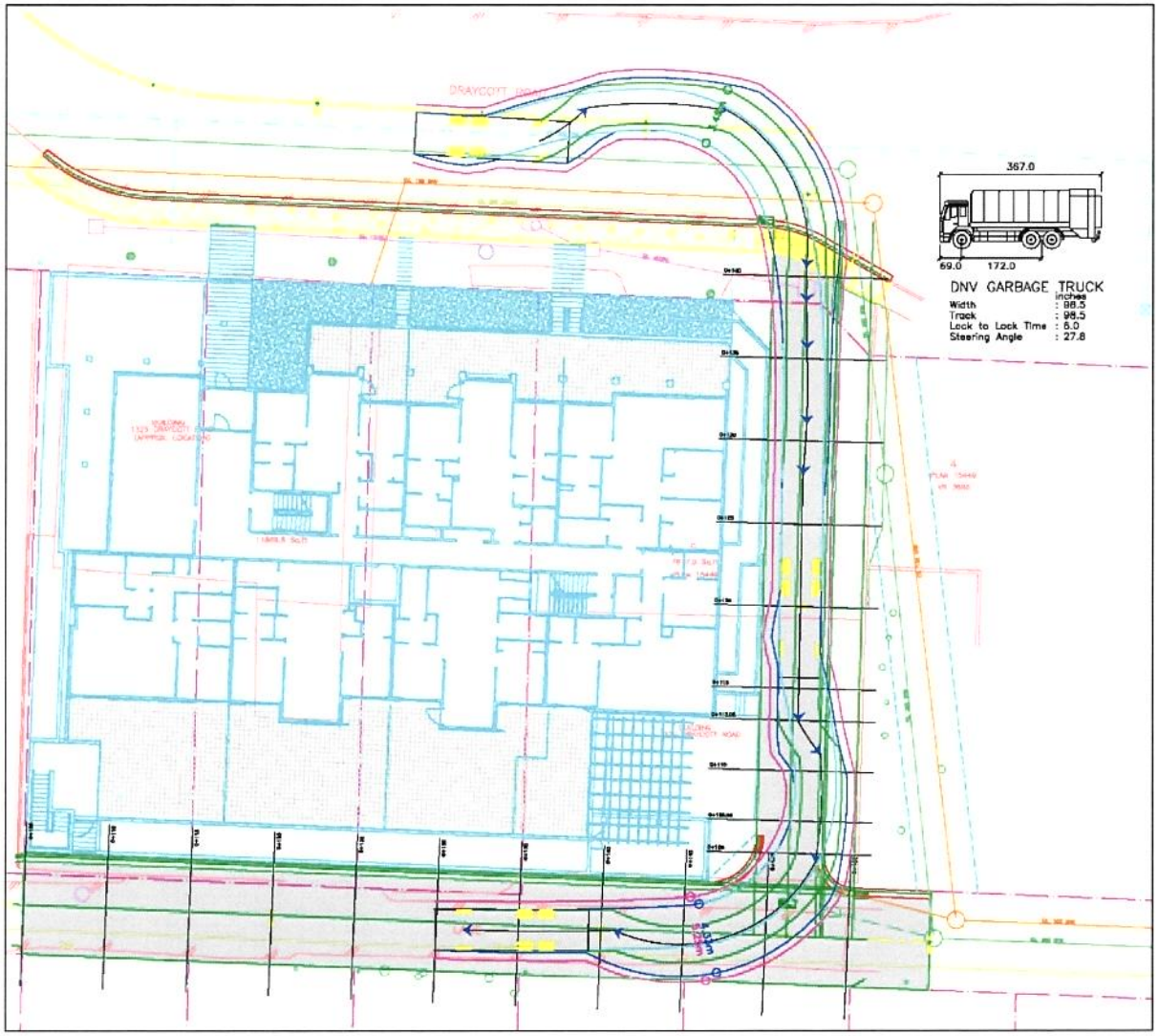


FIGURE 14
GARBAGE TRUCK SWEPT PATH PARTIAL 6.0 metre LANE



As illustrated in the above figures, a 4.0 metre wide lane is insufficient for a garbage truck, let alone a fire truck. Using a standard 6.0 metre wide laneway, the analysis determined that the garbage truck can circulate through the laneway with no conflict based on the current site plan. However, the swept path for the fire truck is still significantly constrained by the width of the laneway.

The Design Criteria Manual, Table B.1 states that for a residential lane the minimum road allowance is 6.0 metres with a minimum of 4.0 metres of paved surface. Table B.4 in the same document states that the corner truncation for a lane to lane intersection is 4.0 metres.

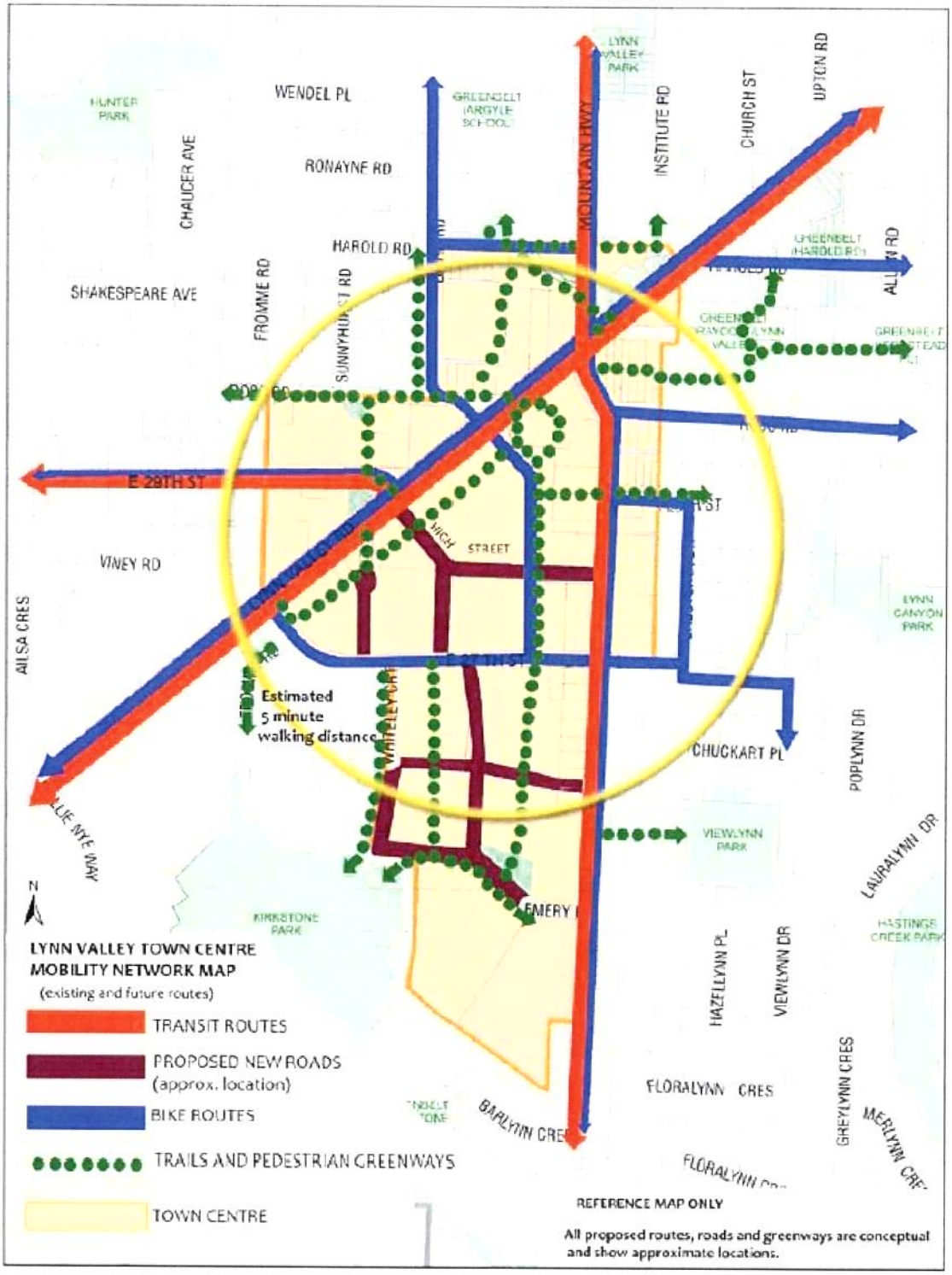
The presence of a fire truck, in particular a ladder truck, is a rare occurrence – only in response to a fire and should not be used for design purposes in this instance. If the fire service is responding to a fire at the rear of the building, access can be achieved by using the laneway access from Mountain Highway. For the residential developments to the east of the proposed development, access can only be achieved via the lane and the fire vehicle would have to reverse out. The analysis illustrates a fire truck entering from Draycott Road – if the fire truck entered from Mountain Highway and tried to utilize the proposed new north south laneway, it would not be able to make the turn as the swept path of the rear of the fire truck would impinge on existing development to the south of the lane.

With the adjacent community and the District of North Vancouver wishing to preserve as much of the hedge along the east property line as possible, the swept path for a garbage truck, as shown in **FIGURE 14,** minimizes the loss of hedging.

8.0 ALTERNATE MODES

As shown in **FIGURE 15**, the Official Community Plan for Lynn Valley Town Centre contemplates an extensive network of transit, cycling and pedestrian networks.

FIGURE 15
LYNN VALLEY TOWN CENTRE MOBILITY MAP



Map 7. Lynn Valley Town Centre Mobility Network Map

8.1 Public Transit

The subject site is well served by public transit with the 227 and 228 on Lynn Valley Road and the 209, 210 and 255 on Mountain Highway (less than a 150 metre walk).

The 209 provides 30 minute service and the 210 provides 15 minute service during the peak periods on weekdays.

The 227 provides 30 minute service and the 228 provides 15 minute service during the peak periods on weekdays.

The 255 provides 30 minute service all day to Capilano College, weekdays.

Residents of 1325-1335 Draycott will be well served by public transit having a variety of options to travel to major centres on the North Shore and downtown Vancouver.

8.2 Pedestrian

Pedestrian access to 1325-1335 Draycott Road is excellent with a sidewalk on Draycott Road and sidewalks on both sides of Lynn Valley Road and Mountain Highway.

These sidewalks provide safe and easy access to the public transit system as well as to the nearby retail shopping centre and public library.

Walking for a number of types of residential trips including shopping, services such as dry cleaning or beauty salons, is a viable travel option which will assist in reducing the number of vehicle trips.

8.2 Cycling

There are no on-street bike lanes within close proximity to the site.

Lynn Valley Road is a major street with shared lanes for cyclists and vehicles.

Mountain Highway south of Lynn Valley Road to 29 Street is a major street with a shared lane for cyclists and vehicles. Between 29 Street and 27 Street, there is an on-street dedicated bicycle lane.

9.0 CONCLUSIONS & RECOMMMENDATIONS

9.1 Conclusions

9. Milori Homes is proposing to redevelop the site of the former Irly Bird Lumber Yard at 1325-1335 Draycott Road into a 35 unit multi-family residential development with underground parking. For the purposes of this study, it was assumed that the development would be completed by the year 2016.

10. CTS conducted vehicle, pedestrian and bicycle traffic counts on Friday, 1 May 2014 from 0700-0900 and from 1500 to 1800 to obtain current traffic volumes of key intersections and accesses in the study area.

11. Future base traffic volumes were projected using the traffic projections contained in the Lynn Valley Transportation Study and then the proposed development traffic was superimposed on top to estimate future baseline conditions. The design hour of analysis were the weekday afternoon peak which is when residential developments typically generated their highest traffic volumes.

12. The counted AM peak hour traffic volumes were between 80% and 84% of the PM peak hour volumes. Since the analysis concluded that the PM peak hour was functioning well, the AM peak hour will also function well.

13. The proposed development is estimated to generate 19 vehicle trips during the weekday afternoon peak hour (i.e. 13 veh/hr inbound and 6 veh/hr outbound). The projected volume of additional traffic is not considered to be significant as it represents on average less than 0.32 vehicle movements every minute during the weekday afternoon peak hour.

14. The proposed residential development will generate 45% fewer vehicle trips (19 trips versus 35 trips) during the PM peak hour than the Irly Bird Lumber Yard did when it was in operation.

15. The Ministry of Transportation & Infrastructure's warrant for triggering a traffic impact assessment is 100 or more vehicles during the design hour. Therefore, the proposed expansion does not meet this requirement as the peak volume of traffic is only 19 vehicles per hour (or 19% of the threshold).

16. At the proposed east lane access on Draycott Road, the overall LOS remains at A (excellent) during the weekday afternoon peak hour.

17. At the intersection of Lynn Valley Road & Draycott Road, the addition of the site traffic to the base 2016 volumes does not result in a noticeable change in operations either as the overall LOS at A (excellent) during the weekday afternoon peak hour. For the year of 2030 (i.e. 14 years post buildout), the intersection is projected to continue to operate at LOS A (excellent) during the weekday afternoon peak hour.

18. Intersection capacity analysis was conducted for all locations in order to determine what, if any, operational and/or geometrical improvements were required for the road network to be able to accommodate the projected site traffic volumes. The capacity analysis determined that no improvements or changes are required.

19. CTS conducted an assessment of the proposed new 4.0 metre laneway and determined that a garbage truck **cannot** circulate through the laneway using the current site plan.

20. CTS conducted an assessment of the proposed new 4.0 metre laneway and determined that a ladder fire truck **cannot** circulate through the laneway.

21. CTS conducted an assessment of a 6.0 metre laneway and determined that a garbage truck **can** circulate through the laneway using the current site plan.

22. CTS conducted an assessment of a 6.0 metre laneway and determined that a ladder fire truck **cannot** circulate through the laneway.

23. CTS assessed a laneway configuration that maximizes the preservation of the hedge on the east side of the property.

24. The proposed site is well served by public transit both on Lynn Valley Road and on Mountain Highway.

25. The proposed site is well served with sidewalks to facilitate pedestrian activity.

26. There is a major service commercial/retail site less than 200 metres from the proposed development which will allow residents of 1325-1335 Draycott Road to walk to the store or library.

27. Cycling activity can be accommodated on street.

9.2 Recommendations

Based on the findings of this study, the following is recommended:

1. That the developer install signage at the entrance to Draycott Road indicating that Draycott Road is a cul-de-sac and indicating that access only to 1325-1335 and 1385 Draycott Road.
2. The site plan be amended to provide a 6.0 metre paved laneway, for a distance of 15 metres as measured northward from the north edge of the existing laneway, on a 6.0 metre road allowance, clear of obstructions to allow a garbage truck to circulate through the laneways.
3. The District of North Vancouver Fire Department be advised that a ladder truck cannot successfully negotiate the 90 degree turn between the laneways.

We would like to take this opportunity to thank you for this unique project and we look forward to working with you again in the future. Please call the undersigned should you have any questions or comments.

Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD.





Gary Vlieg, M.Sc., P.Eng.
Sr. Traffic Engineer

Attachment

APPENDIX A

Site Plan



gBL

NOTES

REVISIONS

DRAYCOTT ROAD

DETAILED APPLICATION

U/G PARKING 1

DATE
DRAWN BY
CHECKED BY
SCALE

JOB NUMBER 1285

A-2.02

APPENDIX B

Scope Development Meeting

CREATIVE TRANSPORTATION SOLUTIONS

84a moody street
port moody, british columbia
canada v3h 2p5
604.936.6190
604.936.6175
www.cts-bc.com

REVISED DRAFT TERMS OF REFERENCE (6 May 2014)

1325 Draycott Road Traffic Impact Study, District of North Vancouver, BC

A Study area limits and list of intersections to analyse

- Site Access & Draycott Road;
- Draycott Road and Lynn Valley Road
- Mountain Hwy and Lynn Valley Road (no signalised intersection analyses)

B Existing and future base road network in study area

DNV advised that they have no scheduled geometrical and/or operational improvements at this time, to the intersection of Mountain Hwy and Lynn Valley Road.

C Relevant background material

The key document to be referred to is the Lynn Valley Transportation Study.

http://dnv.org/upload/pcdocsdocuments/1v_h801_.pdf

D Anticipated future developments within study horizon that are above and beyond what can be assumed to be built into an annual traffic volume growth rate.

DNV advised CTS that there are no projects approved nearby that will significantly impact future background volumes for the horizon years examined.

- DNV supplied the Bosa study . Realize that it's hard to follow. Like the Draycott Road site, even Bosa development generates very few trips on net, given transition from Zellers to less commercial/residential.
- We will plan to send you a copy of the LV United Church transportation study so that you have an idea of what that would contribute to Lynn Valley/Mountain intersection, if approved. Seems that this can be a footnote as the project is not approved at the time of your study

E Design Peak Hour of Analysis

CTS to examine the weekday morning and afternoon peak hours but, consistent with the LVTS only the PM peak will be evaluated for future conditions. CTS is to comment on current and future AM peak functionality.

F **Horizon Years of Analysis**

CTS to examine the following years:

1. 2014 (i.e. existing base)
2. 2016 (future base, using LVTS projections)
3. 2016 (Future base + site generated)
4. 2030 (future base, using LVTS projections)

G **Traffic Volume Growth Rate**

Future years traffic projection to be based on LVTS.

H **Traffic Projection Methodology**

CTS to use current accepted traffic engineering practices for traffic projections and to document any assumptions in the report. This will be based on the LVTS

I **Trip Generation Methodology**

CTS proposes to use the vehicle trip generation rates from the Institute of Transportation Engineers (ITE) 9th edition.

J **Trip Distribution and Traffic Assignment Parameters**

CTS to use the measured travel patterns in the study area to develop trip distribution and traffic assignment parameters based on existing residential uses.

K **Traffic Engineering Methodology for Analysis**

CTS to use 2010 Highway Capacity Manual methodologies for all intersection capacity analysis. (HCS software for unsignalized intersections and Synchro for signalized intersections if applicable).

L **Engineering Standards**

CTS to propose to use DNV standards for municipal roadways. The DNV standards are included as Appendices to the Development Services Bylaw. In addition the MMCD Platinum edition is also used.

M **Access Review**

CTS will undertake two AutoTurn design reviews one for garbage trucks and one for fire trucks to access the site.

N **Report Format**

CTS to submit the final report in a bound letter report format with appendices.

- **Number of Final Report Copies**

  - District of North Vancouver (2 copies + pdf)
  - Milori Homes (1 copy + pdf)

- **Other Issues**

  1. CTS to circulate draft report prior to issuance of the final report.
  2. Parking and any possible TDM plan remain outstanding. Until CTS receives direction from Milori Homes, this will not be included

APPENDIX C

Traffic Movement Counts Summaries

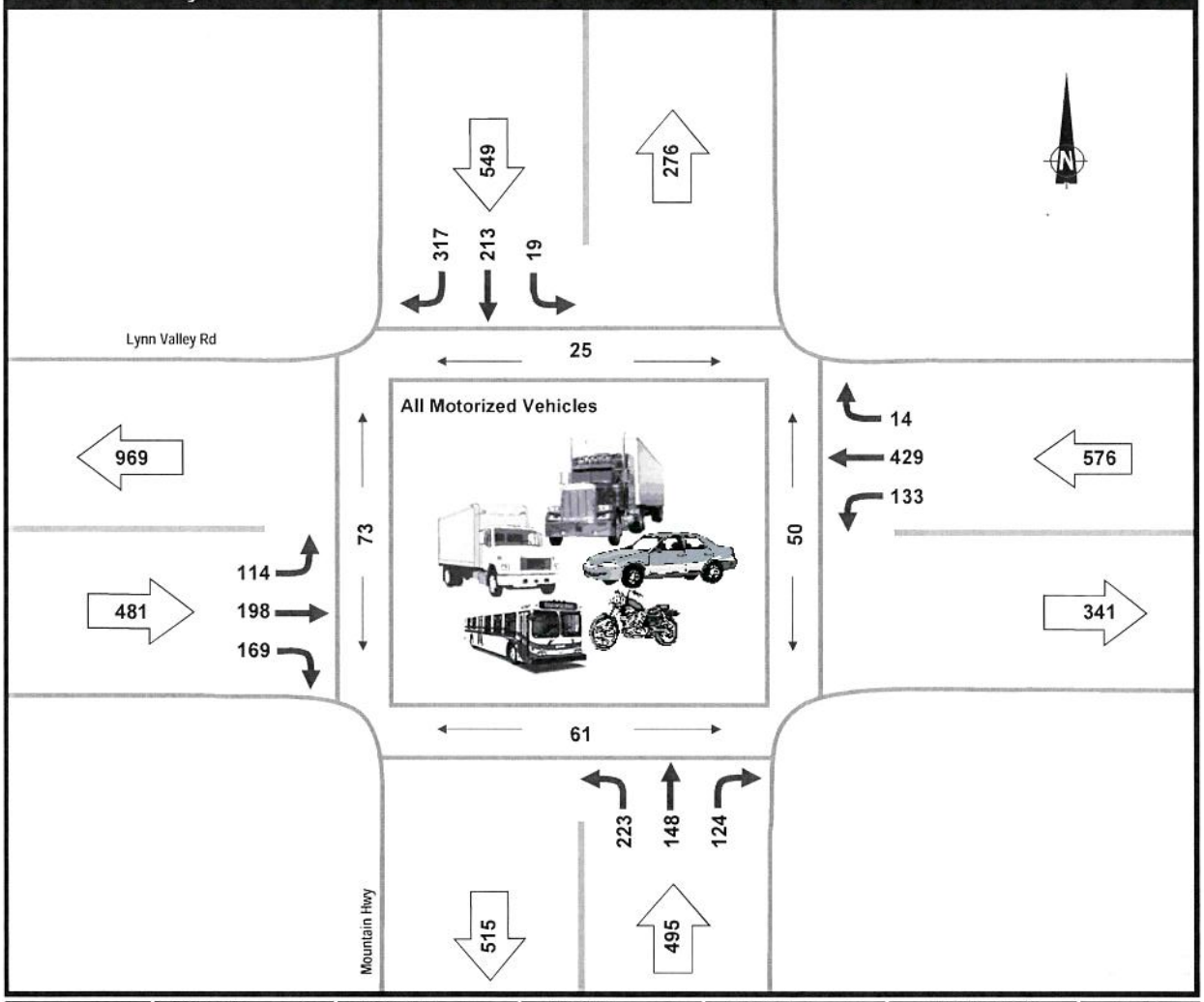
Mountain Hwy & Lynn Valley Rd

Thursday, May 01, 2014

Morning Peak Period

Project: #5223: 1325 Draycott Road Traffic Impact Study
Municipality: North Vancouver
Weather: Sunny
Vehicle Class: All Motorized Vehicles

Peak Hour Traffic by Movement 8:00 AM to 9:00 AM



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
Peak Hour	19	213	317	223	148	124	114	198	169	133	429	14	25	61	73	50	2,101
PH Factor	0.48	0.83	0.88	0.88	0.77	0.66	0.92	0.85	0.94	0.85	0.89	0.50	0.69	0.76	0.87	0.89	0.89
Peak 15 X 4	40	256	360	252	192	188	124	232	180	156	480	28	36	80	84	56	2,348
Average Hour	12	184	289	194	110	90	81	138	124	119	399	10	21	42	49	33	1,750
Survey Total	24	368	577	388	219	179	162	275	248	238	798	19	41	84	97	66	3,495
7:00	1	29	58	29	8	8	5	11	23	29	78	1	2	1	11	0	280
7:15	1	35	60	31	23	12	12	14	12	24	66	1	2	3	3	6	291
7:30	1	52	76	55	19	19	11	24	23	27	115	2	8	5	6	4	424
7:45	2	39	66	50	21	16	20	28	21	25	110	1	4	14	4	6	399
8:00	5	45	83	45	29	22	29	42	37	39	103	1	9	16	21	14	480
8:15	1	44	73	60	48	26	24	58	43	21	117	3	5	6	18	12	518
8:30	3	64	90	63	34	47	31	49	44	39	120	3	5	19	14	11	587
8:45	10	60	71	55	37	29	30	49	45	34	89	7	6	20	20	13	516

CTS

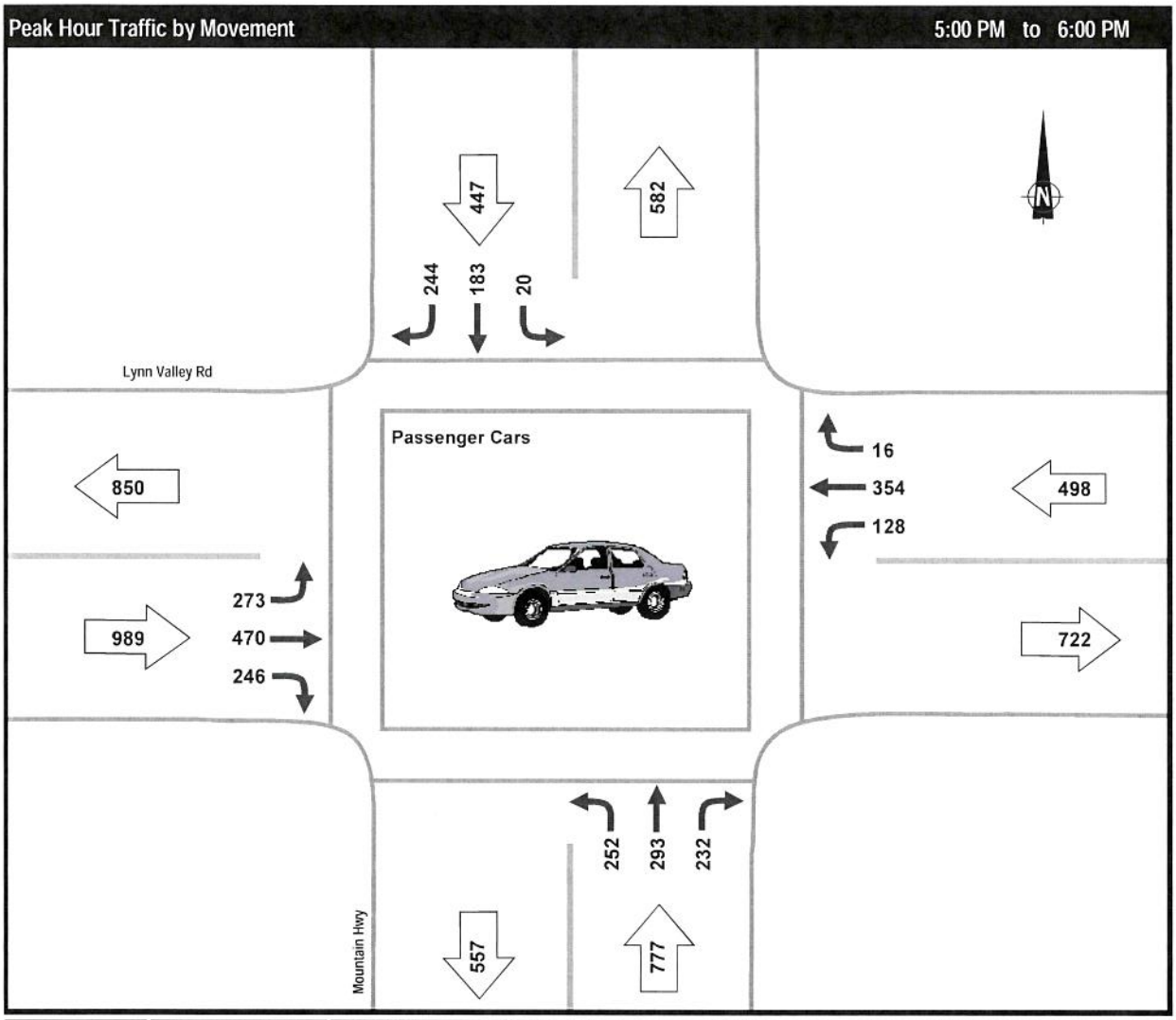
Mountain Hwy & Lynn Valley Rd

Thursday, May 01, 2014

Afternoon Peak Period

Project: #5223: 1325 Draycott Road Traffic Impact Study
Municipality: North Vancouver
Weather: Sunny
Vehicle Class: Passenger Cars

Peak Hour Traffic by Movement 5:00 PM to 6:00 PM



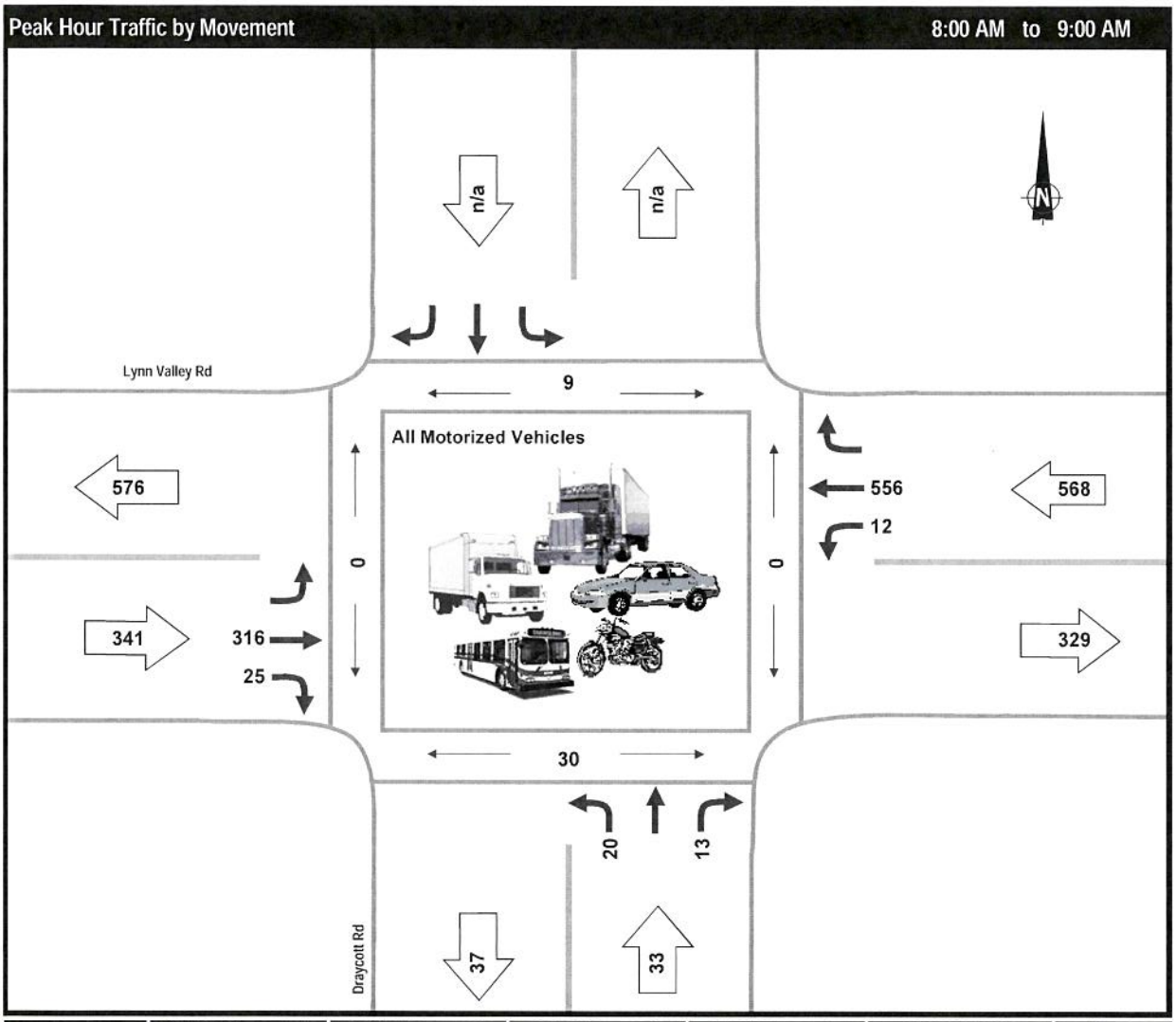
Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
Peak Hour	**20**	**183**	**244**	**252**	**293**	**232**	**273**	**470**	**246**	**128**	**354**	**16**					**2,711**
PH Factor	0.83	0.93	0.92	0.91	0.82	0.94	0.98	0.88	0.76	0.97	0.91	0.44					0.96
Peak 15 X 4	24	196	264	276	356	248	280	536	324	132	388	36					2,816
Average Hour	21	145	202	237	223	202	209	424	224	152	373	14					2,426
Survey Total	62	436	607	711	668	606	628	1,273	671	456	1,118	42					7,278
15:00	9	17	50	61	39	45	36	95	40	39	85	8					524
15:15	6	38	52	61	35	64	42	98	69	50	109	4					628
15:30	5	37	44	65	44	43	36	96	42	59	101	3					575
15:45	2	23	33	68	46	38	34	90	62	37	90	3					526
16:00	5	31	37	52	49	51	55	116	59	49	93	4					601
16:15	2	32	44	49	67	44	41	99	56	22	98	3					557
16:30	6	39	60	48	44	46	53	104	45	35	90	0					570
16:45	7	36	43	55	51	43	58	105	52	37	98	1					586
17:00	5	40	54	64	61	54	66	111	57	31	97	4					644
17:15	5	45	66	69	69	56	68	92	81	31	86	9					677
17:30	6	49	60	69	74	62	69	134	58	33	88	2					704
17:45	4	49	64	50	89	60	70	133	50	33	83	1					686

Draycott Rd & Lynn Valley Rd

Thursday, May 01, 2014

Morning Peak Period

Project: #5223: 1325 Draycott Road Traffic Impact Study
Municipality: North Vancouver
Weather:
Vehicle Class: All Motorized Vehicles



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
Peak Hour				20		13		316	25	12	556		9	30	0	0	942
PH Factor				0.71		0.54		0.88	0.69	0.60	0.90		0.56	0.68	0.00	0.00	0.88
Peak 15 X 4				28		24		360	36	20	620		16	44	0	0	1,072
Average Hour				17		8		223	16	9	511		9	24	0	0	784
Survey Total				34		16		446	32	17	1,021		18	47	0	0	1,566
7:00				1		0		19	1	0	107		1	2	0	0	128
7:15				3		1		26	1	3	88		1	5	0	0	122
7:30				5		2		42	2	1	139		4	2	0	0	191
7:45				5		0		43	3	1	131		3	8	0	0	183
8:00				2		0		66	3	1	141		4	11	0	0	213
8:15				6		2		78	7	4	135		2	8	0	0	232
8:30				7		5		90	9	2	155		3	4	0	0	268
8:45				5		6		82	6	5	125		0	7	0	0	229

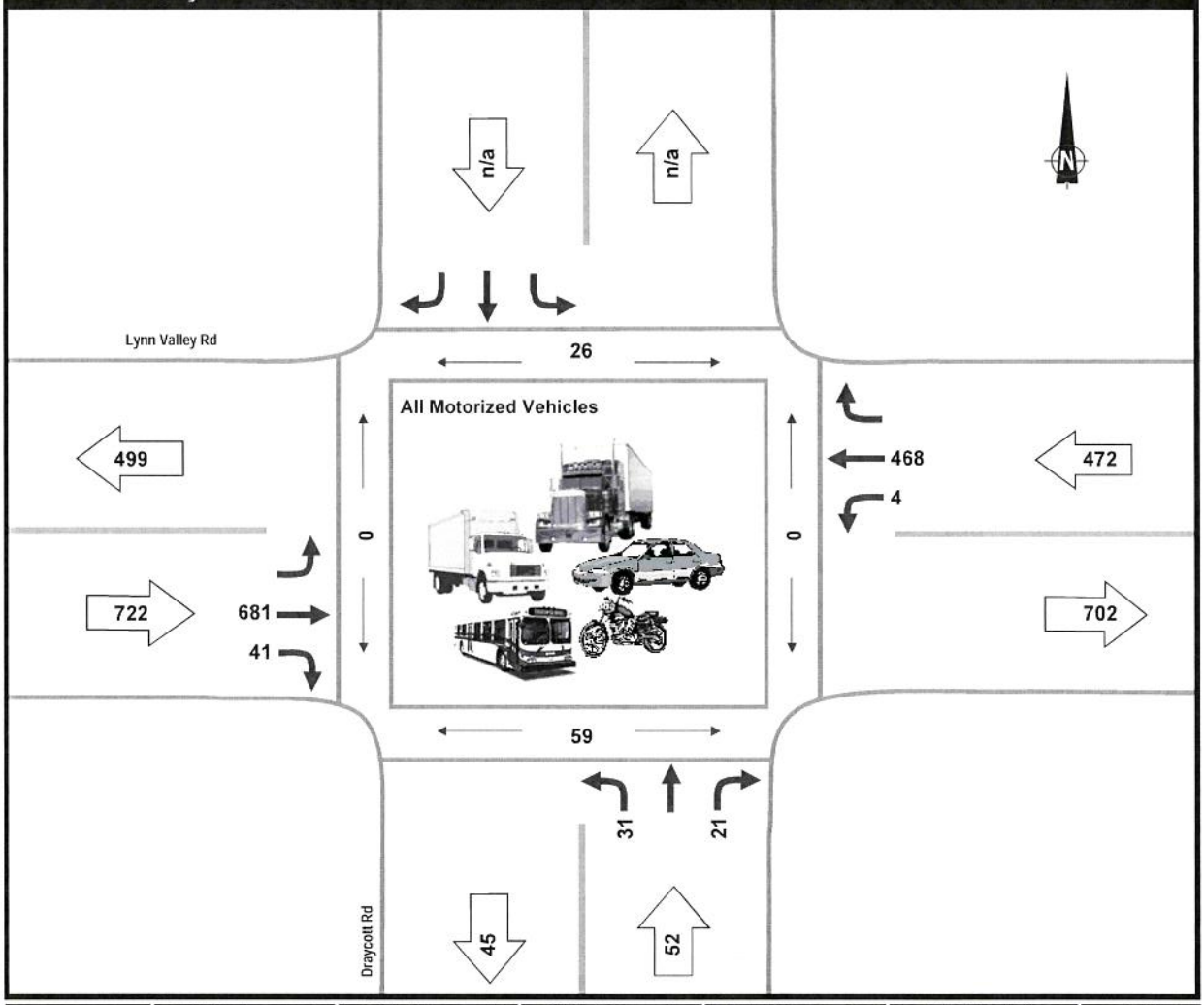
Draycott Rd & Lynn Valley Rd

Thursday, May 01, 2014

Afternoon Peak Period

Project: #5223: 1325 Draycott Road Traffic Impact Study
Municipality: North Vancouver
Weather:
Vehicle Class: All Motorized Vehicles

Peak Hour Traffic by Movement 5:00 PM to 6:00 PM



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
Peak Hour				31		21		681	41	4	468		26	59	0	0	1,246
PH Factor				0.78		0.58		0.89	0.79	0.50	0.96		0.93	0.92	0.00	0.00	0.93
Peak 15 X 4				40		36		768	52	8	488		28	64	0	0	1,336
Average Hour				29		18		607	40	5	511		25	52	0	0	1,210
Survey Total				88		55		1,821	120	14	1,533		74	155	0	0	3,631
15:00				8		4		137	12	3	126		2	6	0	0	290
15:15				13		4		162	6	1	150		5	6	0	0	336
15:30				4		3		129	15	1	160		8	15	0	0	312
15:45				7		10		123	7	1	123		10	15	0	0	271
16:00				3		2		164	8	1	143		4	13	0	0	321
16:15				10		4		134	11	2	113		6	6	0	0	274
16:30				3		4		147	9	0	123		6	22	0	0	286
16:45				9		3		144	11	1	127		7	13	0	0	295
17:00				10		2		158	12	0	122		7	15	0	0	304
17:15				9		3		140	13	0	117		6	12	0	0	282
17:30				3		7		191	11	2	120		7	16	0	0	334
17:45				9		9		192	5	2	109		6	16	0	0	326

APPENDIX D

Intersection Capacity Analysis Worksheets

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: CTS
Date Performed:
Analysis Time Period: Weekday Afternoon Peak Hour
Intersection: Site Access & Draycott Rd
Jurisdiction: District of North Vancouver
Units: U. S. Metric
Analysis Year: 2016 Base + Site
Project ID: 5223 - 1325 Draycott Road Traffic Impact Study
East/West Street: Draycott Road
North/South Street: Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		45	13	0	52	
Peak-Hour Factor, PHF		0.93	0.93	0.93	0.93	
Hourly Flow Rate, HFR		48	13	0	55	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	6		0			
Peak Hour Factor, PHF	0.93		0.93			
Hourly Flow Rate, HFR	6		0			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		0		6				
C(m) (vph)		1555		893				
v/c		0.00		0.01				
95% queue length		0.00		0.02				
Control Delay		7.3		9.1				
LOS		A		A				
Approach Delay				9.1				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: CTS
Date Performed:
Analysis Time Period: Weekday Afternoon Peak Hour
Intersection: Site Access & Draycott Rd
Jurisdiction: District of North Vancouver
Units: U. S. Metric
Analysis Year: 2030 Base + Site
Project ID: 5223 - 1325 Draycott Road Traffic Impact Study
East/West Street: Draycott Road
North/South Street: Site Access
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		45	13	0	52	
Peak-Hour Factor, PHF		0.93	0.93	0.93	0.93	
Hourly Flow Rate, HFR		48	13	0	55	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	6		0			
Peak Hour Factor, PHF	0.93		0.93			
Hourly Flow Rate, HFR	6		0			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		0		6				
C(m) (vph)		1555		893				
v/c		0.00		0.01				
95% queue length		0.00		0.02				
Control Delay		7.3		9.1				
LOS		A		A				
Approach Delay				9.1				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: CTS
Date Performed:
Analysis Time Period: Weekday Morning Peak Hour
Intersection: Lynn Valley Rd & Draycott Rd
Jurisdiction: District of North Vancouver
Units: U. S. Metric
Analysis Year: 2014 Base
Project ID: 5223 - 1325 Draycott Road Traffic Impact Study
East/West Street: Draycott Road
North/South Street: Lynn Valley Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		316	25	12	556	
Peak-Hour Factor, PHF		0.88	0.88	0.88	0.88	
Hourly Flow Rate, HFR		359	28	13	631	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		2	0	0	2	
Configuration		T	TR	LT	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	20		13			
Peak Hour Factor, PHF	0.88		0.88			
Hourly Flow Rate, HFR	22		14			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		13		36				
C(m) (vph)		1168		470				
v/c		0.01		0.08				
95% queue length		0.03		0.25				
Control Delay		8.1		13.3				
LOS		A		B				
Approach Delay				13.3				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: CTS
Date Performed:
Analysis Time Period: Weekday Afternoon Peak Hour
Intersection: Lynn Valley Rd & Draycott Rd
Jurisdiction: District of North Vancouver
Units: U. S. Metric
Analysis Year: 2014 Base
Project ID: 5223 - 1325 Draycott Road Traffic Impact Study
East/West Street: Draycott Road
North/South Street: Lynn Valley Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		681	41	4	468	
Peak-Hour Factor, PHF		0.93	0.93	0.93	0.93	
Hourly Flow Rate, HFR		732	44	4	503	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		2	0	0	2	
Configuration		T	TR	LT	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	31		21			
Peak Hour Factor, PHF	0.93		0.93			
Hourly Flow Rate, HFR	33		22			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		4		55				
C(m) (vph)		836		320				
v/c		0.00		0.17				
95% queue length		0.01		0.61				
Control Delay		9.3		18.6				
LOS		A		C				
Approach Delay				18.6				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: CTS
Date Performed:
Analysis Time Period: Weekday Afternoon Peak Hour
Intersection: Lynn Valley Rd & Draycott Rd
Jurisdiction: District of North Vancouver
Units: U. S. Metric
Analysis Year: 2016 Base
Project ID: 5223 - 1325 Draycott Road Traffic Impact Study
East/West Street: Draycott Road
North/South Street: Lynn Valley Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		685	41	4	471	
Peak-Hour Factor, PHF		0.93	0.93	0.93	0.93	
Hourly Flow Rate, HFR		736	44	4	506	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		2	0	0	2	
Configuration		T	TR	LT	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	31		21			
Peak Hour Factor, PHF	0.93		0.93			
Hourly Flow Rate, HFR	33		22			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		4		55				
C(m) (vph)		833		317				
v/c		0.00		0.17				
95% queue length		0.01		0.62				
Control Delay		9.3		18.7				
LOS		A		C				
Approach Delay				18.7				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: CTS
Date Performed:
Analysis Time Period: Weekday Afternoon Peak Hour
Intersection: Lynn Valley Rd & Draycott Rd
Jurisdiction: District of North Vancouver
Units: U. S. Metric
Analysis Year: 2016 Base + Site
Project ID: 5223 - 1325 Draycott Road Traffic Impact Study
East/West Street: Draycott Road
North/South Street: Lynn Valley Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		685	52	6	471	
Peak-Hour Factor, PHF		0.93	0.93	0.93	0.93	
Hourly Flow Rate, HFR		736	55	6	506	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		2	0	0	2	
Configuration		T	TR	LT	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	35		23			
Peak Hour Factor, PHF	0.93		0.93			
Hourly Flow Rate, HFR	37		24			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		6		61				
C(m) (vph)		825		310				
v/c		0.01		0.20				
95% queue length		0.02		0.72				
Control Delay		9.4		19.4				
LOS		A		C				
Approach Delay				19.4				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: CTS
Date Performed:
Analysis Time Period: Weekday Afternoon Peak Hour
Intersection: Lynn Valley Rd & Draycott Rd
Jurisdiction: District of North Vancouver
Units: U. S. Metric
Analysis Year: 2030 Base + Site
Project ID: 5223 - 1325 Draycott Road Traffic Impact Study
East/West Street: Draycott Road
North/South Street: Lynn Valley Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		664	52	6	304	
Peak-Hour Factor, PHF		0.93	0.93	0.93	0.93	
Hourly Flow Rate, HFR		713	55	6	326	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		2	0	0	2	
Configuration		T	TR	LT	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	35		23			
Peak Hour Factor, PHF	0.93		0.93			
Hourly Flow Rate, HFR	37		24			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		6		61				
C(m) (vph)		842		357				
v/c		0.01		0.17				
95% queue length		0.02		0.61				
Control Delay		9.3		17.2				
LOS		A		C				
Approach Delay				17.2				
Approach LOS				C				

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Lynn Valley Town Centre
DESIGN GUIDELINES

Ramsay Worden Architects
PFS Studio
DRAFT December 05 2014

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1.0 Design Principles and Objectives

The Lynn Valley Town Centre Design Guidelines are based on the principles of authenticity and sustainability, directing development within a Mountain Village theme where distinctive landforms, materials, colours and selected plants from the surrounding natural environment are dominant in the architecture and landscape design. Thematic elements include references to Lynn Valley's important and rich logging history.

Guiding Urban Design Principles to Support the Vision:

1. Encourage design excellence and innovation - in urban design, architecture and landscape architecture that clearly reflects and responds to Lynn Valley's unique mountain setting and local climate.
2. Connect to the wider Lynn Valley community and natural environment - establish an overall structure that integrates with and links to the surrounding community and streets to encourage active lifestyles and social connections. The location and design of buildings are to maintain key public views toward the mountain setting from new streets to and through the Town Centre.
3. Develop a unique sense of place - by the creation of linked plazas, parks and trails that reference the history, logging, etc.
4. Encourage variety and innovation in building form - encourage distinctive and innovative architecture that differentiates between developments and also different buildings within larger developments.
5. Integrate authentic and natural materials - the design of both the public realm and private developments are encouraged to integrate locally and regionally available materials to further enhance the send of the mountain village.
6. Provide a vibrant mixed use High Street - that creates a physical, social and economic heart for the community.













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2.0 Policy Context

These Design Guidelines were developed to support existing policies, guidelines and studies relevant to the Lynn Valley Town Centre. The intent is that project proponents and their dsign consultants should reference relevant sections of the OCP for the direction on the design of projects in the Lynn Valley Town Centre. For the ease of use and updating, all policies and guidelines in the OCP are not repeated in this guideline document.

2.1 Existing Policies - Overview

Existing policies that impact these Street Design Guidelines:

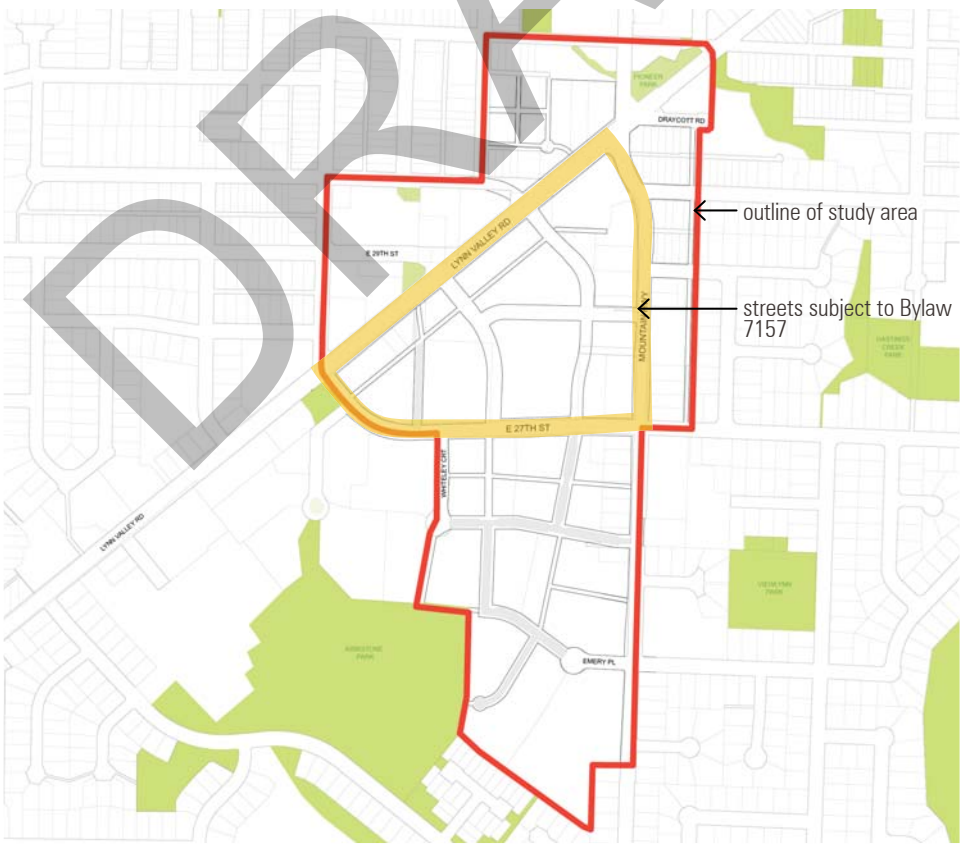
- Bylaw 7157 - sections relevant to Street Design Guidelines
- Lynn Valley Town Centre Transportation Study 2013
- Hastings Creek Watershed: Ecology and Hydrotechnical Assessment, 2013
- North Shore Area Transit Plan, 2012
- Development Services By-Law (DSB) and other Municipal Standards

These policies are not repeated in this Design Guideline document. Sections of these existing policies have been revised or expanded to meet the Design Objectives listed below.

2.1.1 Existing Policies Impacting Street Design Guidelines

Bylaw 7157 applies to the portions of Lynn Valley Road, Mountain Highway and East 27th Street within the study area. Design elements for all other streets within the study area are subject to Section 3.0 Street Design Guidelines in this document.

The District has developed guidelines for street tree planting to ensure that trees can mature in healthy condition. These standards are especially important considering the landscape is a large determinant of the Town Centre character.



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2.1.2 Existing policies that impact Building Design Guidelines:

- Guidelines for Commercial and Mixed Use Buildings, DNV OCP, Schedule B
- Guidelines for Multi-Family Housing, DNV OCP, Schedule B
- Guidelines for Ground Oriented Housing, DNV OCP, Part 5, Schedule B

Lynn Valley Town Centre project proponents and design consultants should consult relevant sections of the OCP for project direction. All specific OCP Design Guidelines that have been revised and/or expanded to meet the Design Objectives of these Lynn Valley Town Centre Design Guidelines are:

2.1.2.a DNV OCP, Schedule B: Guidelines for Commercial and Mixed Use Buildings

A 1.8: ***Enclosure -*** revised and expanded
A 2.20 ***Breaks in the Streetwall -*** revised and expanded
A 1.11 ***Storefronts -*** revised and expanded

A 2.10 ***Rainwater Management -*** added
A 2.11 ***View Corridors -*** added

A 3.1 ***Variation in Building Design*** - revised and expanded
A 3.3 ***Setbacks*** - revised and expanded
A 3.7 ***Building Materials and Transitions*** - incorporated into General Building Design Guidelines
A 3.8 ***Colours and Finishes*** - incorporated into General Building Design Guidelines
A 3.11 ***Balconies*** - revised
A 3.16 ***Signage and Lighting*** - revised and expanded

2.1.2.b DNV OCP, Schedule B: Guidelines for Multi-Family Housing

General Residential Building Design Guidelines - added
B 2.6 ***Building Setbacks to the Street -*** revised and expanded
B 3.1 ***Variation in Building Design -*** revised and expanded
B 3.5 ***Setbacks***
B 3.8 ***Building Materials and Transitions -*** revised and expanded
B 3.15 ***Balconies -*** deleted
B 4.2 ***Maximum Building Frontage -*** deleted
B 4.5 ***Maximum Building Footprint -*** deleted
B 4.9 ***Articulation of the Building -*** revised and expanded
B 4.10 ***Sculpting the Top of the Tower -*** revised and expanded
B 4.11 ***Balconies -*** deleted

2.1.2.c DNV OCP, Schedule B: Guidelines for Ground Oriented Housing

B 1.1 ***Height and Massing -*** revised and expanded
B 1.2 ***Roof Treatment -*** revised and expanded
B 2.8 ***Rear Yard Setbacks -*** revised and expanded
B 2.9 ***Side Yard Setbacks -*** revised and expanded
B 2.10 ***Pedestrian Access -*** revised and expanded
B 3.2 ***Variations in Design -*** revised and expanded
B 3.3 ***Cladding -*** revised and expanded
B 3.4 ***Varied Roof lines -*** revised and expanded

2.1.3. Existing policies that impact these Open Space Design Guidelines are:

- Bylaw 7388: Water, sanitary sewer and stormwater standards and the MMCD Supplementary Specifications and Standard Drawings
- Development Services By-Law (DSB) and Other Municipal Standards

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3.0 STREET DESIGN GUIDELINES

3.1 General Guidelines

Intent: To provide Guidelines for the new Lynn Valley Town Centre streets, inspired by the contemporary style and character in Library Square , the Mountain Village theme and the North Shore natural environment. These Guidelines are intended to complement and be compatible with Bylaw 7157 which includes street design guidelines for Lynn Valley Road, East 27th and Mountain HIghway. Refer to the Lynn Valley Town Centre Transportation Study 2013 for detailed street design. The network of streets in the Lynn Valley Town Centre subject area are intended to support a walkable community.

3.1.1 Rain and Stormwater Management:

Intent: To manage rain and stormwater naturally and locally (where possible) through a comprehensive and coordinated network of Low Impact Development best practice strategies. These strategies should be integrated with other streetscape, landscape and architectural elements to enhance the public realm and public art elements, allowing rain and stormwater management to be visible and memorable. The goal is to improve the local ecology and health of Hastings Creek Watershed by implementing systems appropriate for higher density urban development that manage rain where it falls and are multi-functional in providing water quality treatment, base flow re-charge and attenuate peak flows through interim storage capacity. by reducing pollution levels in stormwater by natural filtration, and by recharging local streams through infiltration and groundwater flow.



an example of rainwater management integrated into landscaped areas at the corner of Lynn Valley Road and Mountain Highway

The District of North Vancouver encourages stormwater management as a key sustainable best practice. In the heart of the Town Centre, stormwater management needs to be integrated into other urban design and sustainable strategies including enhancing the pedestrian environment by narrowing streets and crossing distances, integrating bicycle lanes within street cross-sections, and planting trees and other landscape elements with sufficient soil volumes to thrive. The constraints of the streetscape design limit the potential to include standard rain gardens in the area between the movement zone of the sidewalk and the curb. Instead rainwater should be directed into underground French drains that slow stormwater to permit some infiltration into the ground.



trench grate with river rock motif

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Stormwater features are encouraged in streetscapes between the buildings and the pedestrian movement zone of the sidewalk, primarily in plazas and setbacks around building entries. These can take the form of:

- Raingardens below the grade of the plaza, collecting rainwater from surrounding paving and buildings, with either gently sloping sides, where space permits, or with urban edges, including curbs or seating elements.
- Raingardens at or above grade of the plaza, collecting rainwater from the roofs of adjacent buildings.

Both types can include additional storage for rainwater in underground French drains or similar holding areas. Cisterns can also receive rainwater from roofs and store it for use or slow release into the ground or storm sewers. Appropriate plants for raingardens are listed in Section 3.1.3 Street Tree Species and Vegetation.

3.1.1.a Hastings Creek Watershed ISMP

Intent: to integrate land-use planning and stormwater management to ensure the protection of both human and ecosystem health due to upstream changes in land use which may have downstream consequences (refer to the Hastings Creek Watershed ISMP for more detail). Strategies include:

- Restore instream, floodplain and riparian habitat – restoration projects are identified in the Hastings Creek Watershed ISMP. The coordination of identified projects and the continued restoration of in-stream, floodplain and riparian habitat shall be considered as part of all redevelopment in LVTC.
- Promote a healthy urban forest canopy – encourage the protection and planting of trees both on and off site to provide rainwater interception, improved air quality, moderation of the urban heat island effect, carbon sequestration, wildlife habitat and oxygen production.
- Implement Rainwater Best Management Practices – encourage strategies that replicate the natural hydrological process to manage rainwater quantity and quality as urban development continues. Such systems support rainwater treatment, infiltration and detention using above and below ground systems.

3.1.2 Street Design Elements

Intent: Valley Centre Avenue and Library Lane will be characterized by natural groupings/clusters of trees, native understorey plants and boulders, integrated with spaces for street furniture and lighting and on-street parking where possible. Public art treatments of street furniture add to the design, character and pedestrian experience of the streetscape; the inclusion of unifying public art design is encouraged. Paving materials and street furniture will be complementary to Bylaw 7157 but with colours and materials that reflect the contemporary nature Library Square. Refer to Section 3.4.a and 3.4.b for detailed guidelines for Valley Centre Avenue, Library Lane. New local streets will follow the same objectives including contemporary design character, natural groupings/clusters of trees, native plans and boulders and contemporary street furniture. ***Paving materials for new local streets will comply with Bylaw 7157.*** Refer to Section 3.4.c for detailed guidelines for new local streets.

a. Cycle Lanes and Paths:

Intent: to encourage cycling by providing convenient, safe and enjoyable routes.

- on-street cycle lanes should be defined by reflective, slip resistant white stripes and bike silhouette graphics
- multi-use paths should be 3.0 minimum wide continuous paved surface, well lit, without abrupt slope changes or raised curbs and be a minimum of 2.5 m wide for 2-way traffic
- minimum 1.4 m wide planting areas are encouraged to separate cyclists and pedestrians from vehicular traffic



access paths to on street parking



attractive landscaping and clear markings encourage cycling

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b. Parking/Furniture/Planting Zone:

- permeable paving is preferred
- consider including infrastructure and priority spaces for electric vehicles
- this zone is the appropriate location for street lights, street furniture, transit shelters, wayfinding, signage and landscape areas
- furniture within this zone should be chosen, coordinated, located, spaced, and aligned to maximize space for planting and create a high quality, visually harmonious appearance
- hard surfaces within this zone should be permeable, related in colour to adjacent pavements
- along residential frontages, landscaping should predominate, consistent with Section 3.1.3 Street Trees and Vegetation, combined with rain and stormwater management facilities
- trees, landscaping, benches and street lighting should be included along all streets
- 045 m wide hard surface access path located between every 2 on-street parking spaces is recommended.
- accessible parking spaces should be located adjacent to a curb letdown with a minimum 1.0 m pathway
- refer to Section 3.1.3 for detailed street trees and vegetation guidelines
- refer to Section 3.1.1 for detailed stormwater management guidelines



example using native plants and boulders within the parking/ furniture/planting zone

c. Sidewalks

i. Pedestrian Zone:

- sidewalks must include a path of travel, free of obstructions, below a height of 2.0 m
- sidewalk widths should be a minimum of 2.00 m along commercial frontages and 2.0 m along residential frontages

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ii. Property Edge:

- sidewalk seating, temporary displays, and landscaped strips are encouraged to be provided between the property line and commercial building edges, to extend the sidewalk and animate this zone – the character of this zone should extend into the private property setback zone
- native plants or unit pavers are recommended materials



examples of seating and planting within the property edge

d. Accessibility

- avoid changes of grade or gaps in paved surfaces greater than 6 mm and avoid pavement slopes greater than 5% in direction of travel and 2% cross slope
- to assist the visually impaired, provide tactile strips adjacent to crossings and between surfaces, such as at curbs
- provide smooth walking surfaces
- sawcut joints are preferable to tooled joints
- provide bench pads that are 1.0 m longer than the proposed bench to accommodate strollers, wheelchairs, scooters. etc.

e. Pedestrian Crossings

Intent: All intersection and mid-block pedestrian crossings should be marked by high-visibility crosswalks.

i. Pedestrian priority:

- landscaped corner bulges at intersections and mid-block crossings with curb extensions shorten pedestrian crossings and are encouraged unless through traffic curb lanes are required
- mid-block crossings are recommended only when absolutely necessary



corner bulges are opportunities for landscaping and rainwater management

ii. Special intersections and mid-block crosswalks:

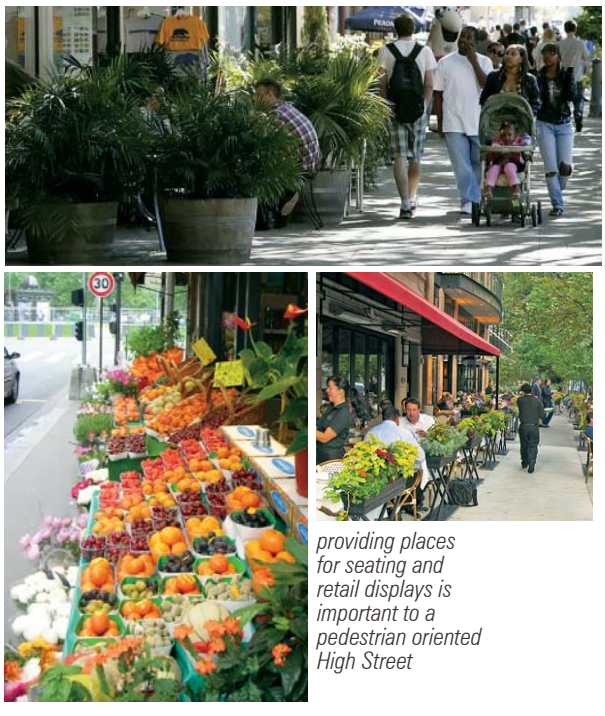
- consider incorporating crosswalks into special curbless "woonerfs" at locations adjacent to public open spaces
- locate crossings to link existing or proposed pedestrian pathways

iii. Accessibility:

- provide curb ramps with detectable change of texture at crossings. Include audible tones and pedestrian countdown signals at signalized crossings

iv. Lighting:

- Provide pedestrian scale light fixtures with increased light levels to highlight pedestrian crossings and pathways



providing places for seating and retail displays is important to a pedestrian oriented High Street

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f. Street Furniture

Intent: Street furniture within the Town Centre should match or complement the type and appearance of new Library precinct street furniture. Special designs related to Lynn Valley themes are encouraged including public art and/or artist-designed elements. Street furniture in the Town Centre Core should be stainless steel. Street furniture on new local streets should be finished with Dark Green (LUMEC#GN8 - as per Bylaw 7157)

i. Benches:

- refer to adjacent images for preferred benches and seating designs
- benches, trash and recycling containers, bike racks etc. should be part of the same product line to ensure visual continuity
- pads for benches not within the furniture zone should be 1.0 m longer than the proposed bench and of the same material as the sidewalk




preferred Lynn Valley Town Centre benches and seating

ii. Recycling Containers (including organics):

- choice of recycling containers is dependent on the District's recycling policies and infrastructure which determine how many categories of recycling are sorted separately and where they are sorted




examples of Library Plaza recycling containers

iii. Bicycle Racks:

- bike racks should be selected to address the anticipated usage at locations throughout the Town Centre
- explore the possibility of using bike racks as public art
- individual rings or "U"s offer the potential to be placed in small or large numbers




examples of recommended bicycle racks

iv. Newspaper Dispensers and Mailboxes

- these should be integrated into the appropriate colour palette but require coordination with newspaper companies and Canada Post
- should be located adjacent to bus stops, in the furniture zone

v. Water Fountains:

- models that meet requirements for access by people in wheelchairs should be used




examples of water fountains including opportunities as public art

vi. Utility Covers

- utility covers that reflect the Town Centre themes are recommended
- consider local art competitions to develop specific designs

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vii. Advertising Display Units

- free standing cabinets should be considered for large advertising panels along Lynn Valley Road and the High Street
- poster poles or other dedicated display systems should be provided for small scale advertising and bulletins

g. Transit Shelters

Intent: Transit shelters should provide an appropriate level of weather protection, lighting and seating for the expected number of transit users. Where feasible, transit shelter design should be integrated into the building design.

- transit shelter design should be consistent with the street and street furniture character and complement the surrounding public realm design
- transit shelters should exhibit a high standard of contemporary design, compatible with architectural character expected of new Town Centre buildings
- materials should be durable and easily maintained
- shelters should be generally enclosed at the back and at least a portion of one side by clear glazing for wind protection and visibility. Advertising poster display should be confined to one vertical side surface
- design of transit information signage and street furniture associated with transit shelters, such as recycling containers and advertising poster display systems, should be compatible with transit shelter designs
- energy efficient lighting should be incorporated into shelter designs
- consider solar photo voltaic opportunities for lighting, and possibly to heat benches
- refer to Bylaw 7157 for transit shelters that are not integrated into the building design



example of incorporating the transit shelter design into the Lynn Valley library architecture

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h. Public Art

Intent: To provide visual interest and animate the public realm with a range of artistic elements which highlight and reinforce the Lynn Valley Town Centre themes and the character, history, climate and ecology of Lynn Valley. Potential materials and theme include boulders, wood, natural forms and shapes.

Note: A 'Lynn Valley Town Centre Public Art Plan' will be developed to highlight specific opportunities within the Town Centre.

- public art that combines practical and artistic objectives are encouraged including seating, water fountains and wayfinding.
- opportunities to integrate the movement, collection and potential energy of rain into public art pieces are strongly supported
- public art that integrates wayfinding is encouraged
- public art that provides a contrast to the natural elements within the Mountain Village theme are recommended, to provide colour, interest and diversity
- public art pieces that are interactive and function as play elements should be encouraged
- public art treatments of street furniture add to the design, character and pedestrian experience of the streetscape; the inclusion of unifying public art design is encouraged
- the design of lighting in conjunction with public art is encouraged
- locations for public art include:
  - gateways
  - plazas
  - public or private outdoor seating areas
  - transit stops
  - entrances or interest areas in neighbourood parks
  - at commercial or residential entrances
  - at pedestrian pathway entrances or nodes
  - included in street furnishing design



examples of public art complementary to the Mountain Village and rainwater themes



elements that refer to historic log flumes are highly recommended

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i. Gateways

Intent: To mark significant street or path entrances to districts or neighbourhoods, to highlight transitions between areas and as opportunities for public art. Gateways should not include signage for commercial uses.

The design of these urban elements should highlight the Mountain Village theme while allowing for artistic freedom and innovation.

Upright boulders, set back to avoid conflicts with traffic and/or pedestrians, combined with areas of understorey vegetation, are located between the edge of the Lynn Valley Library and the curb and are recommended as a precedent for gateway design in other Town Centre locations. A variety of boulders combined with signage, lighting, wayfinding elements and public art are recommended, supporting the Mountain Village theme.



gateway elements around the Library include plantings, boulders and a unique bus shelter



an example of boulders and signage



Town Centre gateway locations

i. Town Centre gateways could include decorative paving inside the intersection combined with other elements consistent with the Mountain Village Theme.

ii. HIgh Street gateways should signal an entrance to the commercial/retail/community gathering place zone.

iii. Library Lane gateways should consider residential uses and natural landscaping.

iv. other gateways between the Town Centre and residential precinct south of East 27th Street should be pedestrian oriented. Gateways located at pedestrian pathways leading to the nearby parks are encouraged.

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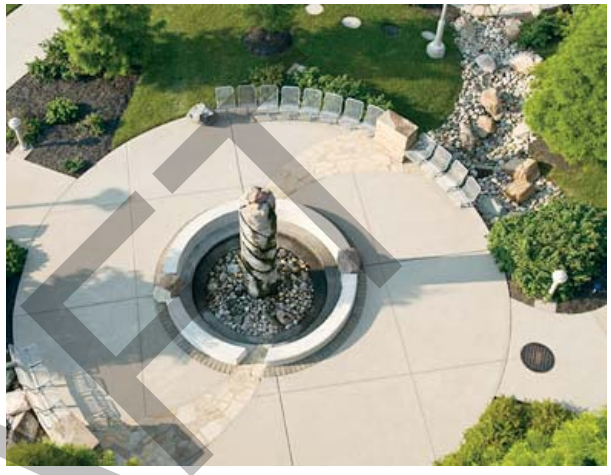
j. Wayfinding

Intent: To provide clear, useful and user friendly graphic information, orient people within the Town Centre, direct them to desired destinations and provide public art opportunities. Wayfinding elements should be consistent within the Town Centre, other public realm signage and graphic elements.

- in addition to providing information, wayfinding elements are also public art opportunities
- other creative opportunities are encouraged to be incorporated such as local historical and environmental interpretation, storytelling, and, particularly for families with children, invitations to explore, cues to notice and follow, and clues to discover, etc.



an example of using unique paving materials within an intersection

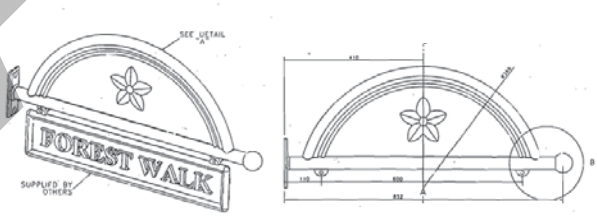


gateways should include natural materials and landscaping and places for people

k. Signage

Intent: To provide street signage that is complementary to the existing standards in ***Bylaw 7157*** (refer to adjacent illustration) and reflects the contemporary style of street furniture in Library Square.

- new street signs should complement the existing design in Bylaw 7157 and reflect the simple, contemporary design of street furniture, etc. from Library Square.
- painted finishes in black and white are recommended
- dimensions should be consistent with ***Bylaw 7157***



street signs excerpt from ***Bylaw 7157***



conceptual design for new street signs



wayfinding combined with public art, street furniture and lighting

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l. Street Lighting

Intent: To provide an appropriate scale, type and level of lighting along traffic and pedestrian routes and to complement both the existing street lights on Mountain Highway, East 27th Street and Lynn Valley Road (refer to Bylaw 7157) and the contemporary style and character of Library Square.

i. Street Lighting Types and Details

- street lighting on new streets, paths, and public realm areas is encouraged to have a unified character, different but related to lighting along those existing streets
- refer to illustrations adjacent and on the following page) for preferred street lights including pedestrian level lighting
- a black finish with the 44 inch standard base cover is recommended on all street lights within the Town Centre core
- Dark Green (LUMEC#GN8 - as per Bylaw 7157) finish with the BC6 Standard Base Cover is recommended for new local streets
- banner brackets are recommended for all street lights on Valley Centre Avenue and Library Lane
- street lights at gateway locations or pedestrian crossings on new local streets should include banner brackets

ii. Light Distribution

- light fixtures should direct appropriate light levels effectively to desired areas, and avoid glare and light spillage to other areas, particularly residential uses and the sky
- light levels should be consistent within areas of similar use, and should avoid creating bright and dark areas
- fixture types and spacing should be selected to correspond with the scale of area to be lit
- consider including small scale, low level lighting along pedestrian routes, such as under benches, lighting associated with public art, and up-lighting of trees to add to the character and ambiance of pedestrian areas
- all light fixtures should be LED and night sky compliant

note: refer to specifications on the following pages

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Beta Pendant

selux



Project: _____

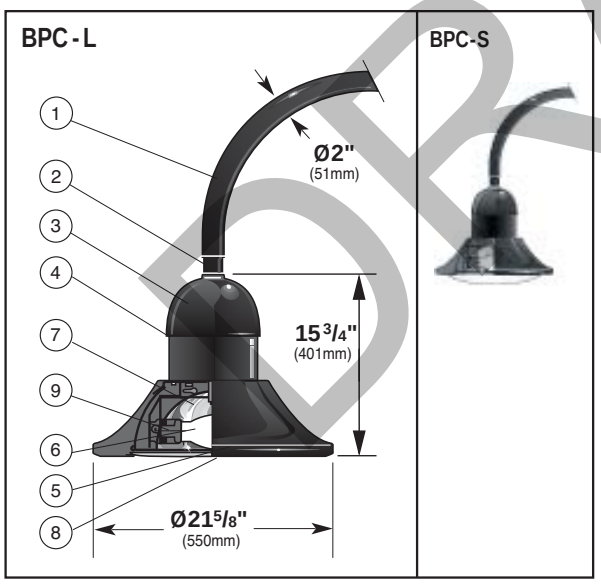
Type: _____ **Qty:** _____

Series	Optics	Reflector	Mounting	Lamping	Finish	Voltage	Options

Pole Series	Height	Finish	Pole Options

Series	Optics	Reflector	Mounting	Lamping		Finish	Voltage	Options
BPC Beta Pendant	**L** Flat Glass Lens **S** Sagged Glass Lens	**R2** Type II Aluminum Reflector **R3** Type III Aluminum Reflector **R5** Type V Aluminum Reflector	**1** Single **2C** Double Cluster **3C** Triple Cluster **4C** Quadruple Cluster **W** Wall Mount **P** Pendant	Metal Halide **H050**[1] 50w **H070** 70w **H100** 100w **H150** 150w	HPS **S050**[1] 50w **S070** 70w **S100** 100w **S150**[2] 150w	**WH** White **BK** Black **BZ** Bronze **SV** Silver **SP** Specify Premium Color	**120** **208** **240** **277** **347**	**HS** House Side Shield **QR** Quartz Restrike (40w Max) **FS**[1] Single Fusing **PCT** Photocell Tenon

[1]Not available for 347v [2]Only for 55v lamp



1. Mounting Arm - Ø2" (51mm) curved arm attaches to pole by means of a transition fitter supplied with fixture.

2. Fixture Connection - The fixture cap is securely fastened to curved arm using a steel connector.

3. Fixture Cap - Decorative fixture cap; removable to provide easy access to ballast.

4. Gasketing - Continuous molded gaskets provide weather-proofing, dust, and insect control.

5. Fixture Hood - Decorative aluminum shade.

6. Lamp - One clear, ED17 metal halide or high pressure sodium up to 150w. Horizontal lamp for R2 and R3 reflectors; base-up vertical lamp for R5 reflector. Lamp provided by others.

7. Reflector - Precision formed aluminum reflector available with a Type II, III, or V distribution.

8. Shielding - Specify tempered flat glass lens (L), or tempered sagged glass lens (S). Lenses are secured using a captive ring and are easily removable for access to lamp (no special tools required). Version with tempered Glass Lens (BPC-L) is IDA-Approved™ dark sky friendly.

9. Socket - 4KV Pulse rated porcelain medium base socket pre-wired to ballast at factory.

10. Ballast - (Not shown) A high efficiency, pulse start, core and coil ballast regulates voltage for H.I.D. lamp. Consult factory for detailed ballast information.

Polyester Powder Coating. All Selux luminaires and poles are finished in our Tiger Drylac certified facility and undergo a five stage intensive pretreatment process where product is thoroughly cleaned, phosphated and sealed. Selux powder coated products provide excellent salt and humidity resistance as well as ultra violet resistance for color retention. All products are tested in accordance with test specifications for coatings from ASTM and PCI.

Standard exterior colors are White (WH), Black (BK), Bronze (BZ) and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide. Hot Dip Galvanized finish (GV) on all steel parts also available.

Preferred Street Lighting
Manufacturer: Selux
Model: Beta

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Beta Lantern

selux



Project: _____

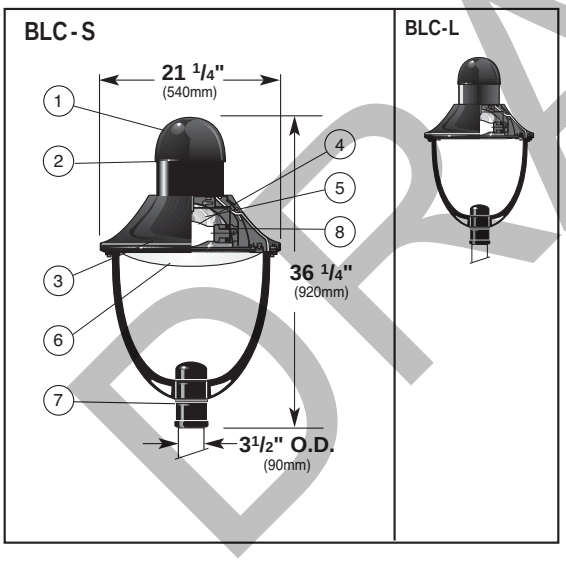
Type: _____ **Qty:** _____

Series	Optics	Reflector	Mounting	Lamping	Finish	Voltage	Options

Pole Series	Height	Finish	Pole Options

Series	Optics	Reflector	Mounting	Lamping		Finish	Voltage	Options
BLC Beta Lantern	**L** Flat Glass Lens **S** Sagged Glass Lens	**R2** Type II Aluminum Reflector **R3** Type III Aluminum Reflector **R5** Type V Aluminum Reflector	**1** Single **2** Double **W** Wall Mount	**Metal Halide** **H050**[1] 50w **H070** 70w **H100** 100w **H150** 150w	**HPS** **S050**[1] 50w **S070** 70w **S100** 100w **S150**[2] 150w	**WH** White **BK** Black **BZ** Bronze **SV** Silver **SP** Specify Premium Color	**120** **208** **240** **277** **347**	**HS** House Side Shield **QR** Quartz Restrike (40w Max) **FS**[1] Single Fusing **PCT** Photocell Tenon

[1]Not available for 347V [2]Only for 55v lamp



1. Fixture Cap - Decorative aluminum fixture cap removable for ballast access.

2. Gasketing - Continuous molded gaskets provide weather-proofing, dust, and insect control.

3. Fixture Hood - Decorative aluminum shade with hinged door for lamp access (no special tools required).

4. Lamp - One clear, ED-17 metal halide or high pressure sodium up to 150w. Horizontal lamp for R2 and R3 reflectors; base-up vertical lamp for R5 reflector. Lamp provided by others.

5. Reflector - Precision formed aluminum reflector available with a Type II, III, or V distribution.

6. Shielding - Specify tempered flat glass lens (L), or tempered sagged glass lens (S). Lenses are secured using a captive ring and are easily removable for access to lamp (no special tools required). Version with tempered Glass Lens (BLC-L) is IDA-Approved™ dark sky friendly.

7. Pole Fitter - Cast aluminum fitter secures to pole with 3 stainless steel Allen head set screws. For 3 1/2" (90mm) pole tenon.

8. Socket - 4KV Pulse rated porcelain medium base socket pre-wired to ballast at factory.

9. Ballast - (Not shown) A high efficiency, pulse start, core and coil ballast regulates voltage for H.I.D. lamp. Consult factory for detailed ballast information.

Selux utilizes a high quality Polyester Powder Coating. All Selux luminaires and poles are finished in our Tiger Drylac certified facility and undergo a five stage intensive pretreatment process where product is thoroughly cleaned, phosphated and sealed. Selux powder coated products provide excellent salt and humidity resistance as well as ultra violet resistance for color retention. All products are tested in accordance with test specifications for coatings from ASTM and PCI.

Standard exterior colors are White (WH), Black (BK), Bronze (BZ), and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide. Hot Dip Galvanized finish (GV) on all steel parts also available.

Preferred Pedestrian Level Street Lighting Manufacturer: Selux Model: Beta

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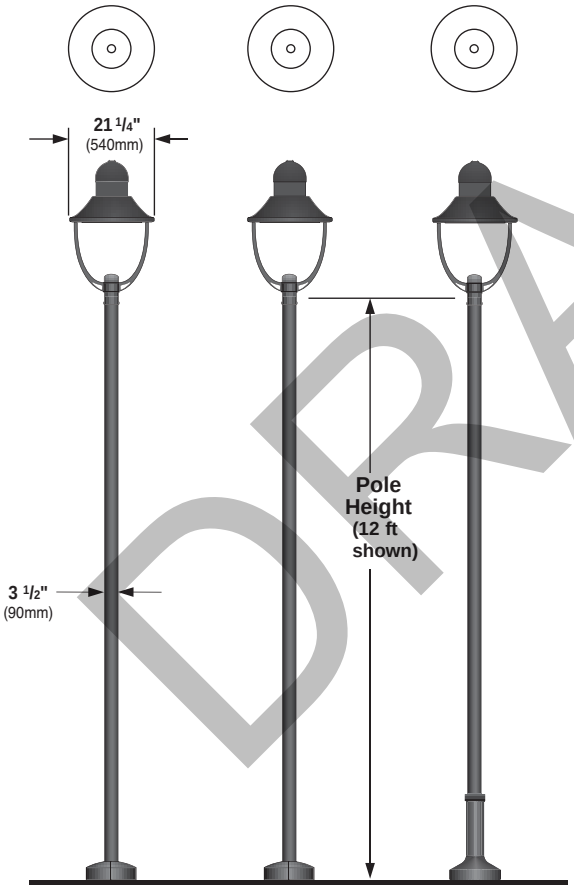
Beta Lantern

Single

Die-cast aluminum fitter base secured to pole with three, stainless steel, Allen head set screws.



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3.1.3 Street Tree Species and Vegetation

Intent: To provide the best possible conditions for healthy street trees that support the pedestrian nature of the Town Centre and the Mountain Village theme.

a. General Guidelines

- street trees should be located and provided with growing conditions which optimize health and extend their life span
- best practise strategies such as tree wells or continuous planting beds should be provided
- permeable paving or landscaping should ideally be provided adjacent to trees
- Silva Cells or equivalent should be considered in constrained situations over structure etc.
- placement and location of street trees is encouraged to be "natural" or irregular rather than evenly placed
- natural groupings of trees are encouraged on all new streets within the Town Centre
- recommended locations include gateways, as buffers to parking or refuse collection areas and to mark pedestrian crossings
- landscape lighting should be included
- conifers are recommended where space permits (2.5 m minimum depending on species) and where they do not impede sidewalks or other public spaces

note: large conifers on private property within the front setbacks are encouraged to relate to the landscape on the street and the height of new developments







examples of informal planting/ boulders

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b. Recommended Plant Species for Informal Groupings on Public Streetscapes

i. Trees

- Acer circinatum / Vine Maple
- Acer griseum/ Paperbark Maple
- Acer glabrum var. douglasii/ Douglas Maple
- Carpinus betulus 'fastigiata' / Fastigiate European Hornbeam
- Cornus nuttallii/ Pacific dogwood
- Cercidiphyllum japonicum/ Katsura
- Ginkgo biloba / Ginkgo
- Nyssa sylvatica / Black Gum
- Thuja plicata / Western Red Cedar (for natural areas)
- Styrax japonica/ Japanese snowbell tree

ii. Shrubs and Groundcover:

- Adiantum pedatum/ Northern maidenhair fern
- Arctostaphylos uva-ursi 'Vancouver Jade'/ Bearberry
- Amelanchier x grandiflora 'Autumn Brilliance'/ Autumn Brilliance Apple Serviceberry
- Arctostaphylos uva-ursi/ Kinnikinnick, Bearberry
- Asarum caudatum/ Wild ginger
- Blechnum spicant/ Deer fern
- Calluna vulgaris var./ Heather
- Cornus sericea / Red Twig Dogwood
- Echinicea purpurea 'Kim's Knee High'/Dwarf purple coneflower
- Euphorbia myrsinites/ Donkey-Tail Spurge
- Festuca glauca/ Blue fescue
- Gaultheria shallon / Salal
- Hamamelis virgiana / Witchhazel
- Lonicera pileata/ Privet honeysuckle
- Mahonia aquifolium / Oregon Grape
- Mahonia nervosa/ Cascade Oregon grape
- Polystichum munitum / Sword Fern
- Stipa tenuissima/ Mexican feather grass
- Spirea douglasii / Hardhack
- Spirea japonica 'Walbuma'/ Magic Carpet spirea

iii. Rain Gardens and Bio-Swales:

- Trees
  - Acer circinatum/ Vine maple
  - Amelanchier alnifolia/ Western service-berry
  - Malus fusca/ Pacific crabapple

- Shrubs
  - Cornus sericea 'Kelseyi'/ Dwarf redtwig dogwood
  - Holodiscus discolor/ Oceanspray
  - Rubus parviflorus/ Thimbleberry
  - Myrican californica/ Pacific wax myrtle
  - Physocarpus capitatus /Pacific ninebark
  - Symphonicarpos albus/ Snowberry

- Grasses, Ferns + Groundcover
  - Asarum caudatum/ Wild ginger Aster chilensis/ Common California aster
  - Carex obnupta/ Slough sedge
  - Eleocharis palustris/ Spike rush
  - Eriophorum angustifolium/ Common cottongrass
  - Isoetes histrix/ Land quillwort
  - Typha minima/ Dwarf cattail
  - Juncus effusus var. pacificus/ Common Rush
  - Juncus tenuis/ Slender rush
  - Athyrium filix-femina/ Lady fern
  - Osmunda cinnamomea/ Cinnamon fern
  - Osmunda regalis/ Royal fern
  - Polystichum munitum/ Sword fern

- Dry area of Garden (higher banks)
  - Achillea millefolium / Yarrow
  - Arbutus unedo 'Compacta'/ Strawberry Tree
  - Echinacea purpurea/ Purple coneflower
  - Iris pseudacorus / Yellow flag iris
  - Ribes sanguineum/ red-flowering currant
  - Wahlenbergia communis/ Tufted bluebell

**This list includes full sun and shade tolerant plants. Further investigation of species is required for appropriate plant selection.*



Symphonicarpos albus/ Snowberry

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c. Recommended Plant Species for Informal Groupings on Private Property and Parks

i. Trees (Large)

- Acer macrophyllum / Big Leaf Maple
- Carpinus betulus ' fastigiata' / Fastigiate
- European Hornbeam
- Cercidiphyllum japonicum/ Katsura
- Cornus 'Eddie's White Wonder'/ Dogwood 'Eddie's White Wonder'
- Ginkgo biloba / Ginkgo
- Nyssa sylvatica / Black Gum
- Pseudotsuga menziesii / Douglas Fir
- Thuja plicata / Western Red Cedar

ii. Trees (Medium)

- Abies lasiocarpa/ Subalpine fir
- Acer circinatum / Vine Maple
- Acer griseum/ Paperbark Maple
- Acer glabrum var. douglasii/ Douglas Maple
- Betula platyphylla var. japonica 'Whitespire'/ Whitespire Japanese white birch
- Chamaecyparis nootkatensis 'Green Arrow'/ Weeping Alaskan Yellow Cedar
- Davidia involucrate/ Dove Tree
- Parrotia persica / Parrotia
- Picea omorika 'Pendula Bruns'
- Picea glauca 'Pendula'
- Pinus sylvestris 'Fastigiata'/ Scotch pine
- Populus tremula 'Erecta'/ Columnar European aspen
- Stewartia pseudocamellia/ Japanese stewartia

iii. Shrubs and Groundcover

Everything 3.3.b as well as:

- Imperata cylindrical 'Rubra'/ Japanese blood grass
- Chamaecyparis obtuse 'Nana Lutea'/ Golden Dwarf Hinoki Cypress
- Liriope muscari/ Lily turf
- Pennisetum alopecuroides/ Fountain grass
- Santolia chamaecyparissus/ lavender cotton
- Sedum 'Autumn Joy'/Autumn Joy Stonecrop
- Taxus x media 'densiformis'/ Yew



Acer macrophyllum / Big Leaf Maple



Imperata cylindrical 'Rubra'/ Japanese bloodgrass

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3.2 Specific Street Design Guidelines

3.2.1 High Street:

- Abbotsford Standard Series 'Natural' running bond concrete pavers are recommended for hard surfaced areas of the public and private realm excluding concrete bands from the inboard edge of the curb extending to the face of the building
- Abbotsford Standard Series 'Charcoal' herringbone concrete pavers are recommended for travel lanes and on-street parking
- travel lanes are recommended at 3.0 m wide, cycle lanes at 1.8 m wide, on street parking at 2.4 m wide, furniture zone (excluding seating) and planting clusters at 1.8 m wide and a clear pedestrian zone at 2.0 m wide
- concrete paving with sawcuts are recommended for cycle lane and pedestrian crossings
- consider locating public art at one end of the pedestrian crossing
- landscaping including tall trees and conifers, boulders, seating and possible public art incorporated into the paving material are recommended at areas of architectural interest including building entrances
- infrastructure including structural support, electricity and water supply to accommodate seasonal and/or community events should be included in the High Street
- public art in a variety of forms including free standing or within paved areas is highly encouraged





community/ seasonal street events



example of landscaping/seating/paving treatment at area of architectural interest





examples of public art integrated into sidewalk paving

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- refer to Section 3.1.1. for stormwater management guidelines

- the location, size and distribution of street trees and vegetation is an critical determinant of the street and Town Centre character and the following guidelines apply:

    - tree clusters should have a minimum width of 3.0 m
    - each cluster should provide diversity in plant species
    - clusters should not be located directly opposite the street from each other
    - distances between tree clusters should vary
    - minimum distance between clusters should be 3.0 m
    - ground cover and/or low shrubs should be incorporated into the tree cluster beds as outlined in Section 3.1.3 Street Trees and Vegetation
    - a variety of boulders, some very large, should be integrated into all planted areas
    - curb bulges are important opportunities for pedestrian level lighting, seating, possible public art and intensive planting
    - where possible, benches should be located within the bulges, located and oriented as indicated on the High Street concept diagram
    - benches should be located on a concrete pad 1.0 - 1.2 m wide plus a clear space of 1.0 m for a total width of 3.0-3.4 m and the length of the pad should accommodate the bench plus 1.0 m of clear space for wheelchairs, strollers, etc. adjacent to the street



precedent street tree cluster near Lynn Valley Library

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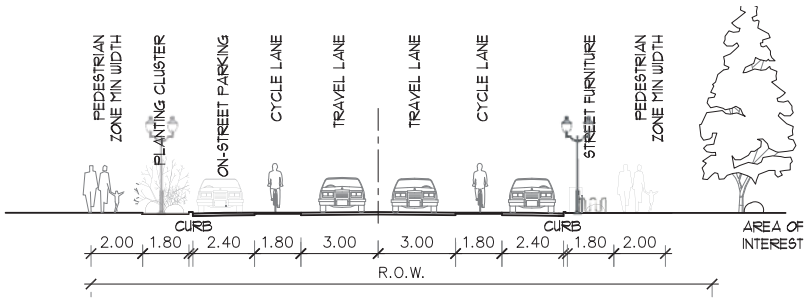

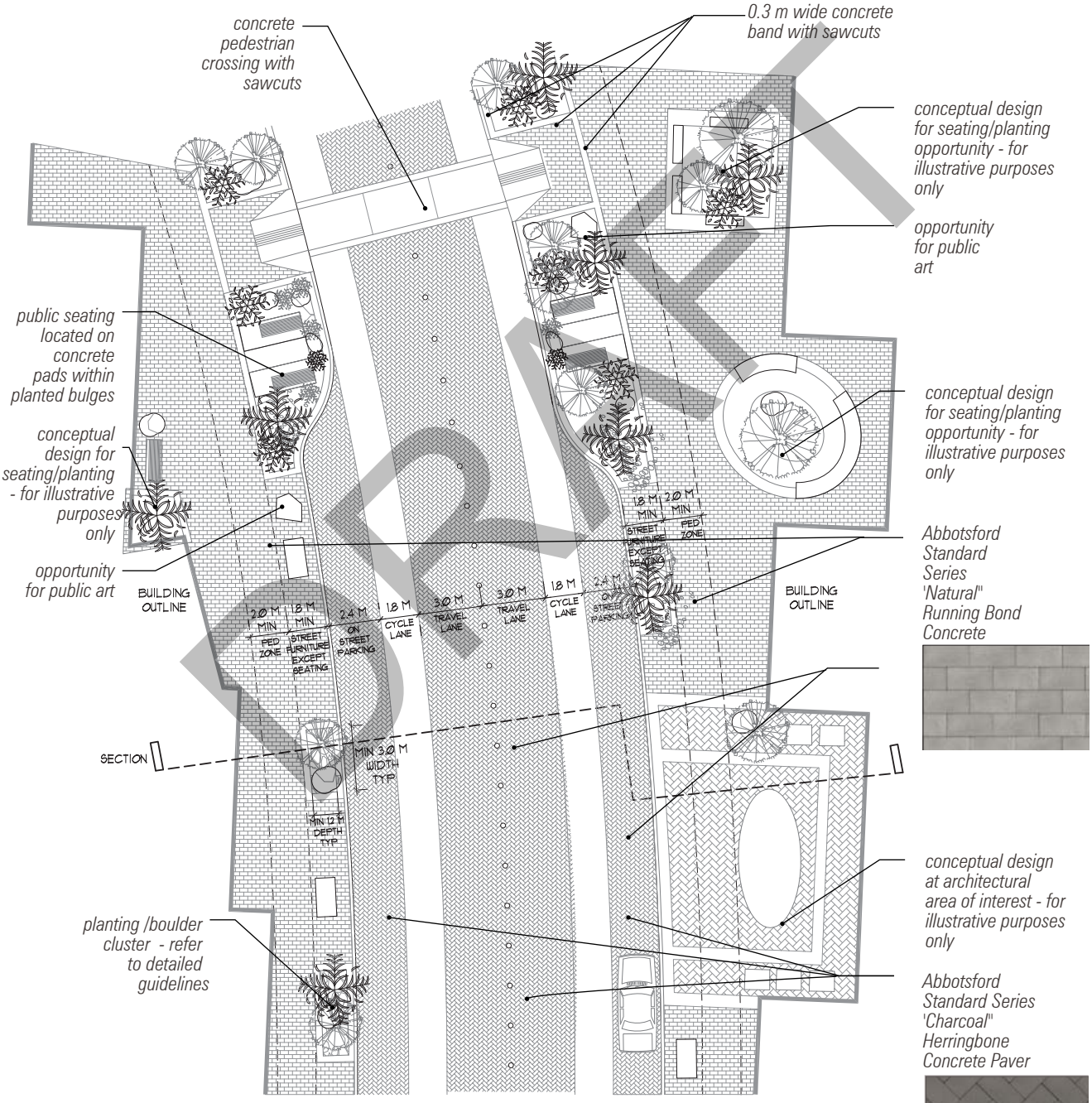

concept diagram for the High Street

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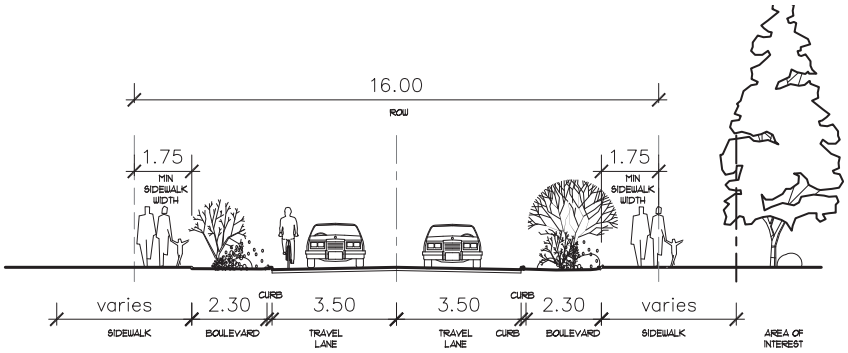
3.2.2 Library Lane

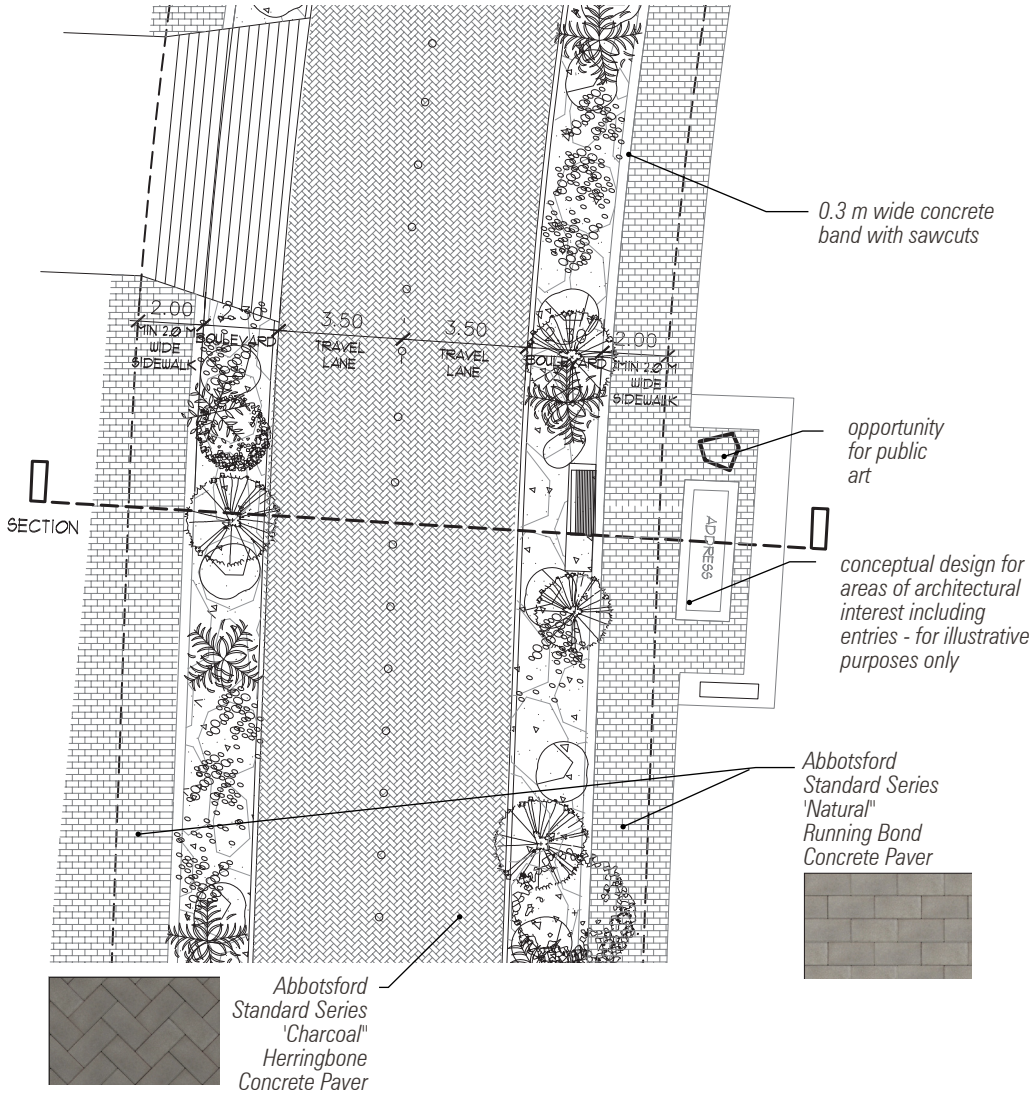
- Abbotsford Standard Series 'Natural' running bond concrete pavers are recommended for hard surfaced areas of the public and private realm excluding concrete bands from the inboard edge of the curb extending to the face of the building/areas of private outdoor space/ landscaping
- Abbotsford Standard Series 'Charcoal' herringbone concrete pavers are recommended for travel lanes
- travel lanes are recommended at 3.6m wide, planted boulevards at 2.3 m and sidewalks at min 2.0 m
- landscaping including tall trees and conifers, boulders, seating and possible public art are recommended at areas of architectural interest including building entrances, consistent with the Mountain Village theme
- the location, size and distribution of street trees and vegetation within the planted boulevards and any areas of private planting adjacent to the public realm are critical determinants of the street and Town Centre character and the following guidelines apply:
    - boulevards should provide variety and diversity in plant species
    - a variety of boulders, some very large, should be integrated into all planted areas
    - benches should integrated into boulevard design, oriented to the sidewalk on a concrete pad 1.0 - 1.2 m wide and the length of the pad should accommodate the bench plus 1.0 m of clear space for wheelchairs, strollers, etc.
    - recycling and trash receptacles should be located on concrete pads, within the boulevard, adjacent to the sidewalk
    - pedestrian level lighting should be integrated into the boulevard design
    - public art is encouraged within the boulevard or at areas of architectural interest, including entries, in a variety of forms including free standing or within paved areas
- refer to Section 3.1.1 for stormwater management guidelines

[confirm travel lane width]



example of boulevard planting and treatment

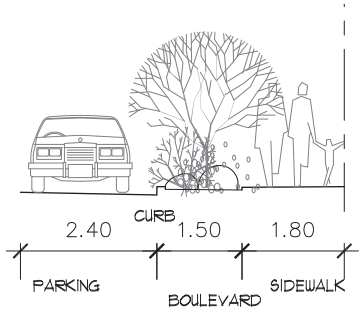




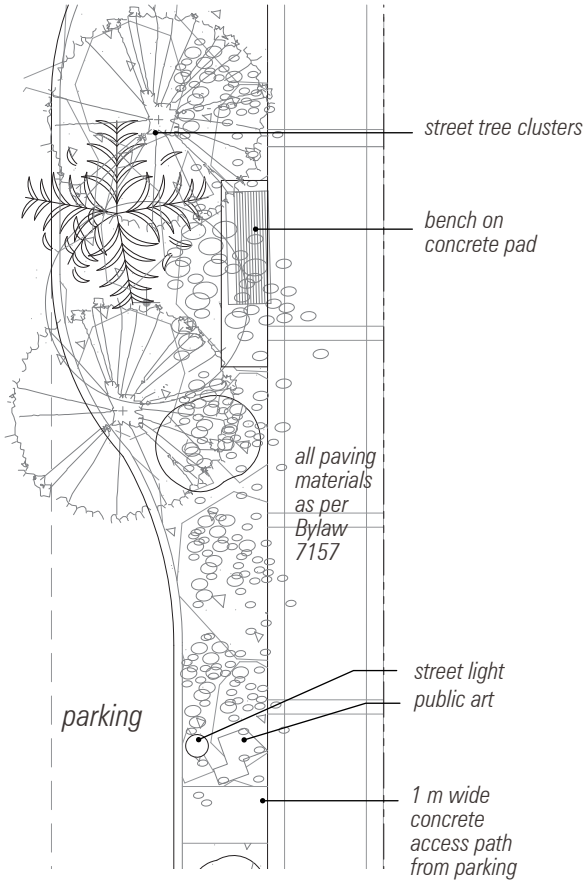
concept diagram for Library Lane

3.2.3 New Local Streets:

- Abbotsford Standard Series 'Charcoal' herringbone concrete paver is recommended for on street parking to relate to the paving materials within the Town Centre Core
- all other paving materials to conform to ***Bylaw 7157***
- pedestrian level lighting, low shrubs or groundcover, boulders and recycling receptacles are recommended at both ends of pedestrian crossing within the planted bulges
- the location, size and distribution of street trees and vegetation within the planted boulevards is a critical determinant of the street and Town Centre character and the following guidelines apply:
    - boulevards should provide variety and diversity in plant species
    - a variety of boulders, some very large, should be integrated into all planted areas
    - benches should integrated into boulevard design, oriented to the sidewalk on a concrete pad 1.0 - 1.2 m wide and the length of the pad should accommodate the bench plus 1.0 m of clear space for wheelchairs, strollers, etc.
    - recycling and trash receptacles should be located within the boulevard, adjacent to the sidewalk
    - pedestrian level lighting should be integrated into the boulevard design
- refer to Section 3.1.1 for stormwater management guidelines



section



plan segment

4.0 BUILDING DESIGN GUIDELINES

The Flexible Planning Framework approved by Council for Lynn Valley Town Centre (below) illustrates locations of development parcels and recommended building heights.

Guidelines for all development forms are divided into the following sections:

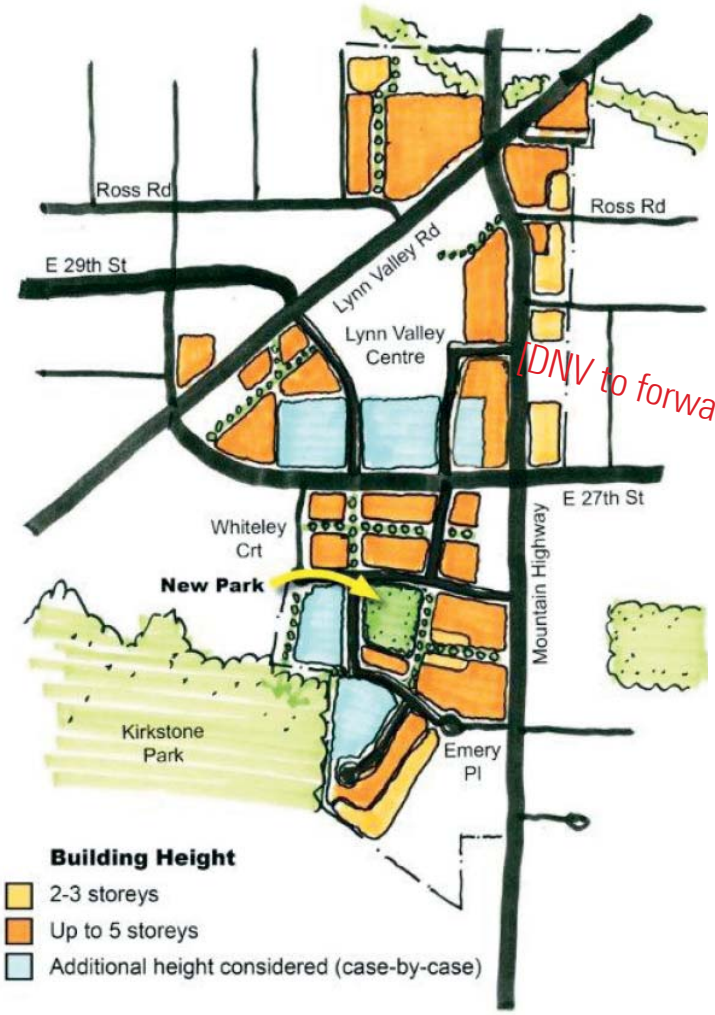
Section 4.1: guidelines common to all building forms

Section 4.2: guidelines for Commercial and Mixed Use Development (refer to 4.3 and 4.4 for residential portions)

Section 4.3: guidelines common to all residential developments

Section 4.4: guidelines for Medium Density Multi-Family Developments

Section 4.5: guidelines for Low Density Ground Oriented Developments up to 3 storeys



[DNV to forward high res replacement]

4.1 General Guidelines

(replaces OCP Schedule B Guideline: A3.7 Building Materials and Transitions and A3.8 Colours and Finishes)

Intent: The form and character of Town Centre developments should support the Mountain Village theme and incorporate elements that extend the natural North Shore environment. Natural building materials, an earth toned colour palette and landscaping integrated into the building forms are strongly recommended. Refer to Section 3.1.1 for stormwater management guidelines.



wood products

4.1.1 Building Materials

Intent: Building elevations emphasizing one or two natural building materials, in addition to glazing, are strongly encouraged. Accent materials providing colour, interest and contrast to the overall building design are encouraged. Well crafted, durable materials that support sustainability and Town Centre themes are expected throughout.

- natural building materials including wood, stone, concrete and brick should dominate the expression on lower floors and along the streetwall including retaining and garden walls
- materials on upper floors are expected to be consistent with the quality, durability and craftsmanship of the lower levels
- accent materials including ceramic tile or glazed brick and coloured glass and spandrel panels are recommended for their durability and wide range of colour choices
- functional screens, shading devices and other passive solar design elements that complement the architecture are highly recommended
- heavy timber and engineered wood elements especially along the base of the building and at entrances are strongly encouraged
- wood elements should be protected from weathering using best building practices and appropriate finishes that preserve the natural colour and texture
- brick colours should be chosen to complement the palette of natural stone and wood: tones of grey are considered most appropriate
- the use of red brick is discouraged



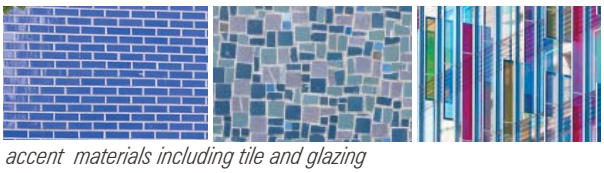
natural stone



grey brick



concrete, textured concrete and concrete block



accent materials including tile and glazing

examples of recommended exterior materials



examples of wood shading and entrance elements

- soffit materials should be consistent with the building's overall durability and quality - vinyl and perforated materials are discouraged
- wood soffits are preferred where permitted
- clear vision glass is preferred over tinted products
- material transitions should avoid a "wallpaper" look
- the use of vinyl or aluminum siding or other materials made to imitate natural finishes is discouraged
- the level of design quality required for streetscape elements should be maintained for all sides of buildings and in site design

4.1.2 Building Colours

- the primary colour palette within the Town Centre should reflect the local mountain and forest environment.
- brighter, complementary accent colours to offset low winter light levels and increase visual interest should be considered



preferred colour palette

4.1.3 Rainwater Design Elements

Intent: to highlight and celebrate rainwater management as a feature of Lynn Valley's mountain character

- visible integration of rainwater management into the building design is an important objective
- integration of landscaping including green walls, green roofs and landscaped roof terraces into the building design is strongly supported
- innovative methods of directing rainwater from roofs and canopies to street level landscaped areas including rain gardens is encouraged
- public art that is integrated with and designed to make visible rainwater management strategies is encouraged
- refer to Section 3.1.1 for stormwater management guidelines



green walls and green roofs support rainwater management



building design should integrate rainwater collection and storage

4.1.4 View Corridors

Intent: to protect and highlight views to mountains as a basic component of Lynn Valley's character and identity

- protect mountain views defined by view corridors (refer to adjacent location map) and at street ends
- incorporating a 2-3 storey streetwall height, sloped roof lines on low-rise buildings and smaller, terraced upper floors of mid-rise buildings are strategies to optimize views
- developments located on view corridors are recommended to provide a view analysis to determine optimal street wall height to protect views



location of Lynn Valley's view corridors

4.1.5 Variation in Building Design

(replaces OCP Schedule B Guideline: B 3.1 Variation in Building Design)

Intent: the identity and character of individual buildings should support the Mountain Village theme while contributing interest and variation to streetscapes

- individual buildings within a development and developments adjacent to each other are expected to provide adequate variation in form, materials and colour to avoid repetitive, monotonous streetscapes
- design variation as a response to solar orientation is strongly encouraged



recommended mixed use streetwall heights and step backs

4.1.6 Landscape Design

Intent: to encourage an authentic and sustainable landscape throughout the Town Centre that clearly reflects and responds to Lynn Valley's unique mountain setting and local climate.

- incorporate native plants and materials in an "informal", randomly grouped or unstructured manner
- combine tree clusters (including conifers where appropriate, especially in relation to higher buildings), native North Shore shrubs and ground cover species to provide a transition in scale
- provide off leash areas on private developments and where space is prohibitive, dog relief areas are required
- screen views of refuse/recycling and other less attractive architectural elements with plants, trellises or other garden structures
- incorporate green walls as landscape features or to enhance blank walls wherever possible
- incorporate green roofs where possible to manage rainwater, provide useful outdoor space enhance views from higher building forms and/or provide breaks along the streetwall
- refer to Section 3.1.1 for stormwater management guidelines





clusters of local plants and materials including boulders and tall conifers are preferred landscape materials



shopfront design variety, changes in plane, materials and roof line all provide breaks in the streetwall

4.2 Commercial and Mixed Use Buildings

4.2.1 Streetwall Height (Building height facing the street)

(in addition to OCP Schedule B Guideline: A1.8 Enclosure)

- a 2-3 storey streetwall height is recommended
- a 2.4 m minimum step back is recommended for storeys above the streetwall to encourage opportunities for terraces and landscaping

4.2.2 Residential Uses

- refer to *4.3.1 Residential Setback Treatments, 4.3.2 Ground Oriented Units* and *4.4.3 Setbacks* for detailed design guidelines for residential portions of mixed use buildings



green walls and other landscaping opportunities are recommended at breaks in the streetwall

4.2.3 Breaks in the Streetwall

(refer to OCP Schedule B Guideline: A1.10 Breaks in the Streetwall)

- buildings exceeding 45 m long should provide a significant architectural break in the street facade to diminish the visual impact of excessive length
- gaps between sections of overhead weather protection including awnings and canopies should be coordinated with visual breaks in the street facade
- entrances to residential lobbies are opportunities to create breaks in the streetwall through increased setbacks, unique canopies or awnings, a graphic approach to the design of the address and specialized lighting and landscaping
- building breaks that provide opportunities for landscaping are encouraged including planting large conifers where appropriate





shopfronts that include heavy timbers and rainwater collection systems support the Mountain Village theme

4.2.4 Storefronts

(in addition to OCP Schedule B Guideline: A1.11 Storefronts)

Intent: diversity, variety and designs that recognize the human scale are expected on mixed-use streetscapes. Larger commercial spaces with extended frontages are expected to provide active uses along the street including views into shop interiors

a. General Storefront Guidelines

- to provide variety and interest, larger outlets should incorporate smaller shops with their own entries and identities into commercial frontages
- a rhythm of storefront widths from 5.0 to 10,0 m is expected
- small outlets at a scale appropriate for kiosk or incubator businesses are encouraged to enliven the streetwall and provide opportunities for small businesses within the Town Centre
- a minimum of 50% of the entire retail frontage should be comprised of smaller shops
- shop entrances recessed into the building face are recommended to maximize opportunities for glazing, signage and retail display space along the streetwall



high quality materials, transparent shopfronts, attractive and individual signage and landscape treatments all support economic activity and a walkable community



the quality and character of the street is enhanced through careful attention to the design of entrances, landscaping, awnings and lighting

b. Materials and Proportions

- areas of shopfront glazing should maximize views into interiors and opportunities for retail display at the pedestrian level
- 4.0 m minimum dimension for ground level floor to floor heights is recommended
- shopfront exteriors should be constructed of high quality materials that are durable, resistant to graffiti, complement the overall appearance of the building and are compatible with adjacent shopfronts
- including narrow frontages into retail and commercial streetscapes encourages diversity, variety and an enhanced pedestrian experience

c. Entrances

- shopfront entrances should be focal points on commercial streetscapes

d. Awnings and Canopies

- awnings and canopies are important opportunities for signage, colour and weather protection and variation along the street
- the size, colour and overall design of awnings on multiple-storefront buildings should balance variety and diversity with the benefits of a unified streetfront
- awnings and canopies should provide weather protection that is as continuous as possible
- canopies, awnings or overhangs should emphasize individual shopfronts
- gaps between awnings or canopies should generally be a maximum of 1.0 m and align with architectural breaks

e. Landscaping/Street Furniture

- planters, window boxes and/or seating integrated into commercial exteriors reinforce the human scale and support variety





seating and retail displays are accommodated within the commercial setback zone

4.2.5 Setbacks

(In addition to OCP Schedule B Guideline: A3.3 Setbacks)

- a min 1.0 m setback on the ground floor is recommended to accommodate retail displays and seating
- refer to 4.3.1 for residential setback guidelines

4.2.6 Signage and Lighting

(replaces OCP Schedule B Guideline: A3.15 Signage and Lighting)

- signs and lighting should contribute to the Town Centre as a walkable, pedestrian-oriented development
- pedestrian-oriented signs are preferred including: overhead hanging signs perpendicular to the shopfront, painted window signs, signage incorporated into awnings or canopies
- shop signs and lighting that are well crafted are encouraged
- larger commercial outlets with extended frontages are expected to incorporate variation in signage along the street
- signs should be unique and complement the style, composition, materials, colours and details of the building
- generally, overhead signs should not extend above the first storey or conflict with design details, windows or cornices
- window signs and graphics should complement and enhance the shopfront design and support walkability by not restricting views into shop interiors
- light fixtures should be located to enhance the building design
- larger format retail outlets should include pedestrian-oriented signs along the Valley Centre Avenue
- freestanding commercial signs should incorporate natural materials including stone, wood (including heavy timber) ceramic glazed tiles and masonry and be as sensitively illuminated as reasonable
- car-oriented signs including large backlit plastic signs should be avoided
- exterior lighting on mixed use streets should illuminate facades, entrances and signage and provide an adequate light level for personal safety
- exterior lights should not produce glare onto streets, public ways or adjacent properties
- lighting fixture design should complement the building facade.



providing opportunities for innovative signs on the commercial streetscape



examples of free standing signs



well designed exterior lighting improves the streetscape and enhances the shopfront

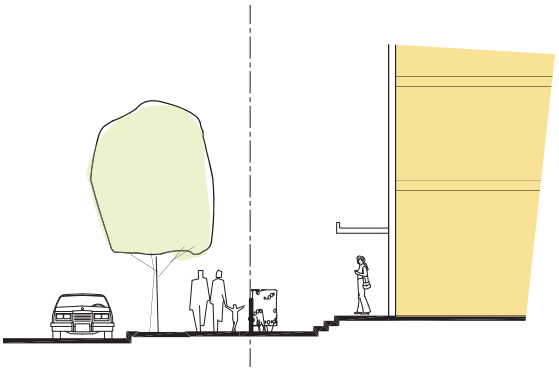
4.3 General Residential Building Design Guidelines

4.3.1 Residential Setback Treatments

- setting back residential buildings from the property lines provides new developments a degree of privacy and a landscaping opportunity, similar to existing residential patterns
- hedges, garden walls, pathways, lighting and addresses or other residential indicators are encouraged to mark the transition from the public to semi-public or private realm



ground level units with front doors, gardens, hedges and gates oriented to the street



raised front stoops and weather protection are recommended at ground level units

4.3.2 Ground-oriented Units

- street oriented ground level residential units are encouraged in all residential development forms including front doors, gardens, gates, and pathways oriented to the sidewalk where possible, to increase livability and enhance the streetscape
- ground oriented units accessed from a courtyard should be visible from the street where possible
- particularly where ground floor units are single storey the floor level should be sufficiently higher than the surrounding grade to maintain privacy
- strategies to maximize daylighting and livability including generous areas of glazing and high floor to ceiling heights are encouraged
- the interface between public and private properties should be treated with high quality materials and architectural finishes



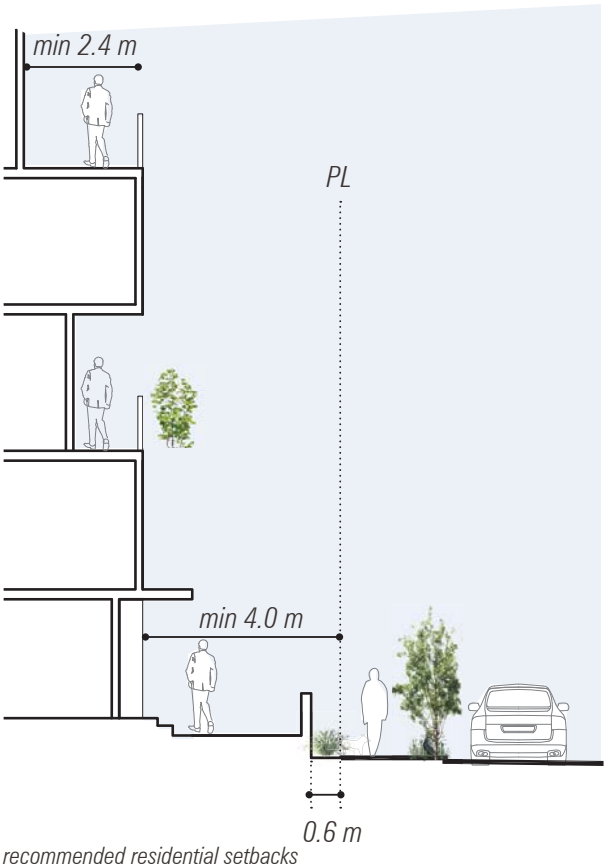
garden gates, pathways, lighting and addresses enhance residential property edges

4.4 Medium Density Multi-Family

4.4.1 Setbacks

(replaces OCP Schedule B Guideline: B3.5 Setbacks and B 2.6 Building Setback to the Street)

- residential uses should be setback minimum 4.0 m from the property line
- setting back the garden wall, hedges and gates 0.6 m from the property line is encouraged to provide an opportunity for grade transitions and landscaping
- refer to 4.2.1 Streetwall Height for upper level step backs



recommended residential setbacks

4.4.2 Building Form including Roofs

(replaces OCP Schedule B Guideline: B4.9 Articulation of the Building and B4.10 Sculpting the Top of the Tower)

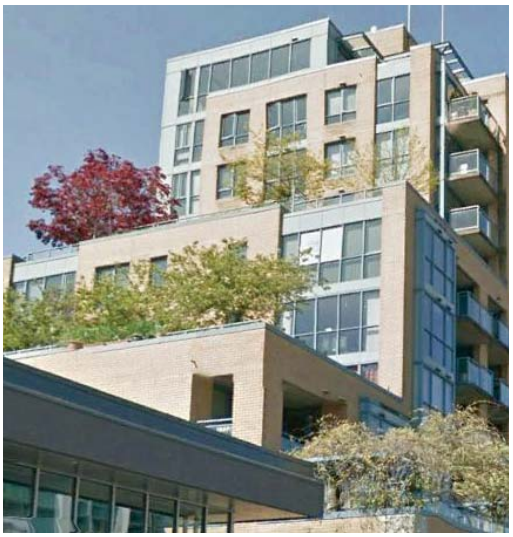
a. Buildings Up to 5 Storeys

- simple, purposeful roof forms are preferred

b. Buildings Higher than 5 Storeys

Intent: designers are encouraged to consider how new and existing and future tall buildings relate to each other and to the backdrop of the North Shore mountains

- roof forms that dominate the building silhouette and emphasize the top of the building are discouraged
- simple, purposeful roof forms are preferred
- stepping back upper levels is encouraged to reduce bulk and shadowing and to enhance livability by incorporating upper terraces and roof gardens
- upper levels that incorporate architecture elements such as trellises, arbours or other shading or privacy elements in materials and colours to support the Mountain Village theme are encouraged


an example of upper level step backs and garden spaces

4.5 Low Density and Ground Oriented Multi-Family (up to 3 storeys)

Discussion

This land use designation is expected to be developed with townhouses or rowhouses to provide a transition in density between the Town Centre and existing residential neighbourhoods.

These attached residential forms should support the Mountain Village theme through their form and character including colour, materials and setback treatment.

4.5.1 Height, Massing and Variation

(replaces OCP Schedule B Guideline: B1.1 Height and Massing)

- building height should be maximum three storeys
- portions of buildings adjacent to lower existing houses should transition towards the height of those houses
- massing should reflect the rhythm of individual dwelling units, with an emphasis on vertical proportions.
- stepped building forms, bay windows and recessed areas are encouraged
- variations of massing, dwelling unit types, materials and colour, within a unifying design theme, will contribute to the contemporary Mountain Village theme
- buildings consisting of small groups of dwelling units are encouraged
- long rows of repetitive identical units should be avoided

4.5.2 Roof Treatment

(replaces OCP Schedule B Guideline: B1.12 Roof Treatment)

- roof forms should be simple - either contemporary shed or flat roofs or more traditional steep pitched gable roofs
- roofs should relate to and emphasize individual dwelling units
- wide overhangs should be provided
- generous roof canopies over entries are encouraged to provide weather protection and identify unit entries
- use of generously proportioned solid wood fascia, trim and bracket elements contributes to the intended mountain character of buildings
- exploration of green roofs is encouraged







examples of simple roof forms, articulated elevations, landscaped setbacks and individual unit identity

4.5.3 Rear Yard Setbacks

(replaces OCP Schedule B Guideline: B2.8 Rear Yard Setbacks)

- where units back onto walkways, lanes or public open spaces, a minimum 6.0 m setback should be provided for fenced or screened private open space with consideration to vary for L or U-shaped buildings
- some variation is encouraged in setback, and in dwelling unit rear elevation design, to avoid creating a visual wall

4.5.4 Pedestrian Access

(replaces OCP Schedule B Guideline: B2.10 Pedestrian Access)

- all dwelling units should be entered directly from grade
- street fronting units are preferred, with individual walkways between unit entries and sidewalks
- entries from common courtyards are preferred to entries off parking areas or lanes, unless the lane is developed as a greenway
- unit entries should ideally be visible from well used public property - particularly where entries are off private courtyards
- CPTED best practises should be provided

4.5.5 Rainwater Management

- rainwater should be infiltrated optimally into the ground at each development site
- the rainwater management strategy is encouraged to be made visible, and placement and design of gutters, rain water leaders, chains, splash blocks, rain barrels, etc. should be carefully considered
- integrating rainwater management elements into the design should reinforce the identity of individual dwelling units
- simple profiles and geometries of gutters and rain water leaders, and use of durable materials, should contribute to the Mountain Village character



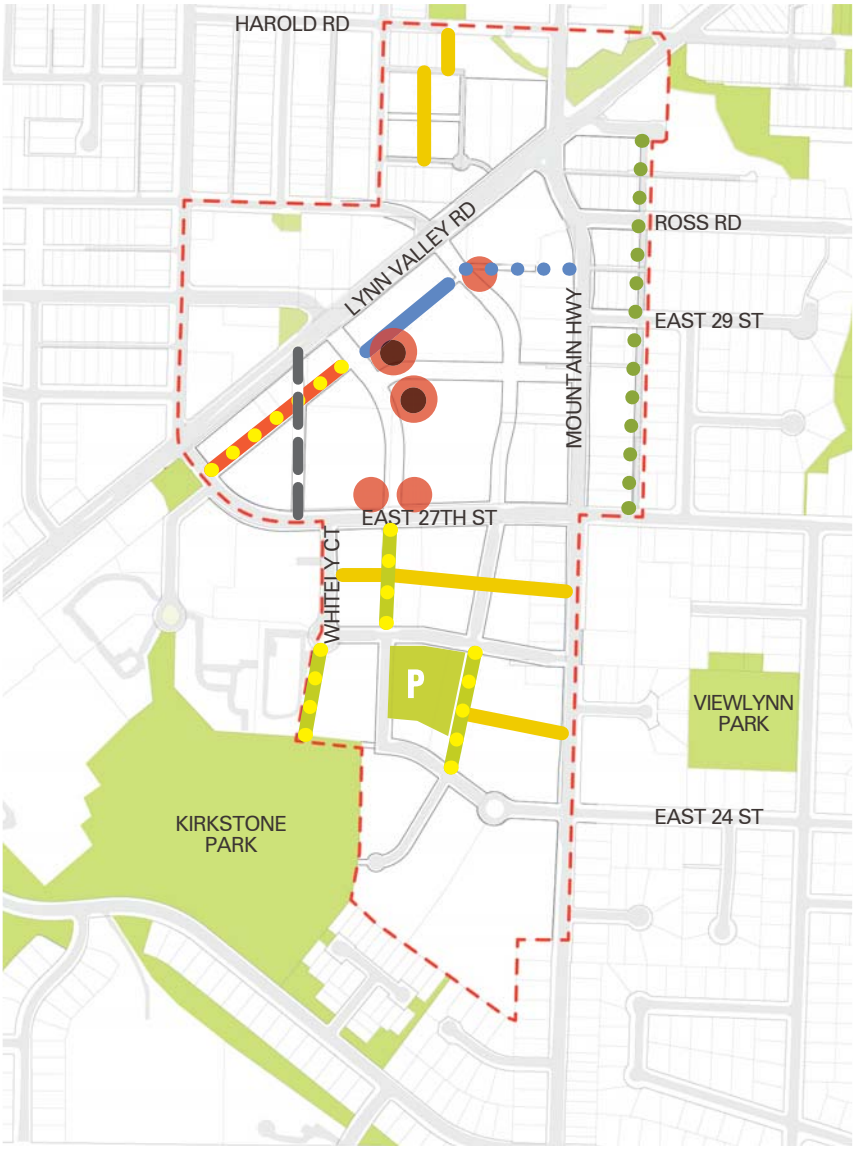
design elements that manage rainwater are encouraged

4.5.6 Cladding

(replaces OCP Schedule B Guideline: B3.3 Cladding)

- use of natural materials such as wood siding and shingles, stone, and brick is encouraged and should dominate the building expression, especially facing the street, public open spaces and at ground floor elevations
- stone dash stucco is preferred to smooth trowelled stucco, and textured stucco should be avoided
- manufactured panels, planks and shingles, should be well crafted and durable
- trim should be wood, generally nominal 2" thick, in generous widths to contribute to the Mountain Village character

5.0 OPEN SPACE GUIDELINES





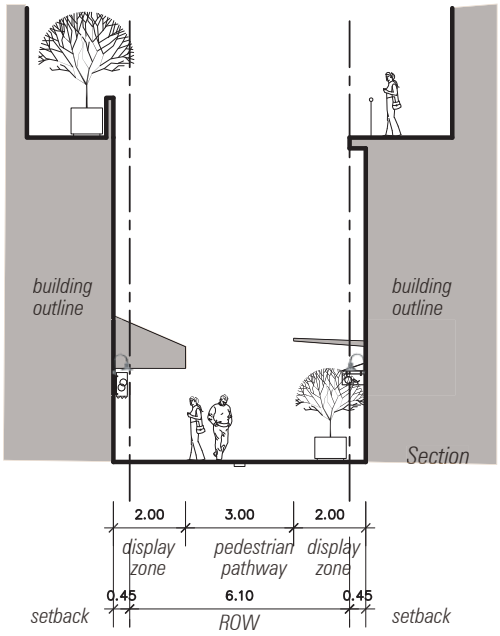
5.1 Pedestrian/Cycle Pathways

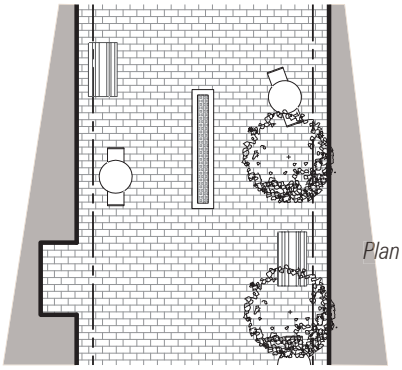
5.1.1 Town Centre Core Pedestrian Mews

A pedestrian mews is envisioned south of Lynn Valley Road immediately south of the buildings that front the south side of the road. Its south end aligns with Fromme Road and connects to the lane south of the Lynn Valley Library. It is intended to add diversity and variety to the pedestrian experience.

Guidelines include:

- a 3.0 m wide pedestrian zone is recommended flanked by 2.0 m wide zone for seating, retail display, plants in containers, refuse and recycling containers, etc., on both sides
- a building setback of 0.45 m from the property line is recommended
- the surface of the mews should be pavers, consistent with the Town Centre core sidewalk treatment
- buildings should be encouraged to have windows and entries along the mews
- planting of non-invasive vine species or climbing plants on the buildings is encouraged where blank walls are unavoidable
- buildings along the mews are encouraged to incorporate pedestrian oriented signs with wall mounted lighting integrated into the design
- wall mounted lights are encouraged along the length of the mews
- exterior, wall mounted brackets on the building facade to support seasonal lighting and banners are encouraged
- incorporation of public art and integrated cues to wayfinding should be part of the design
- the possibility of covering portions of the mews with a tensile structure or glazed canopy is encouraged
- refer to Section 3.1.1 for stormwater management guidelines







street furniture, signs, planters and decorative catch basin covers should contribute to creating a unique public space

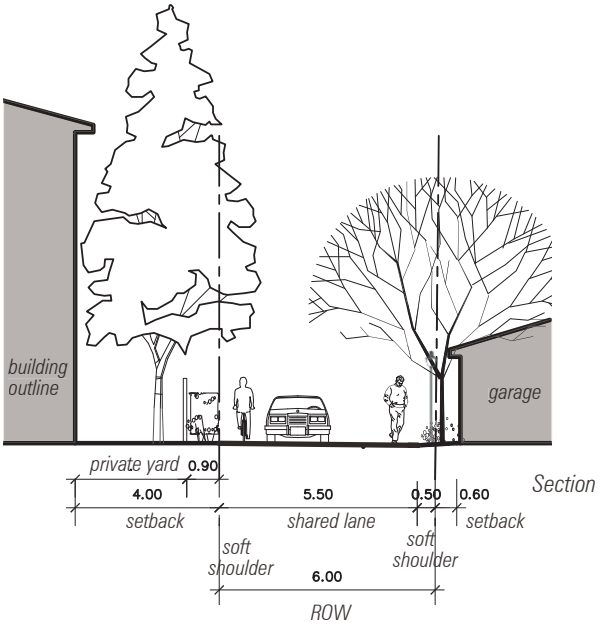


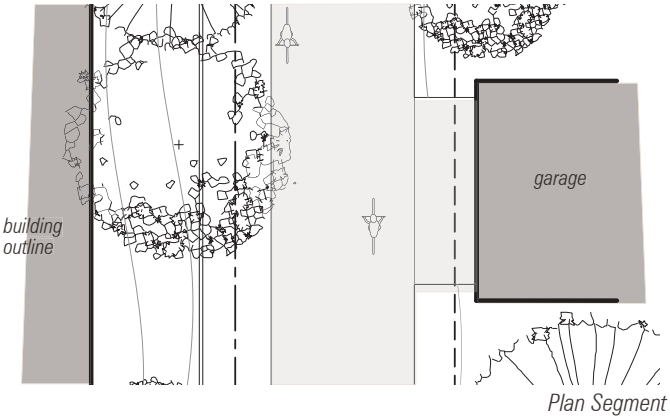
5.1.2 Green Lane

A Green Lane is being implemented east of and parallel to Mountain Highway, between East 27th and East 29th Streets. It would bisect the block fronting on Mountain Highway and Crestlynn Drive where it would also provide access for vehicles to multiple family developments. It would continue northward to Draycott Road on alignment with the southern section; this portion might be pedestrian only or have some vehicular access role, depending on the pattern of development.

Guidelines include:

- dimensions meeting minimum District standards for a vehicular laneway with possible exceptions to allow trees or pockets of landscaping
- a surface of concrete or concrete pavers selected from the paving palette for the Town Centre is recommended
- cyclists should share the laneway with vehicles and pedestrians
- landscaping between the buildings and the lane surface is encouraged if space is adequate, except at building entries
- permeable surface treatment are recommended along the edges in the ROW if feasible
- min 0.9 m width for shrubs, ground cover and other plants is recommended on the west side
- planting of non-invasive vine species or climbing plants on the buildings is encouraged where blank walls are present
- buildings along the Green Lane should be encouraged to have windows and secondary entries, if feasible
- lighting should be provided at a pedestrian scale either with fixtures mounted on building facades or with Town Centre standard pedestrian-scale lights
- incorporation of public art and integrated cues to wayfinding is encouraged to be part of the design
- refer to Section 3.1.1 for stormwater management guidelines









the character of the Green Lane should be appealing to pedestrians and cyclists

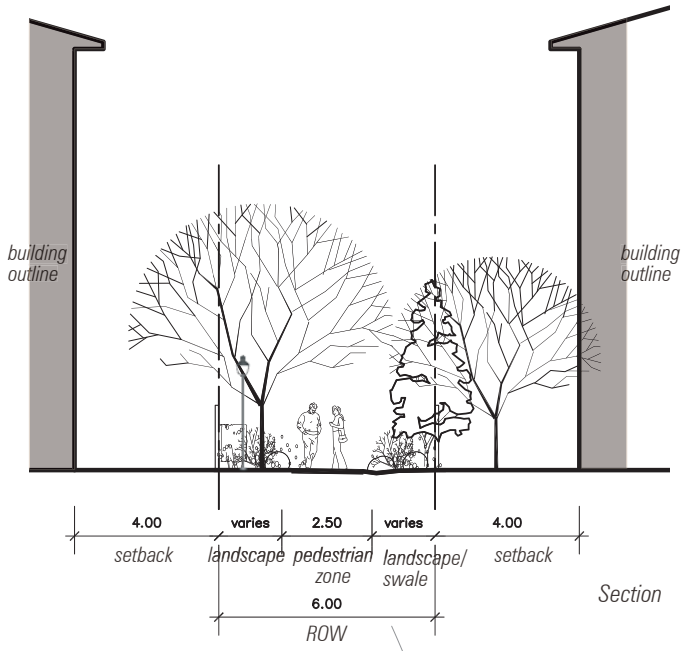


5.1.3 Town Centre Pedestrian Pathways

Several pedestrian focused pathways are identified in the Town Centre outside of the core, both north of Lynn Valley Road and south of East 27th Street. These pathways are intended to be publicly accessible routes along key desire lines without vehicular access.

Guidelines include:

- a surface of concrete or concrete pavers selected from the paving palette for the Town Centre; a minimum width of 2.5 m should be provided
- the pathway is encouraged to meander within the ROW
- landscaping, trees including medium sized conifers and benches are encouraged between the buildings and the pathway surface except at building entries; planting of non-invasive vine species or climbing plants on the buildings is encouraged where blank walls are present
- pathway surface should be sloped to a parallel drainage swale - benches should be located on the opposite side of the pathway
- buildings along the pathway should be encouraged to have windows and secondary entries if feasible
- furnishings such as benches and waste / recycling receptacles should be located on concrete pads within the landscape zone
  - concrete pads should extend 1.0 m in width under benches for strollers, etc.
  - benches should be set back 0.5 m from the edge of the concrete pad
- lighting should be provided at a pedestrian scale either with fixtures mounted on the adjacent buildings or with Town Centre standard pedestrian-scale lights
- incorporation of public art and integrated cues to wayfinding is encouraged to be part of the design
- refer to Section 3.1.1 for stormwater management guidelines



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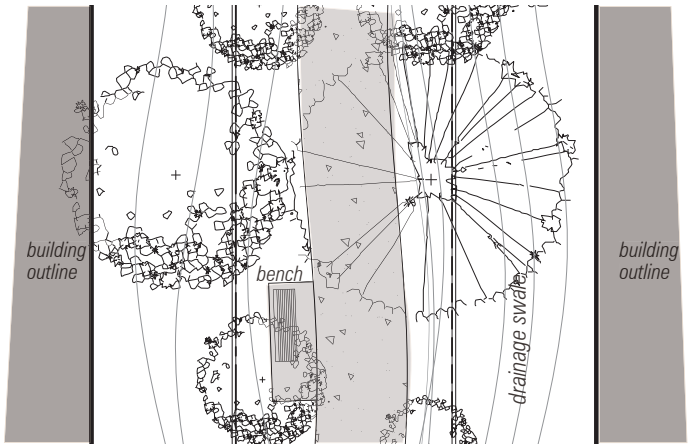


Plan Segment





landscaping provides a buffer between private and public space



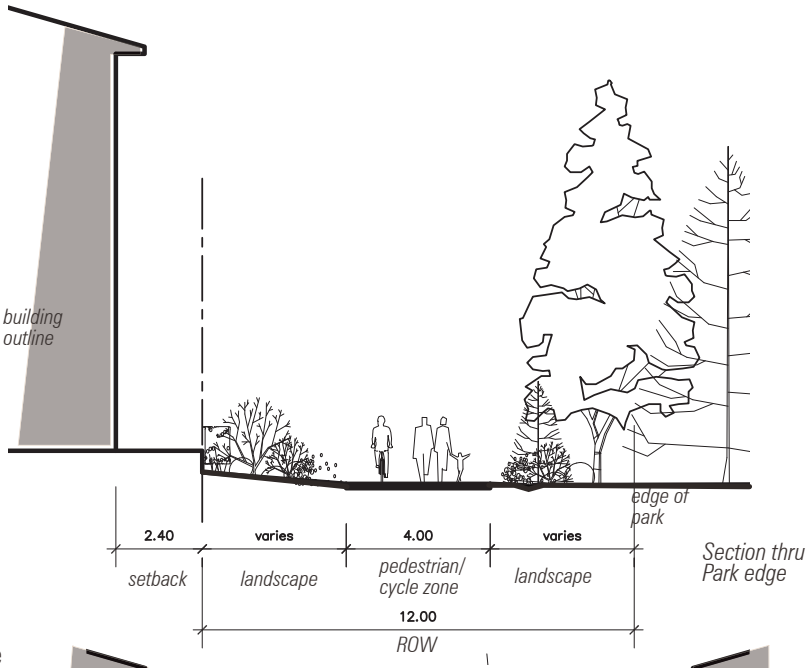
5.1.4 Town Centre Pedestrian/Cycle Greenway

Guidelines include:

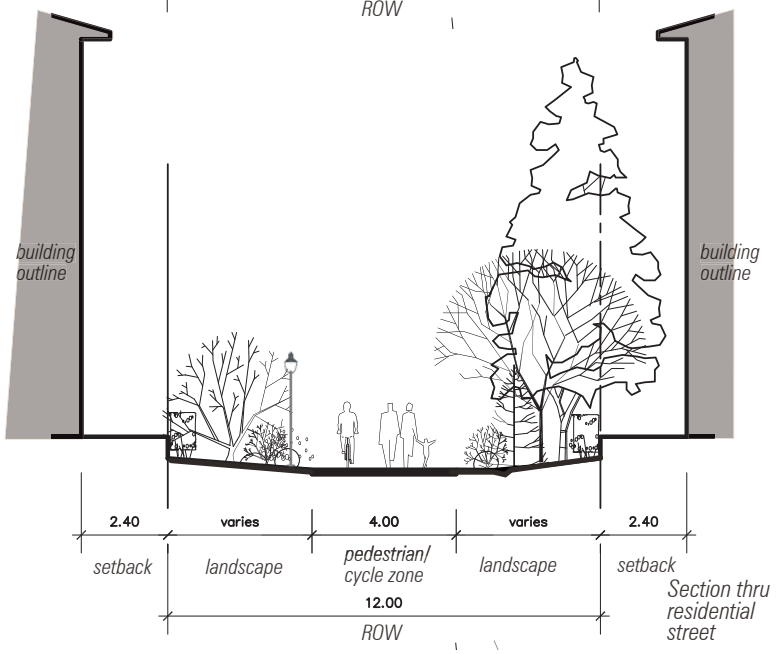
- a minimum 12.0 m wide ROW including 4.0 m wide pedestrian/cycle path that is encouraged to meander within the ROW to accommodate planting, benches, etc.
- min 4.0 m wide landscape zone on both sides of the path to accommodate tall trees
- the surface of the pathway should be concrete selected from the paving palette for the Town Centre
- pathway surface should be sloped to a parallel drainage swale
- benches should be located on the side of the pathway without the swale
- planting of non-invasive vine species or climbing plants on the buildings is encouraged where blank walls are present
- buildings along the greenway are encouraged to have windows and secondary entries if feasible
- furnishings such as benches and waste / recycling receptacles should be located on concrete pads within the landscape zone
  - concrete pads should extend 1.0 m in width under benches for strollers, etc.
  - benches should be set back 0.5 m from the edge of the concrete pad
- lighting should be provided at a pedestrian scale either with fixtures mounted on the adjacent buildings or with Town Centre standard pedestrian-scale lights
- incorporation of public art and integrated cues to wayfinding is encouraged to be part of the design
- refer to Section 3.1.1 for stormwater management guidelines



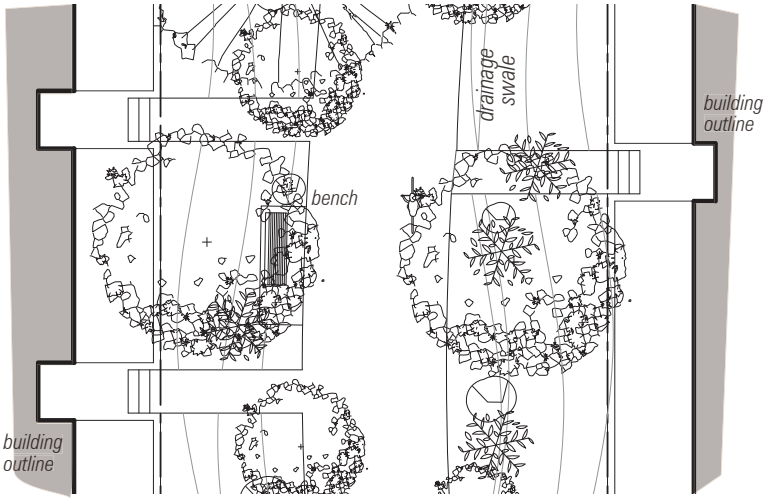
a variety of landscaping is recommended along the Greenway



Section thru Park edge



Section thru residential street



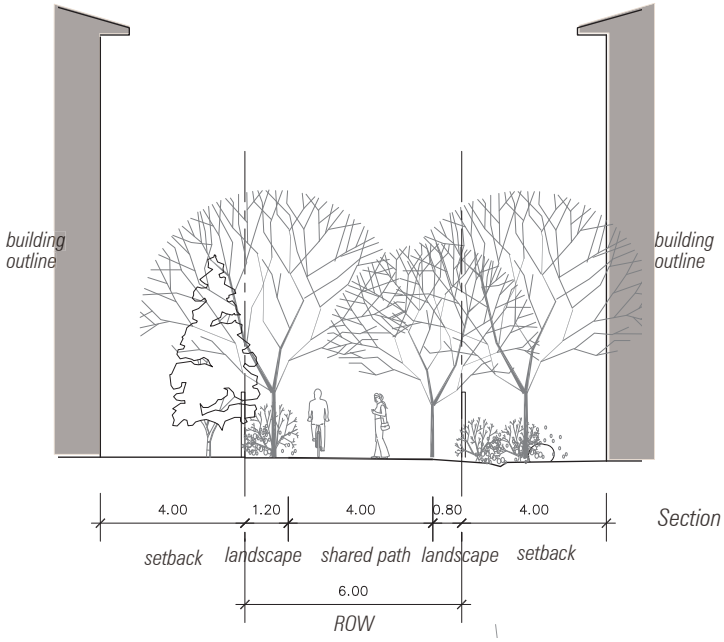
Plan Segment



5.1.5 Town Centre Core Pedestrian/ Cycle Greenway

Guidelines include:

- a minimum 6.0 m wide ROW including 4.0 m wide shared pedestrian/cycle path
- landscape zone on both sides of the path to accommodate natural groupings of trees and shrubs
- garden walls combined with landscaping are encouraged along the property line
- the surface of the pathway should be concrete, selected from the paving palette for the Town Centre
- pathway surface should be sloped to a parallel drainage swale
- benches should be located on the side of the pathway without a drainage swale
- planting of noninvasive vine species or climbing plants on the buildings is encouraged where blank walls are present
- buildings along the pathway are encouraged to have windows and secondary entries if feasible
- furnishings such as benches and waste / recycling receptacles should be located on concrete pads within the landscape zone
  - concrete pads should extend 1.0 m in width under benches for strollers, etc.
  - benches should be set back 0.5 m from the edge of the concrete pad
- lighting should be provided at a pedestrian scale either with fixtures mounted on the adjacent buildings or with Town Centre standard pedestrian-scale lights
- incorporation of public art and integrated cues to wayfinding should be part of the design
- refer to Section 3.1.1 for stormwater management guidelines



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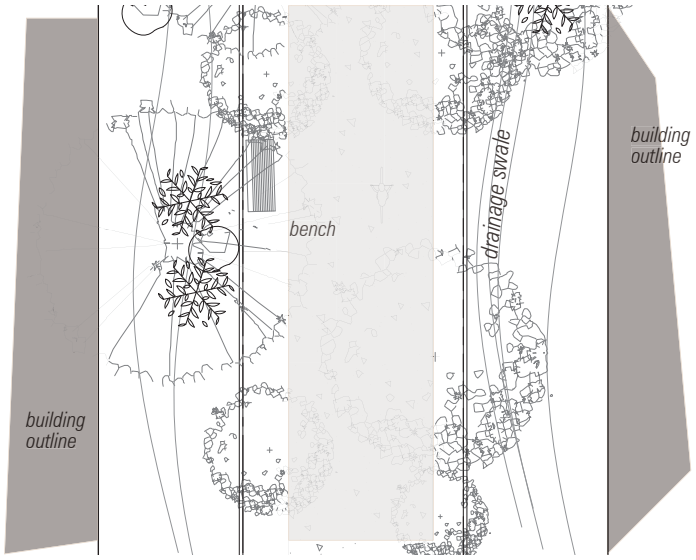


Plan Segment

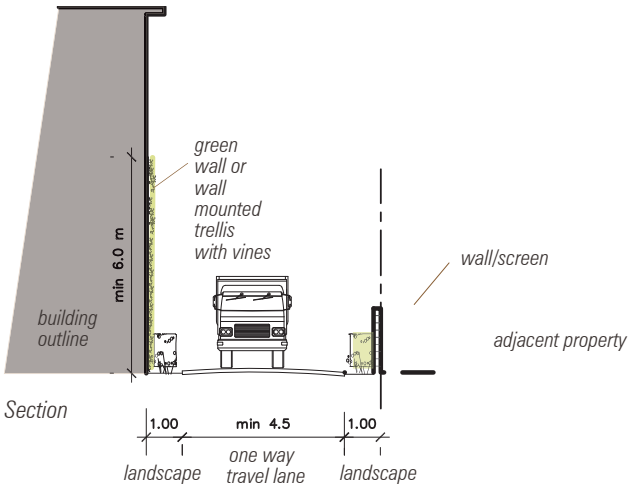


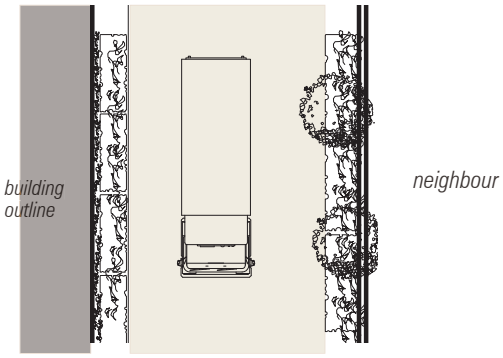
5.1.6 Service Passage

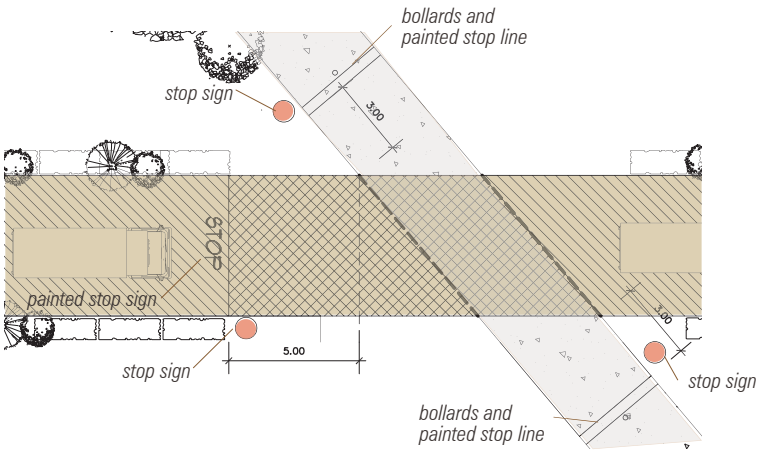
Guidelines include:

- min 4.5 asphalt one way travel lane to accommodate semi-trailer trucks
- min 1.0 m wide landscape strip adjacent to the grocery store
- min 1.0 m wide landscape strip along neighbouring property lines to accommodate shrubs, hedges and/or ground cover
- additional landscaping is encouraged in areas within the ROW that are not required for truck traffic
- building facade should incorporate a green wall or 6.0 m high trellis to support non-invasive perennial climbing vines wherever possible
- screening unattractive views into the Service Passage and modulating disturbing noise caused by truck movement should be considered in the design of landscaping, walls, fences or screens along common property lines
- it is recommended that the wall/fence/screen be designed to absorb noise if possible
- lighting should not spill or produce glare into adjacent property
- lighting fixtures mounted on the building facade above truck height are expected
- where the Service Passage intersects with the Town Centre Core Pedestrian/Cycle Greenway, free standing stop signs adjacent to the travel lane and painted signs on the asphalt to ensure truck drivers stop min 5.0 m from the edge of the greenway are suggested
- a contrasting strip of paving material or painted line, a free standing stop sign adjacent to the pedestrian/cycle greenway and/or a line of bollards min 3.0 m from the edge of the service passageway travel lane are suggested
- bollards that can be repainted if damaged and easy to source to replace are recommended
- the height of landscaping installed within 3.0 m of the intersection of the Service Passage with the Greenway should maintain clear and safe sightlines
- loading bays should be located to prevent trucks backing up within 5.0 m of the Greenway
- refer to Section 3.1.1 for stormwater management guidelines









plan segment of Service Passage intersection with Town Centre Core Pedestrian/ Cycle Greenway

5.2 Public Plazas

Two public plazas are located on the north side of East 27th Street on either side of Valley Centre Avenue. These plazas are positioned to benefit from sunlight during the day. Together they form a gateway into the Town Centre core from East 27th Street.

Design guidelines include:

- ample seating opportunities should be provided in locations that will receive direct sun during the day and in places that have rain protection
- seating and tables should meet the needs of a broad range of users, optimizing comfort and accessibility
- the use of movable tables and chairs is encouraged
- seating should be designed to be integral to the design concept for the plaza and use materials that complement the material palette of adjacent buildings
- coordinate site furnishings (e.g. garbage containers, bike racks, lighting, tables and seating) with streetscape furnishings including a drinking fountain /water fill station in the large public plaza(s)
- an area where stormwater collected from building roofs or fixed canopies, infiltrated into a rainwater garden, should be included on private property if space permits
- landscape plantings should respond to the theme of naturalized mountain landscape with a variety of native or similar species including a proportion of coniferous species
- paving should be compatible with the streetscape materials palette and patterned to both respond to surrounding building architecture (entrances, pilasters, etc.) and merge seamlessly into the overall paving pattern of adjacent sidewalks
- public art should be incorporated as free-standing elements that enhance the gateway function of these plazas; public art embellishments of furnishings (benches, storm grates, etc.) are also encouraged
- refer to Section 3.1.1 for stormwater management guidelines







plazas with solar access, comfortable places to sit and generous landscaping will become important Town Centre gathering places







examples of integrating stormwater management into plazas

5.3 Neighbourhood Park

The new neighbourhood park will be the subject of a District-led park master plan process, including public engagement on its design and programming.

5.3.1 Park Planning - General

- provide large square or rectangular shaped, contiguous park space, to accommodate comprehensive park programming
- paved areas of the park should be integrated seamlessly into the adjacent streetscapes
- rain falling on adjacent sidewalks and any associated plaza areas should be well managed and considered a design feature within the park
- provide opportunities for users of all ages including children, youth, seniors and persons with disabilities
- provide flexibility for future demands
- due to small size of park, detailed and beautiful elements are important
- where possible, landscape plans should take advantage of the opportunity to plant large, long-lived trees that are typical of the area's original mix of tree species; large trees will benefit from this one area of unlimited soil volumes to thrive in the Town Centre





examples of furnishings and natural landscaping

5.3.2 Neighbourhood Park Guidelines

- park area is approximately 1.5 - 2 acres
- provide an open lawn area for flexible multi-use including markets, concerts, outdoor community activities and opportunities for active and passive play
- programming of the park should anticipate space and infrastructure to support outdoor special events, gathering, seating and play opportunities related to the Town Centre (water supply, electrical supply, adaptable lighting fixtures, etc.)
- include places to gather, meet, entertain, see and be seen, sunbathe, picnic, play and rest
- incorporate an urban landscape expression with shade trees
- provide unique and innovative seating (also incorporating tables) to meet the capacity and needs of a broad range of users, optimizing comfort and accessibility
- integrate pedestrian and cycling circulation via a multi-use greenway to the east with a connection to Kirkstone Park
- coordinate site furnishings (e.g. garbage containers, bike racks, lighting, tables and seating) with streetscape furnishings including a drinking fountain /water fill station



outdoor special events

5.3.3 Play Programming

- address current and future need for active play in the community including informal, passive and adventure play
- provide an innovative neighbourhood children's play area focused on active play, incorporating the following:

    ° minimum of 350 square meters of playground space with minimum 15 m width
    ° the playground should accommodate up to thirty (30) 5-12 year old children with a minor component for tot aged children.
    ° the playground should be designed to the highest possible standards of universal accessibility
    ° other considerations:

        * create a safe open environment, providing safe physical upper and lower body play challenges
        * include social / imaginative play, and perceptual motor and physical development in the overall design
        * provide a variety of play opportunities for children of all abilities with an emphasis on shared play
        * incorporate features that stimulate the senses and foster inclusive play
        * incorporate a logical circulation pattern allowing children to move from one activity to another in an interesting and challenging manner

    ° incorporate the following play amenities and elements:

        * overhead ladders (monkey bars)
        * climbing net
        * slide pole
        * inclined ladders, climbing structure (also for adults – e.g. pull-ups)
        * ground level imaginative activities,
        * balancing activities
        * slide(s)





generous areas of open space and innovative play structures



1325 DRAYCOTT

DETAILED PLANNING APPLICATION

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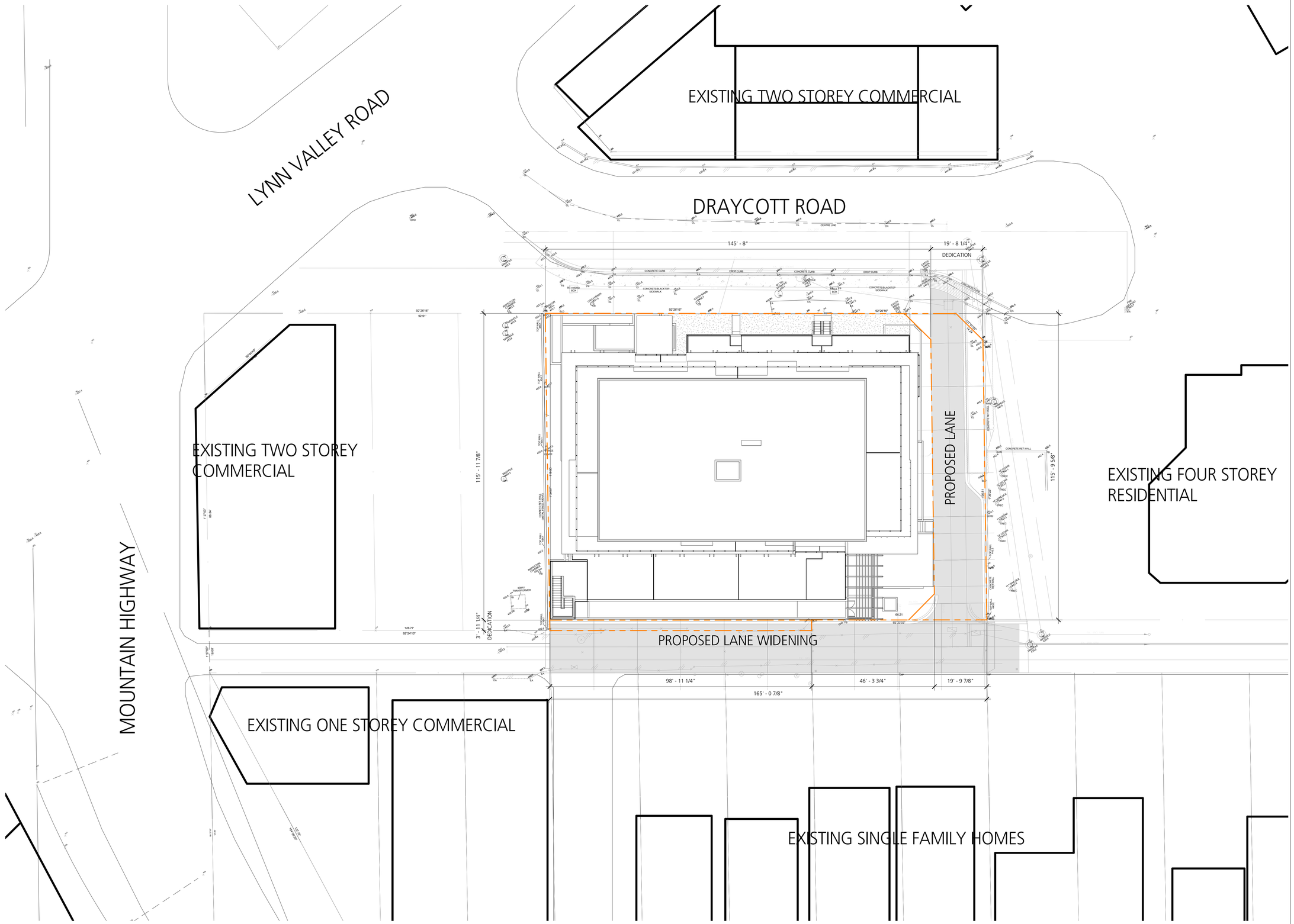
A-2.05	THIRD LEVEL
A-2.06	FOURTH LEVEL
A-2.07	FIFTH LEVEL
A-2.08	ROOF PLAN
A-2.09	UNIT PLANS
A-2.10	UNIT PLANS
A-2.11	UNIT PLANS
A-3.01	ELEVATIONS
A-3.02	ELEVATIONS
A-4.01	SECTIONS
A-4.02	SECTIONS
A-4.03	SECTIONS
A-4.04	SECTIONS
A-4.05	SECTIONS
A-5.01	3D VIEWS
A-6.01	DOOR SCHEDULE
A-8.01	FSR - GROUND LEVEL
A-8.02	FSR - LEVEL 2
A-8.03	FSR - LEVEL 3
A-8.04	FSR - LEVEL 4
A-8.05	FSR - LEVEL 5



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TEL 604 736 1156
FAX 604 731 5279

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WALTER'S PLACE

ISSUE FOR CONSTRUCTION

SITE PLAN

DATE	2/18/2015 6:19:39 PM
DRAWN BY	JS
CHECKED BY	SL
SCALE	1/16" = 1'-0"
JOB NUMBER	1285

A-1.00

LOTS 1-3
11,864 SF

LOT 5 (DNV)
7,620 SF



VICINITY PLAN



AERIAL VIEW FROM NORTH WEST

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WALTER'S PLACE

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OVERVIEW

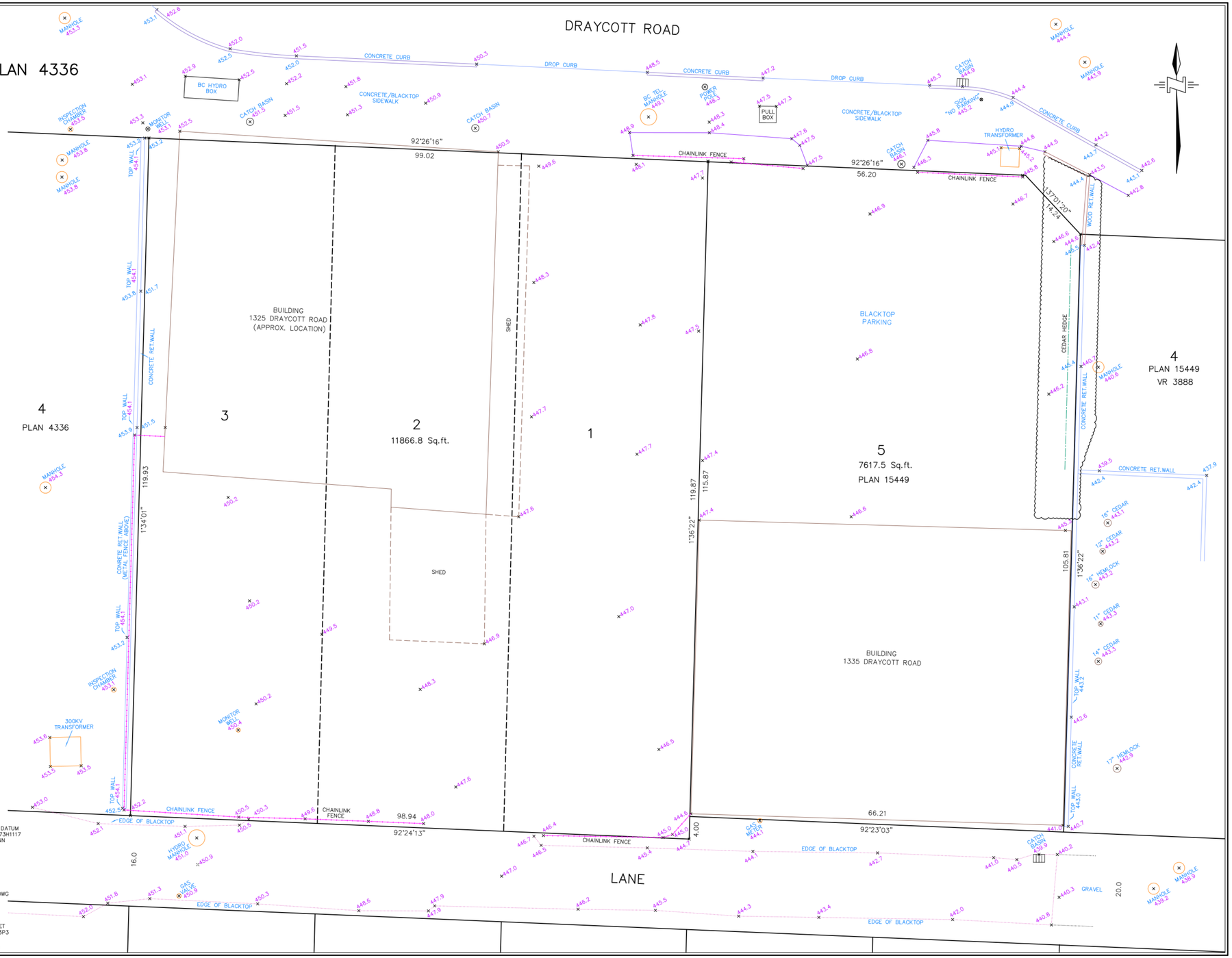
DATE	2/18/2015 6:19:40 PM
DRAWN BY	JS
CHECKED BY	SL
SCALE	
JOB NUMBER	1285

A-1.01

PLAN SHOWING ELEVATIONS ON
LOT 5 PLAN 15449
LOTS 1, 2, 3 OF
LOTS 7 AND 8 BLOCK 2 PLAN 4336
DISTRICT LOT 2023
GROUP ONE NEW WESTMINSTER DISTRICT
P.I.D. 007-659-954 LOT 5
P.I.D. 011-632-721 LOT 1
P.I.D. 011-623-739 LOT 2
P.I.D. 011-632-755 LOT 3

~~SCALE: 8 FEET TO 1 INCH~~

NOT TO SCALE



NOTE:
LOT 5 IS SUBJECT TO:
– A COVENANT (BF320309) IN FAVOUR OF THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER, SECTION 215 L.T.A.

LOTS 1,2 AND 3 ARE SUBJECT TO:
– AN EASEMENT (BX200483, BX200484, BX200485), APPURTENANT TO LEASE L59469
– AN INTER ALIA COVENANT (BX200486) IN FAVOUR OF THE CORPORATION OF THE DISTRICT OF NORTH VANCOUVER.

SEE CERTIFICATES OF TITLE FOR FURTHER LEGAL NOTATIONS.

NOTE:
PROPERTY DIMENSION MAY VARY SLIGHTLY ON A REPOSTING SURVEY.

NOTE:
THIS DOCUMENT SHOWS THE RELATIVE LOCATION OF THE SURVEYED STRUCTURES AND FEATURES WITH RESPECT TO THE BOUNDARIES OF THE PARCEL DESCRIBED ABOVE. THIS DOCUMENT SHALL NOT BE USED TO DEFINE PROPERTY LINES OR PROPERTY CORNERS

THIS DOCUMENT IS NOT VALID UNLESS ORIGINALLY SIGNED AND SEALED.

CERTIFIED CORRECT ACCORDING TO FIELD SURVEY:

_____ BCLS
THIS 15th DAY OF MARCH, 2013

NOTE:
ELEVATIONS ARE TO GEODETIC DATUM AND ARE DERIVED FROM OCM 73H1117 ON MOUNTAIN HIGHWAY AT LYNN VALLEY ROAD
ELEVATION = 457.08 FEET

JOB: 12126 FB: 474 P.1
FILE: L139-3 COMP: 12126X_R2.DWG

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RANKINE LAND SURVEYING LTD.
300 – 1000 WEST 14TH STREET
NORTH VANCOUVER, BC V7P 3P3
TEL: 604-987-7772
Email: info@rankinesurveys.com

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WALTER'S PLACE

ISSUE FOR CONSTRUCTION

SITE SURVEY

DATE	2/18/2015 6:19:46 PM
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SCALE	
JOB NUMBER	1285

A-1.02

ZONING DATA

1325-1335 DRAYCOTT ROAD	**LOT 5 PLAN 15449, LOTS 1, 2, 3 OF LOTS 7 AND 8 BLOCK 2 PLAN 4336 DISTRICT LOT 2023**
LOT DIMENSION:	~ 150' x 120'
LOT AREA:	19,484.3 SF
ZONING:	C-2
SETBACKS:	North: 16.5' | East: 7.5' | West: 7.5' | South: 26.5' ** Setbacks taken from property line*
HEIGHT:	55' (5 STOREYS) **EXCLUDES MECHANICAL EQUIPEMENT & ELEVATOR OVERRUN*
ALLOWABLE FSR:	1.903 *(37,068 SF) *SEE OCP DIAGRAM*
PROPOSED FSR:	1.903 *(37,068 SF)*
ALLOWABLE BUILDING COVERAGE:	50%
PROPOSED BUILDING COVERAGE:	56%
ALLOWABLE SITE COVERAGE:	85%
PROPOSED SITE COVERAGE:	71%

OCP DIAGRAM - *BLENDED FSR*



TOTAL ALLOWABLE AREA: 9,902.5 + 27,165.8 = 37,068 SF
TOTAL ALLOWABLE FSR: 1.903

PARKING & STORAGE

PARKING REQUIREMENTS
35 Market Units x 1.85 = 65 Stalls
TOTAL: 65 Stalls

PROVIDED
60 Stalls
- 1 Disabled Stalls
- 34 Regular Stalls
- 25 Small Stalls

BICYCLE STATS
- 17 Stalls Provided

STORAGE
- 35 Storage Lockers

GROSS AREA

TOTAL - GROSS AREA	
TYPE	AREA
AMENITY	647.3 SF
COMMON AREA	4561.3 SF
UNIT AREA	32457.1 SF
Grand total	37665.8 SF

NET AREA (FSR)

TOTAL - NET AREA		
TYPE	AREA	FSR
COMMON AREA	4561.3 SF	0.23 SF
UNIT AREA	32457.1 SF	1.67 SF
Grand total	37018.4 SF	1.90 SF

TOTAL - NET AREA BY LEVEL		
LEVEL	AREA	FSR
L1	7376 SF	0.38 SF
L2	8196.8 SF	0.42 SF
L3	8199.7 SF	0.42 SF
L4	8200.1 SF	0.42 SF
L5	5045.8 SF	0.26 SF
Grand total	37018.4 SF	1.90 SF

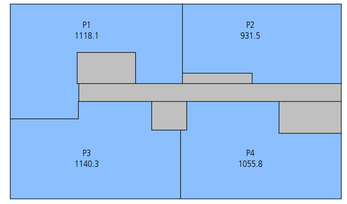
UNIT MIX

TOTAL - 3 BR UNIT COUNT			
NAME	Count	Area	Level
B1	1	1089.91 SF	L2
B1	1	1089.91 SF	L3
B1	1	1088.91 SF	L4
B2	1	1004.49 SF	L1
B2	1	1005.05 SF	L2
B2	1	1005.05 SF	L3
B2	1	1005.05 SF	L4
	7		

TOTAL - PENTHOUSE UNIT COUNT			
NAME	Count	Area	Level
P1	1	1118.13 SF	L5
P2	1	931.46 SF	L5
P3	1	1140.26 SF	L5
P4	1	1055.81 SF	L5
	4		

TOTAL - 2 BR UNIT COUNT			
NAME	Count	Area	Level
A1	1	773.26 SF	L1
A1	1	766.58 SF	L2
A1	1	767.70 SF	L3
A1	1	767.70 SF	L4
A2	1	853.02 SF	L1
A2	1	853.02 SF	L2
A2	1	853.02 SF	L3
A2	1	853.02 SF	L4
A3	1	939.21 SF	L1
A3	1	935.38 SF	L2
A3	1	938.59 SF	L3
A3	1	938.59 SF	L4
A4	1	887.38 SF	L1
A4	1	887.38 SF	L2
A4	1	887.38 SF	L3
A4	1	887.38 SF	L4
A5	1	855.42 SF	L1
A5	1	855.49 SF	L2
A5	1	854.38 SF	L3
A5	1	855.49 SF	L4
A6	1	934.41 SF	L2
A6	1	934.12 SF	L3
A6	1	934.32 SF	L4
A6a	1	910.86 SF	L1
	24		

LEVEL 5



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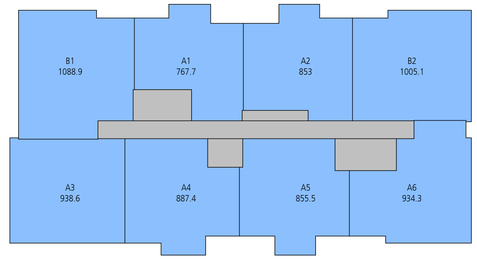
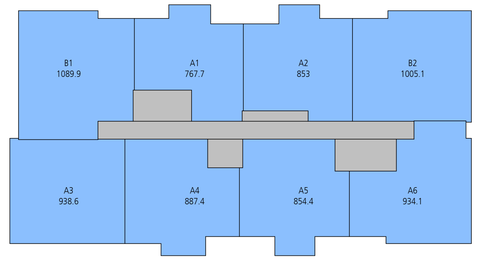


LEVEL 3



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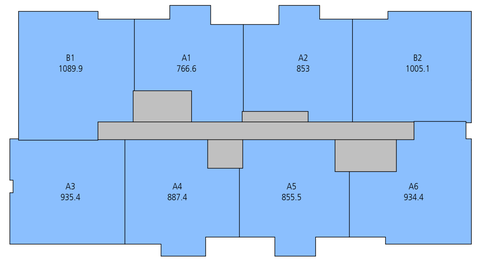
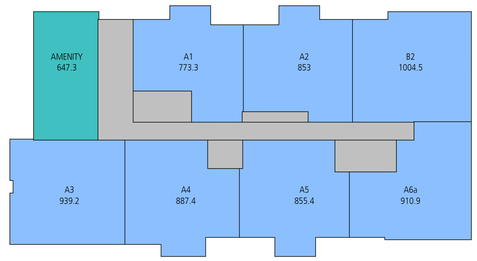


LEVEL 1



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WALTER'S PLACE

ISSUE FOR CONSTRUCTION

STATISTICS

DATE	2/18/2015 6:19:48 PM
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CHECKED BY	SL
SCALE	As indicated
JOB NUMBER	1285

A-1.03







DRAYCOTT ROAD

MOUNTAIN HIGHWAY

LYNN VALLEY ROAD





LYNN VALLEY ROAD

DRAYCOTT ROAD (FACING NORTH)



DRAYCOTT ROAD (FACING SOUTH)



LYNN VALLEY ROAD

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ISSUE FOR CONSTRUCTION

CONTEXT

DATE	2/18/2015 6:19:50 PM
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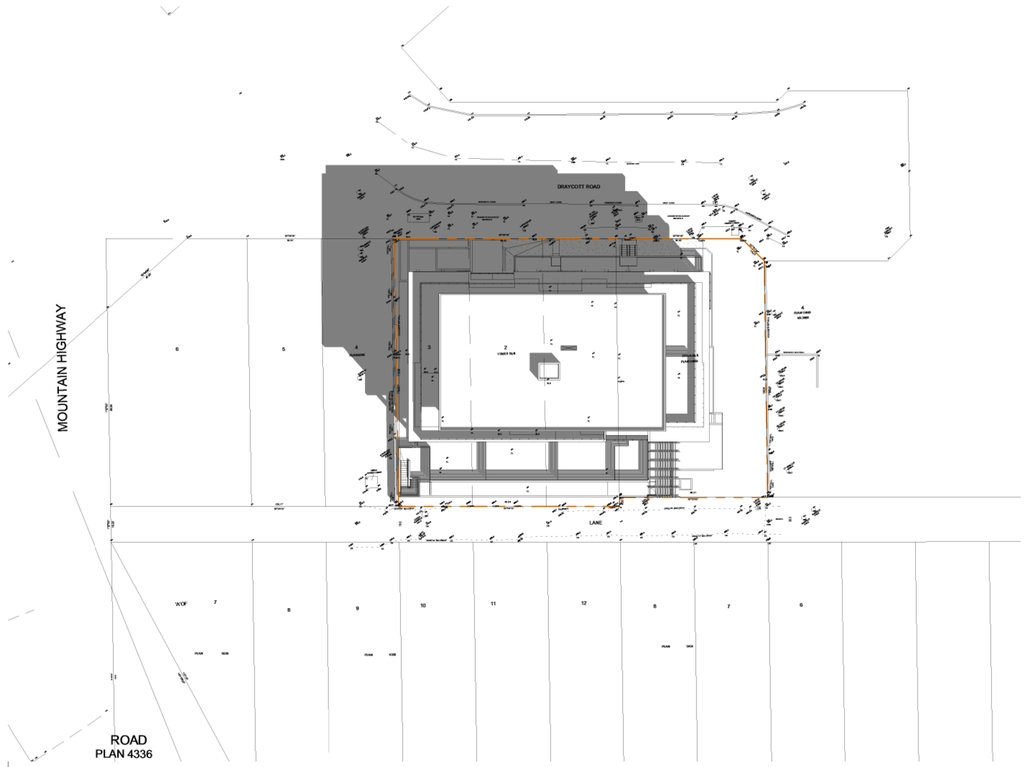
SCALE	
JOB NUMBER	1285

A-1.04



SHADOWS - 10AM
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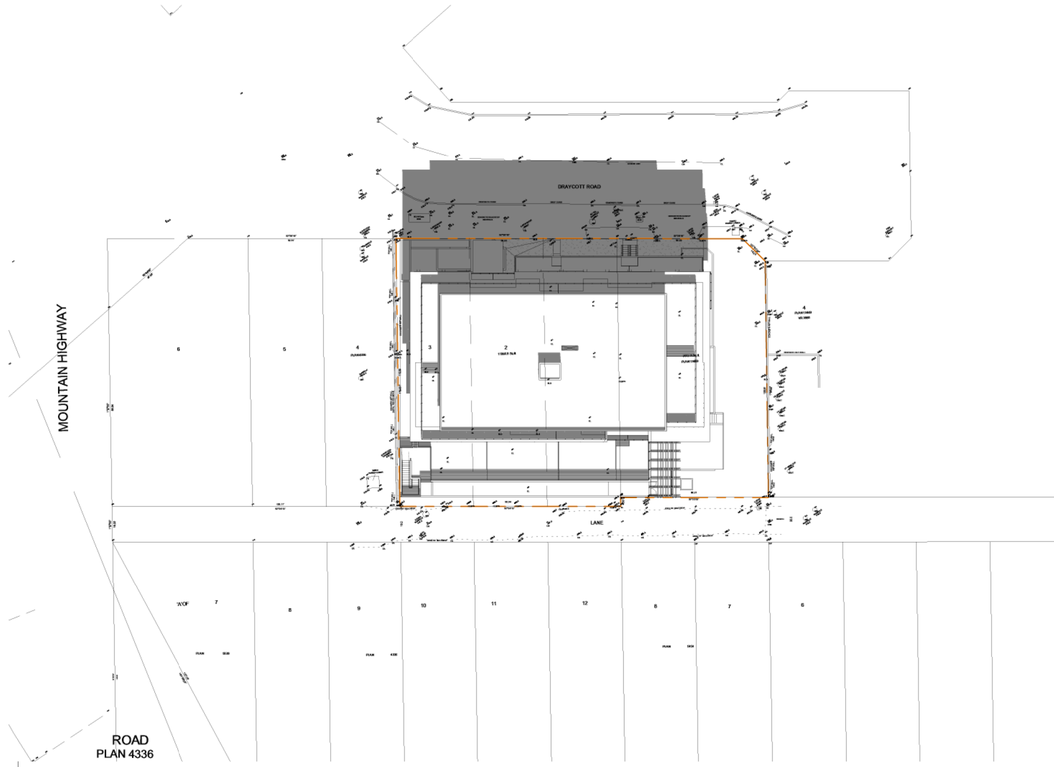

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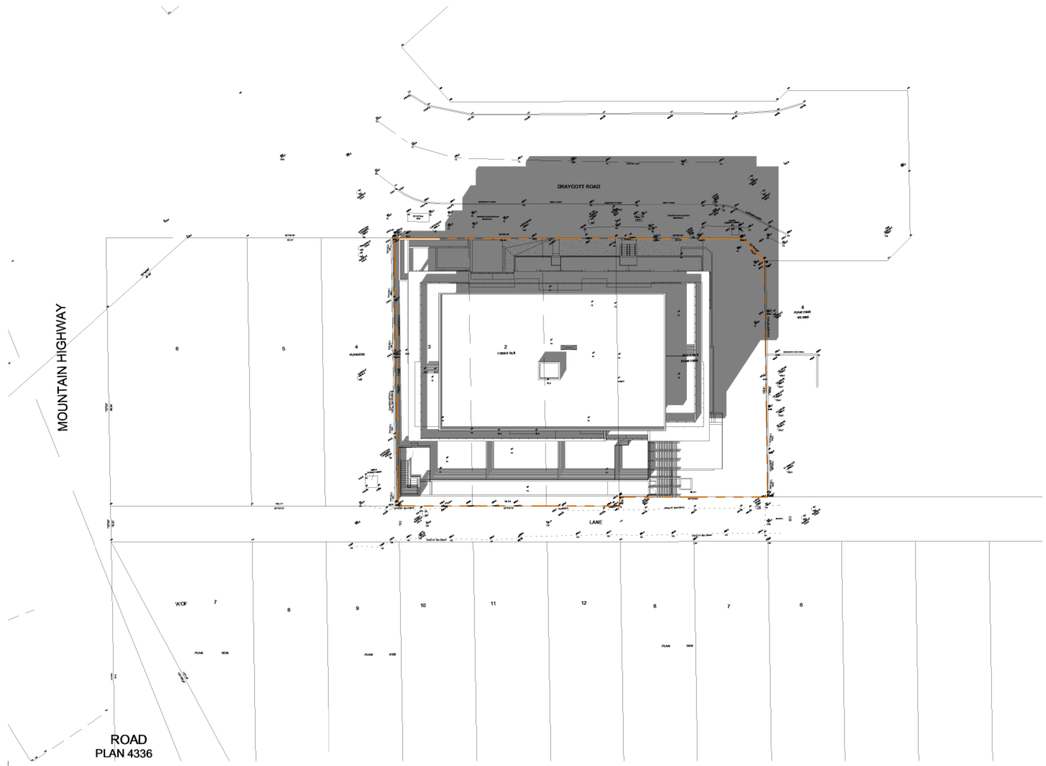

SHADOWS - 2PM
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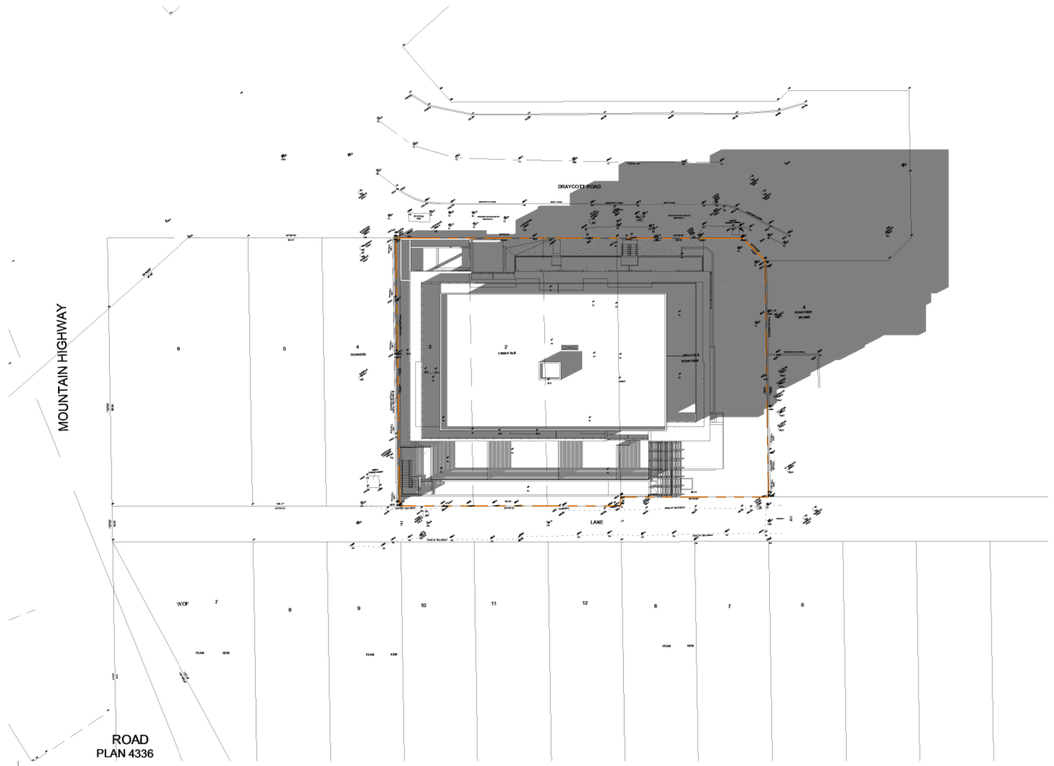

SHADOWS - 4PM
1/32" = 1'-0"

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WALTER'S PLACE

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SHADOW ANALYSIS (MAR / SEP 21)

DATE	2/18/2015 6:20:12 PM
DRAWN BY	JS
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SCALE	1/32" = 1'-0"
JOB NUMBER	1285

A-1.05

RATIONALE

OVERVIEW
Located on the southern side of Draycott Road off of Mountain Highway, this site is part of the Lynn Valley Town Centre and falls under the District of North Vancouver's Official Community Plan. Under this plan, *"Lynn Valley Town Centre is envisioned as a well-designed pedestrian, biking and transit-oriented mixed use centre . . ."*

Building on these principles as well as the prescribed density and use from the Lynn Valley Town Centre Land Use Map, this application seeks to consolidate four lots for a five-storey residential development with an FSR of 1.9.

SITE PLAN
The site will provide a 20' dedication to the east for a new lane and a 5' dedication to the south to widen the existing lane. The underground parking access will be at the south east corner of the site off of the new lane to the east. This will provide convenient access from Draycott Road and minimize excavation as this is the low point of the sloping site. The main lobby will be accessed from Draycott Road and serve 35 units - 12 three bedroom and 23 two bedroom.

A generous setback from Draycott Road will allow for extensive landscaping to enhance the public realm. The north west corner of the site will provide a children's play area for residents and additional landscaping features.

BUILDING EXPRESSION
Starting with the permitted building envelope prescribed in the OCP, the massing was further shaped by articulating the main entry, ground floor amenity space, and a two-storey scale for the walk-up units fronting Draycott Lane. At the south face of the building, the ground level units and parking ramp entry create a mirrored relationship. This mirrored relationship setup a framework to integrate overhangs into the building form on the north and south elevations, while the east and west elevations act as a transition between the mirrored faces.

MATERIALS
The materials in the building have been chosen to compliment the Lynn Valley Town Centre context while emphasizing the framing devices used to articulate the building mass. A light cementitious panel with aluminum reveal joints is used within the frames on the north elevation, while a dark cementitious panel with battens and staggered cedar accent panels is used beneath. As the frames transition on the east and west elevations, so do these materials, leaving the dark cementious panel within the frames and the light panel beneath on the south elevation.

Wood posts line the base as supporting members for the frame overhangs. Additional wood accent panels return down from the wood soffits to provide break points between material changes and at balcony edges.

VARIANCES
The application seeks the exclusion of a 550 sq. ft. amenity space from the FSR for the purposes of providing an accessory indoor space to the outdoor amenity area on the northwest corner.

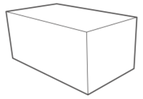
COMMUNITY BENEFITS
The proposal will replace four fragmented lots serving a lumber yard with 35 new households in the Lynn Valley Town Centre. Additionally, all of these units will be designed and oriented towards families. These new residences benefit from walking access to all local conveniences and the local amenities benefit from added residential support. Parking is concealed beneath the building and adds up to 65 parking stalls to the area.

The addition of the eastern lane and widening of the southern lane will improve connectivity and access through the neighbourhood for pedestrian, bicycle, and vehicular traffic.

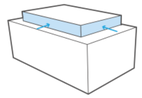
Finally, landscaping features around the perimeter of the site - particularly the north west corner - will enhance the public realm for both neighbors and community members.

DESIGN

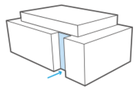
Contextual Expression



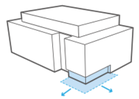
1) Zoning Envelope



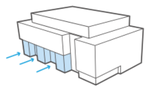
2) 5th floor is set back to reduce massing & shadow impact



3) Articulate entry to improve legibility and reduce scale

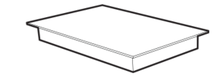


4) The primary corner of the site is expressed by communal indoor/outdoor amenity space

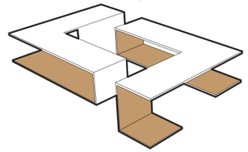


5) Walk-up entries are articulated to express the individual unit. Residential scale is reinforced along Draycott road.

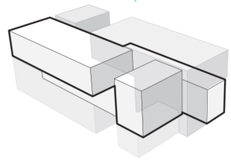
Material Expression



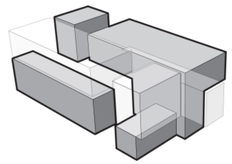
a) **Penthouse**



b) **Cedar Soffit:** articulates contextual expression

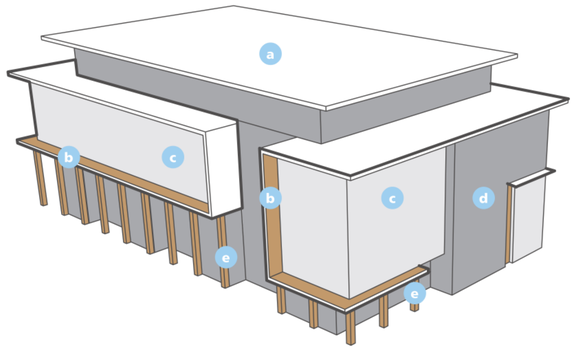


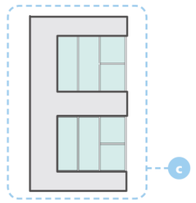
c) **Light Cementitous Panel**: easy trim reveals with contemporary offset openings

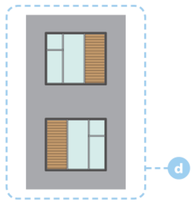


d) **Dark Cementitous Panel:** board and batten joints with cedar accent panels

Formal Expression













Cove Gardens



Lynn Valley Library

gbl

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FAX 604 731 5279

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NOTES

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WALTER'S PLACE

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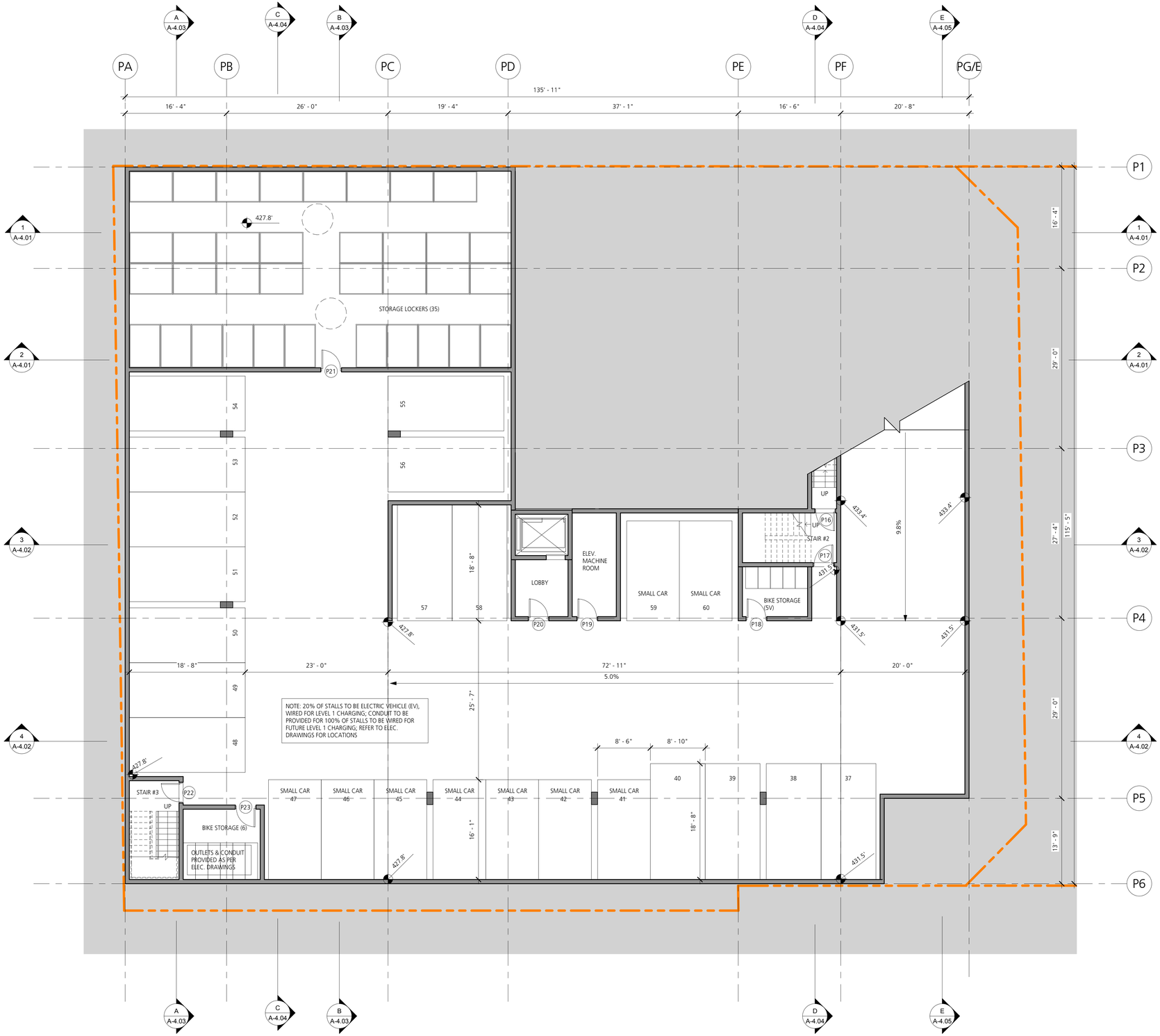

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U/G PARKING 2

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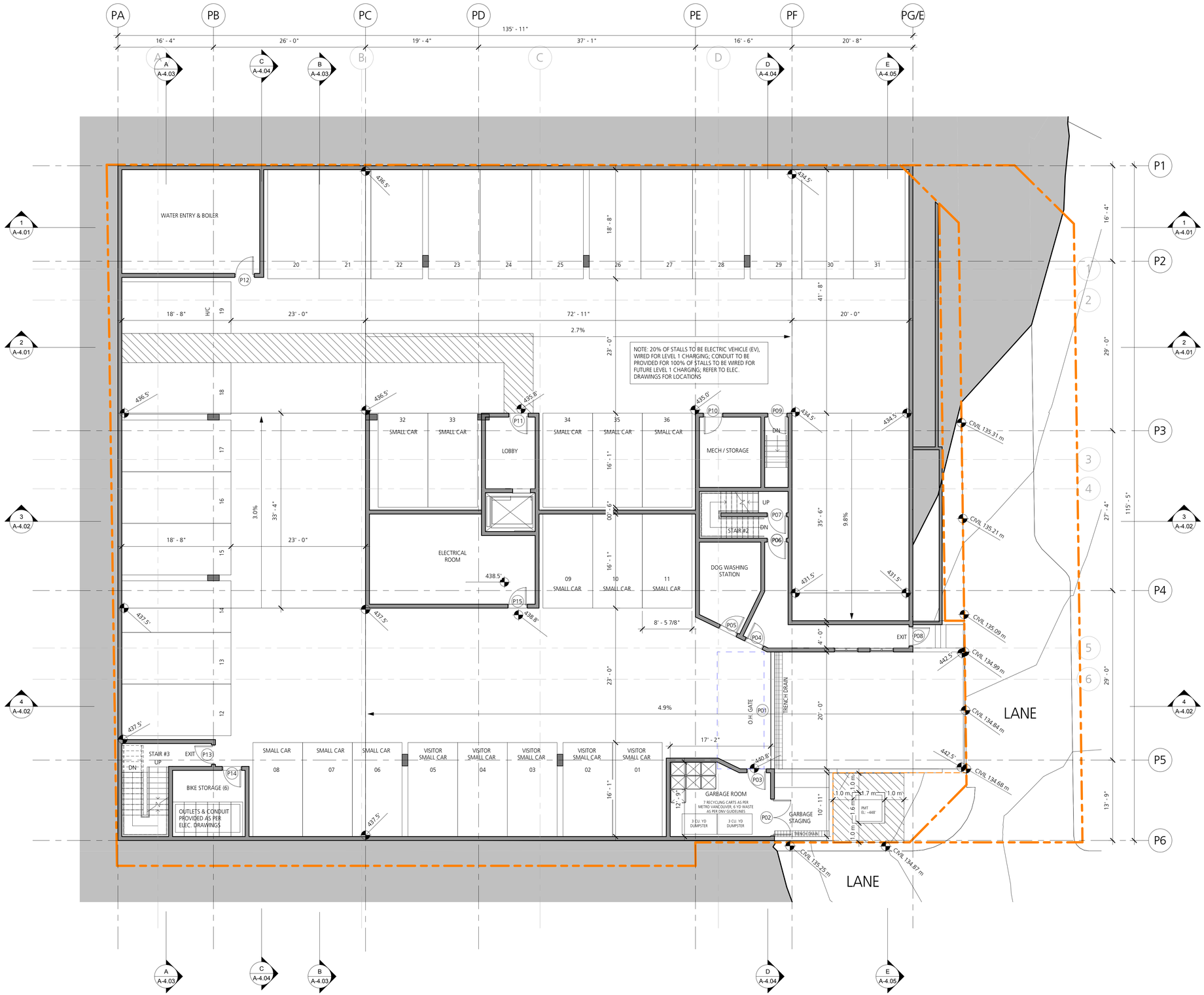

gbl

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U/G PARKING 1

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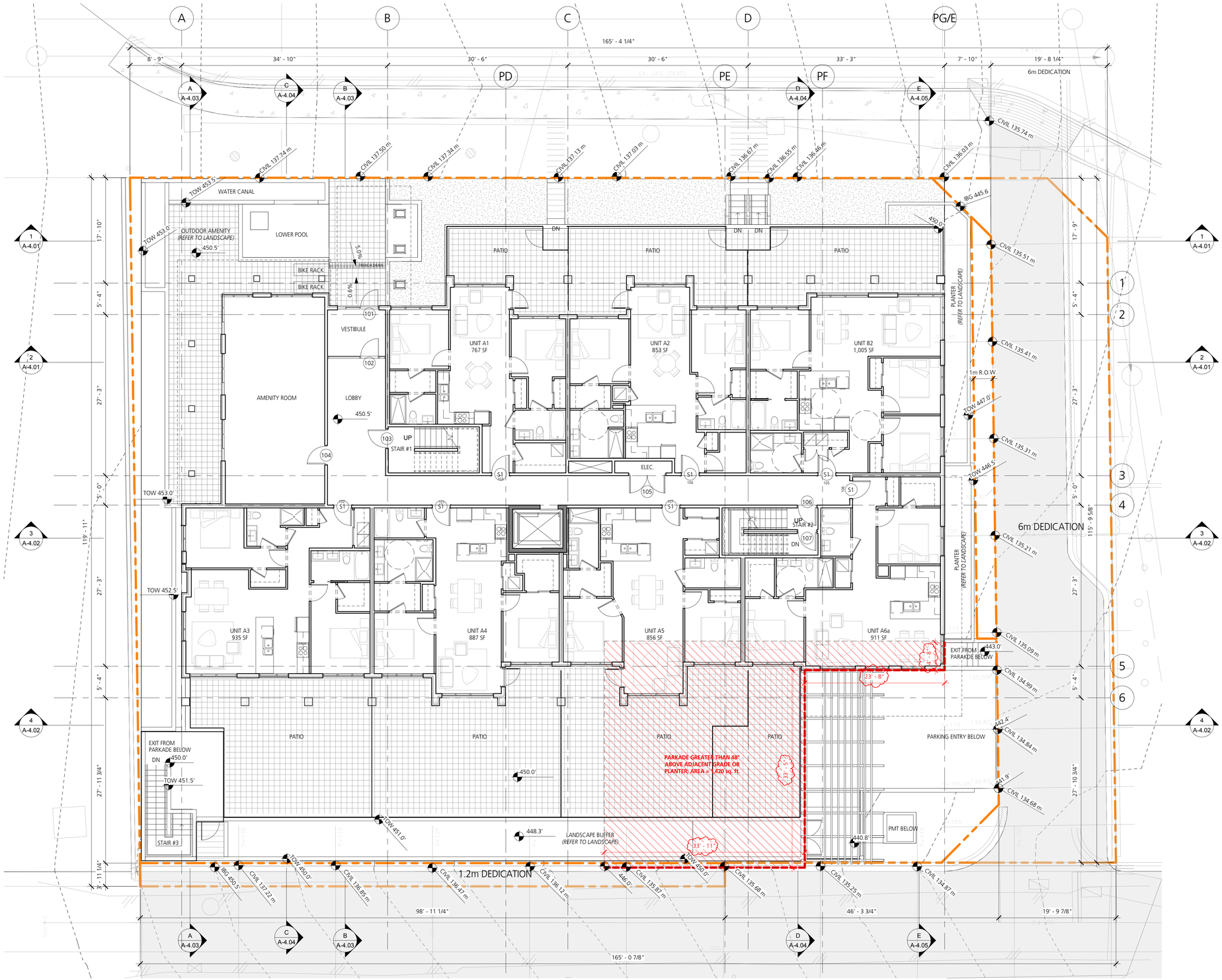

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WALTER'S PLACE

ISSUE FOR CONSTRUCTION

GROUND LEVEL

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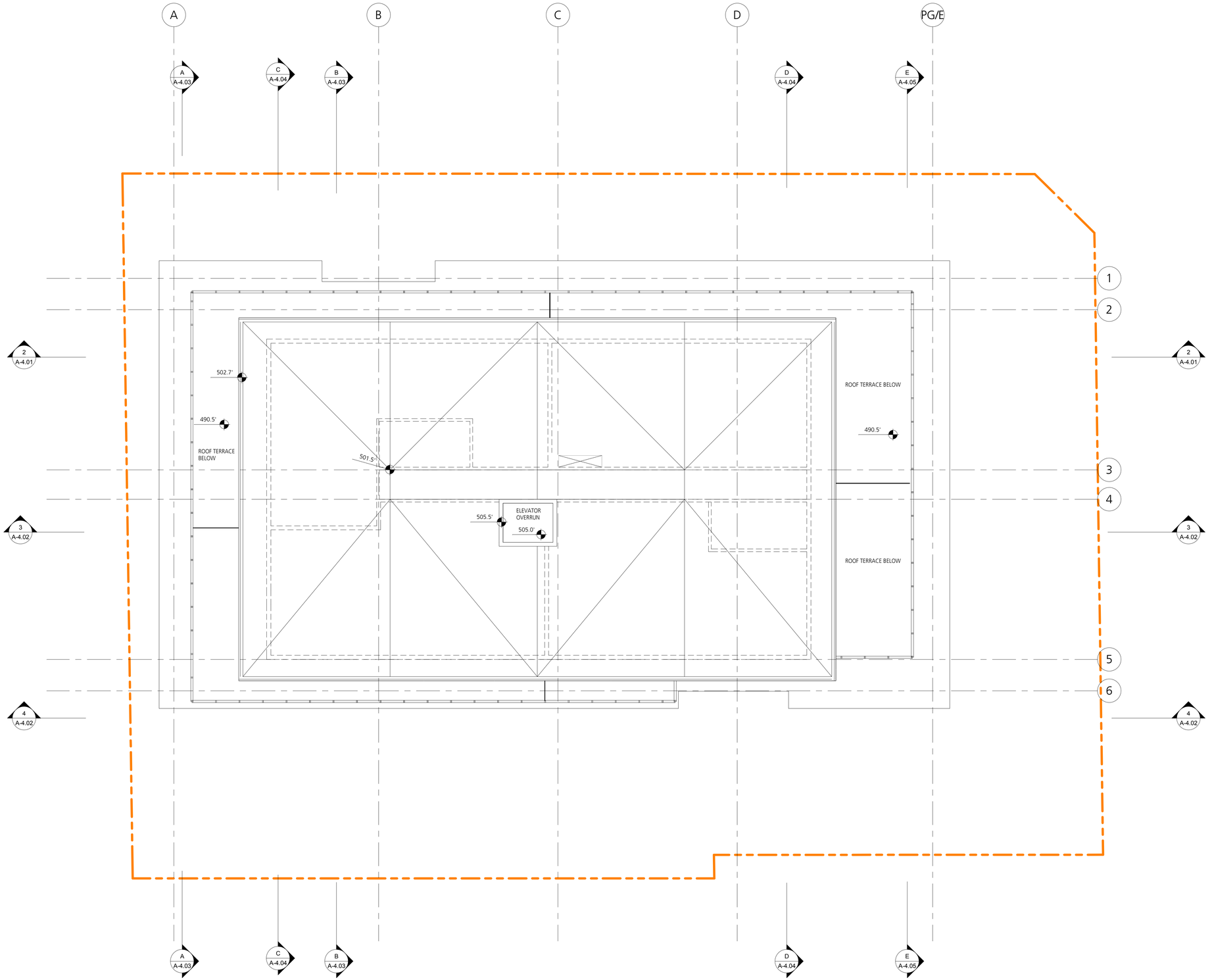

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ROOF PLAN

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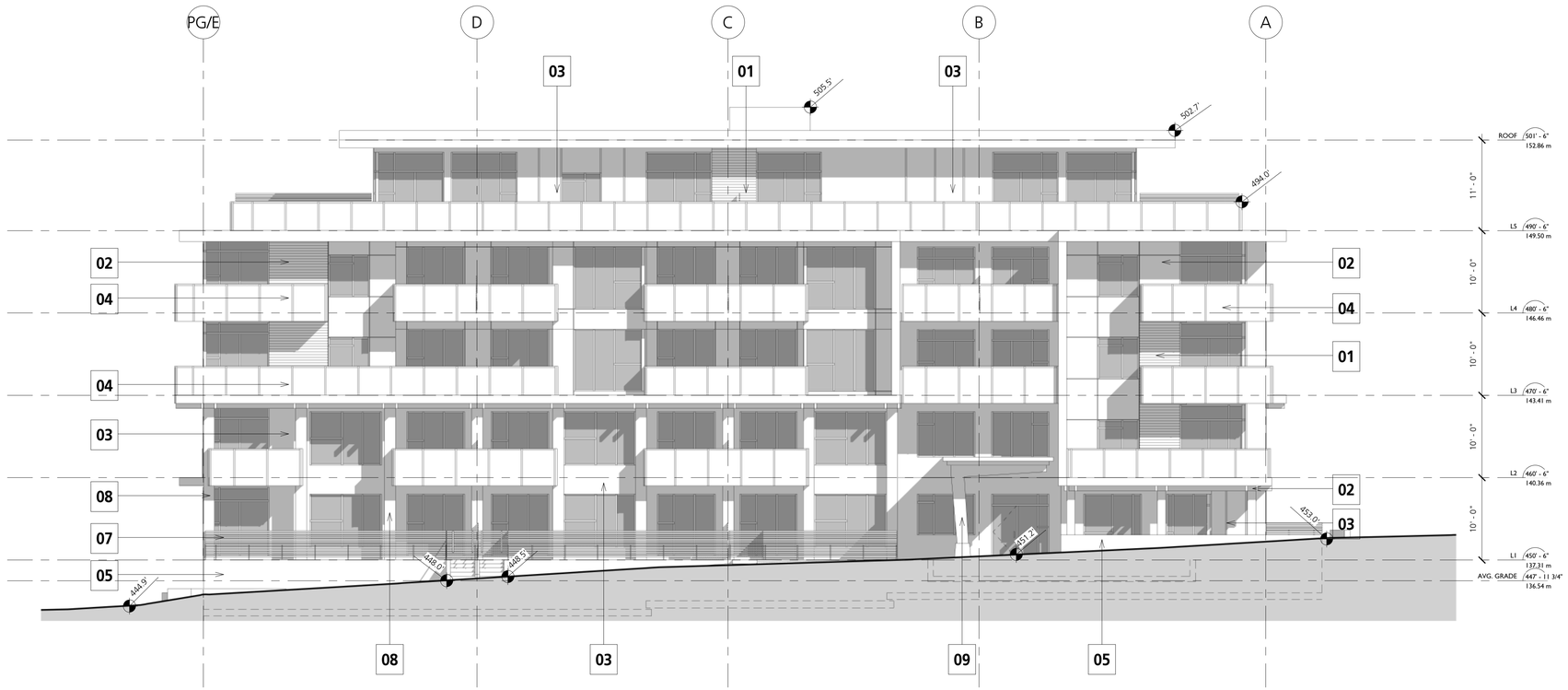

NORTH
1/8" = 1'-0"



2 **WEST**
1/8" = 1'-0"

MATERIAL KEY

01 WOOD ACCENT PANELS (CLEAR STAINED CEDAR OR PAINTED CEMENTITIOUS PANEL)
02 WHITE CEMENTITIOUS PANEL
03 CHARCOAL CEMENTITIOUS PANEL
04 GLAZED GUARD RAIL
05 PAINTED ARCHITECTURAL CONCRETE
06 CULTURED STONE
07 CEDAR PRIVACY SCREEN
08 CEDAR CLAD POST
09 HEAVY TIMBER ENTRY CANOPY

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ELEVATIONS

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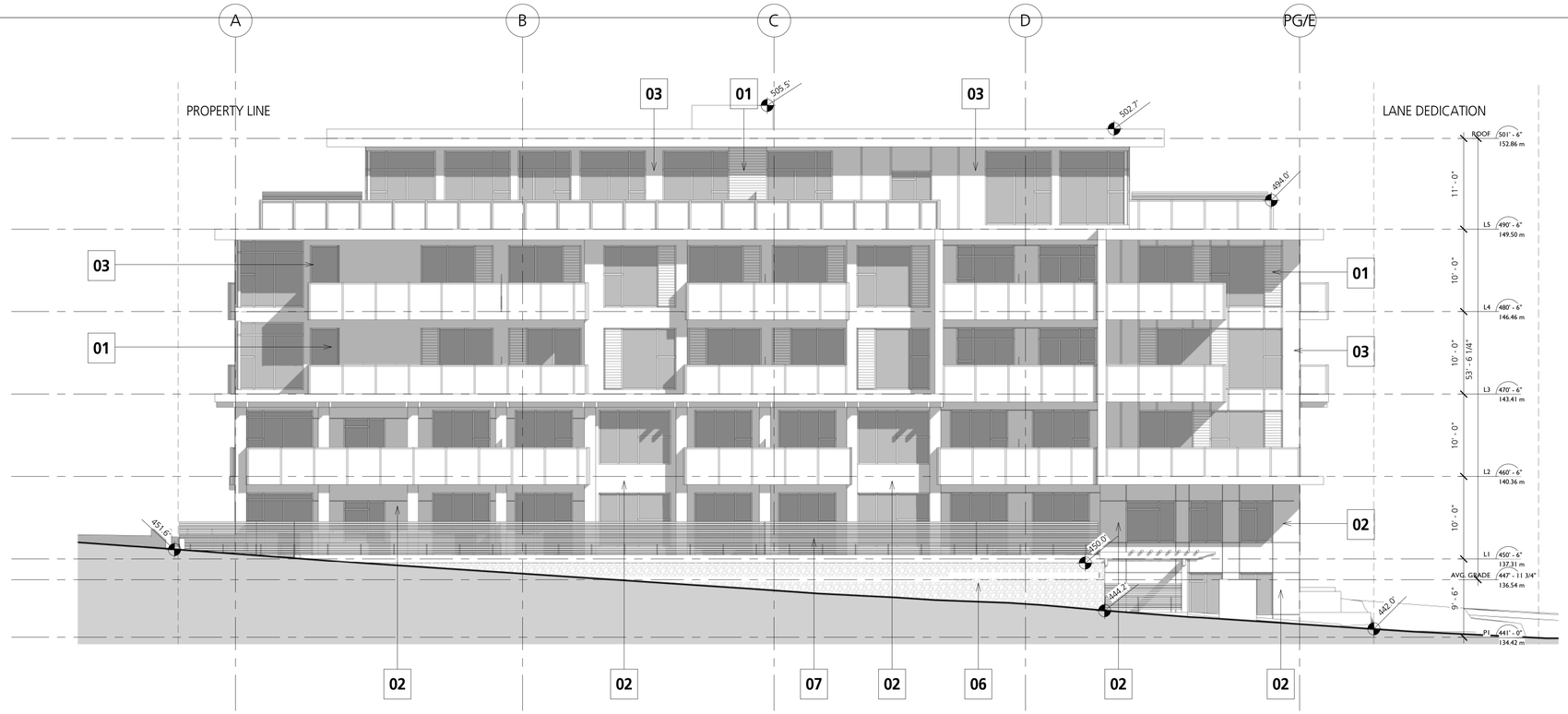

1 SOUTH
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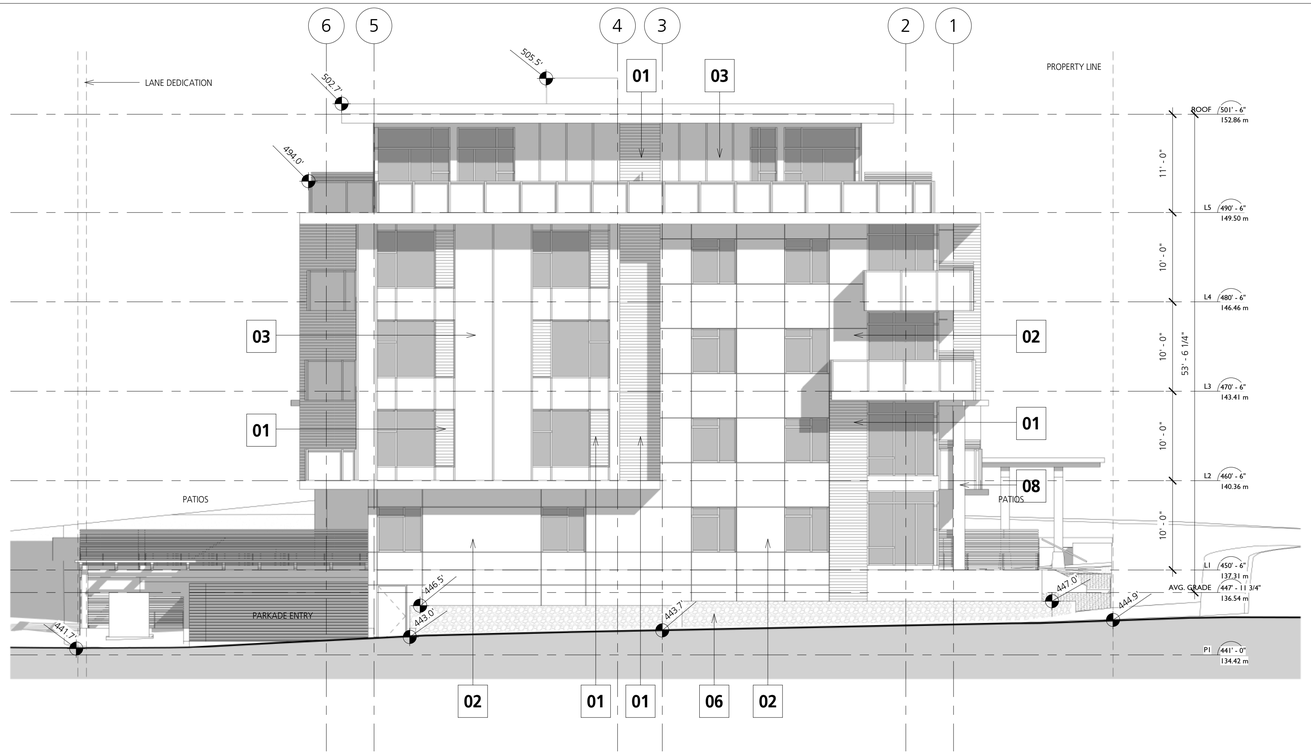

2 EAST
1/8" = 1'-0"

MATERIAL KEY

01 WOOD ACCENT PANELS (CLEAR STAINED CEDAR OR PAINTED CEMENTITIOUS PANEL)
02 WHITE CEMENTITIOUS PANEL
03 CHARCOAL CEMENTITIOUS PANEL
04 GLAZED GUARD RAIL
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06 CULTURED STONE
07 CEDAR PRIVACY SCREEN
08 CEDAR CLAD POST
09 HEAVY TIMBER ENTRY CANOPY

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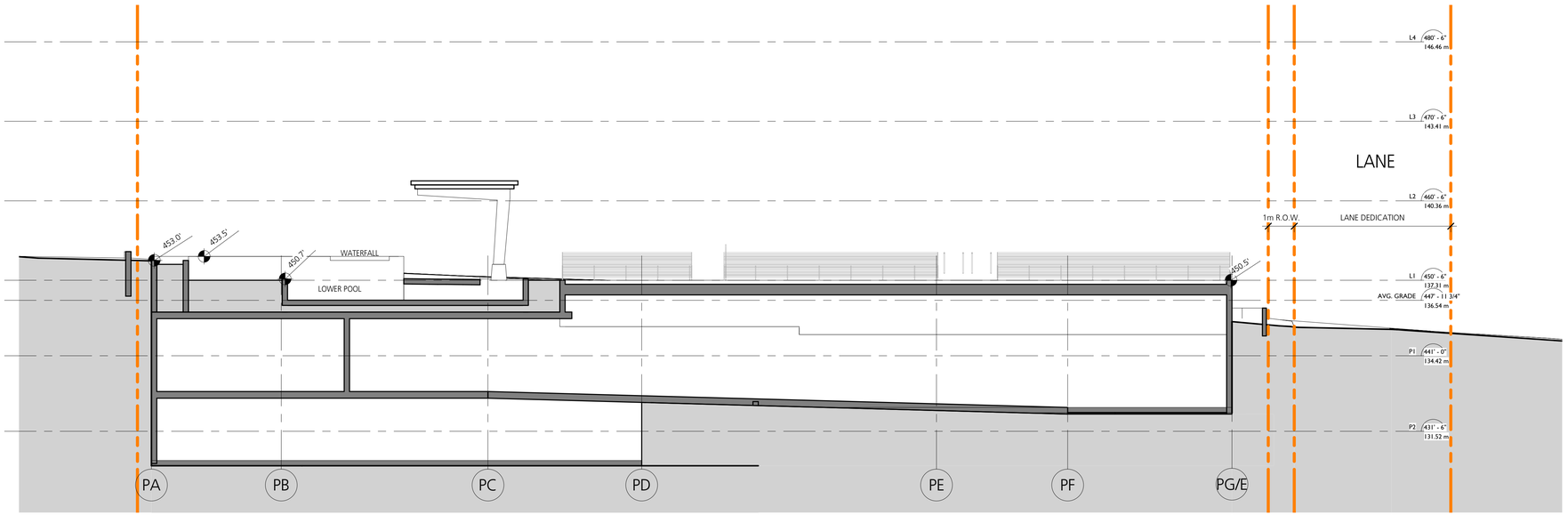

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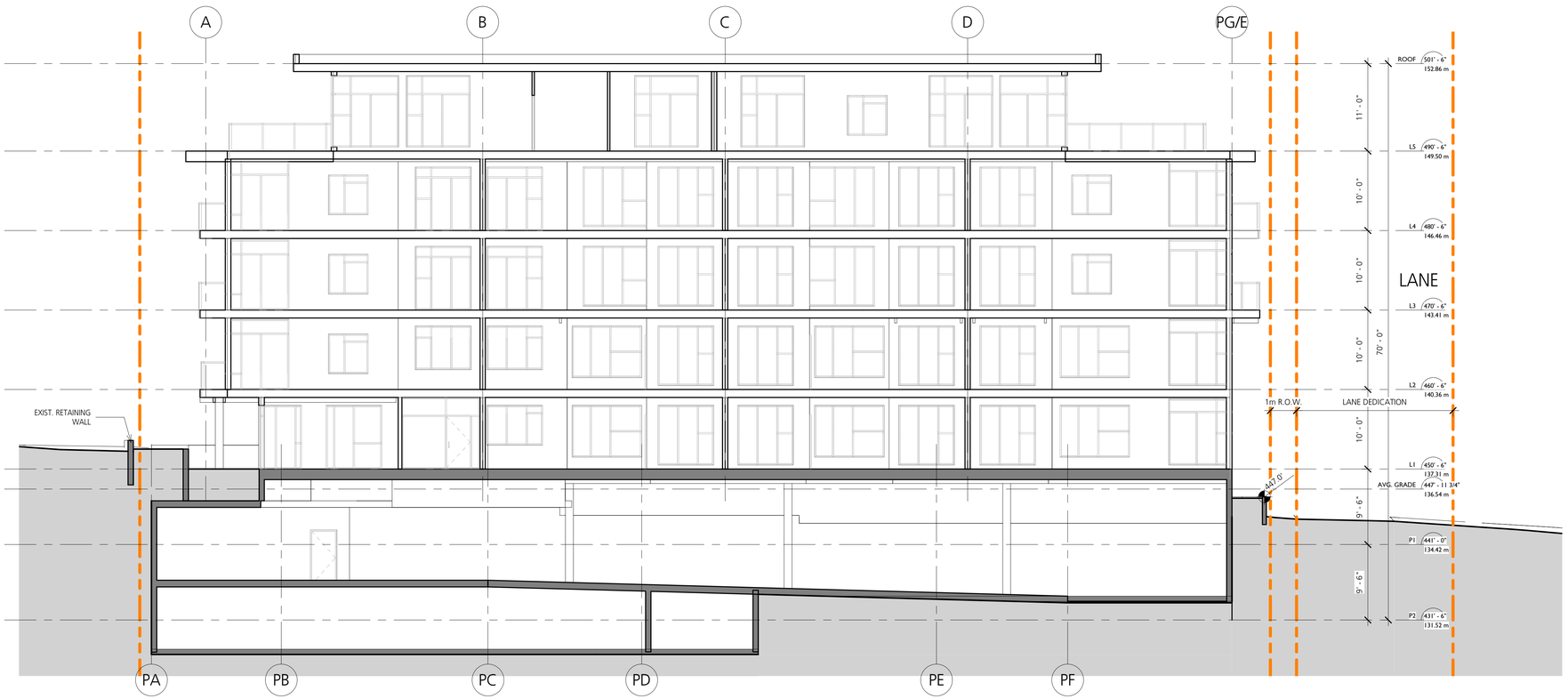

2 **SECTION 2**
1/8" = 1'-0"

gbl

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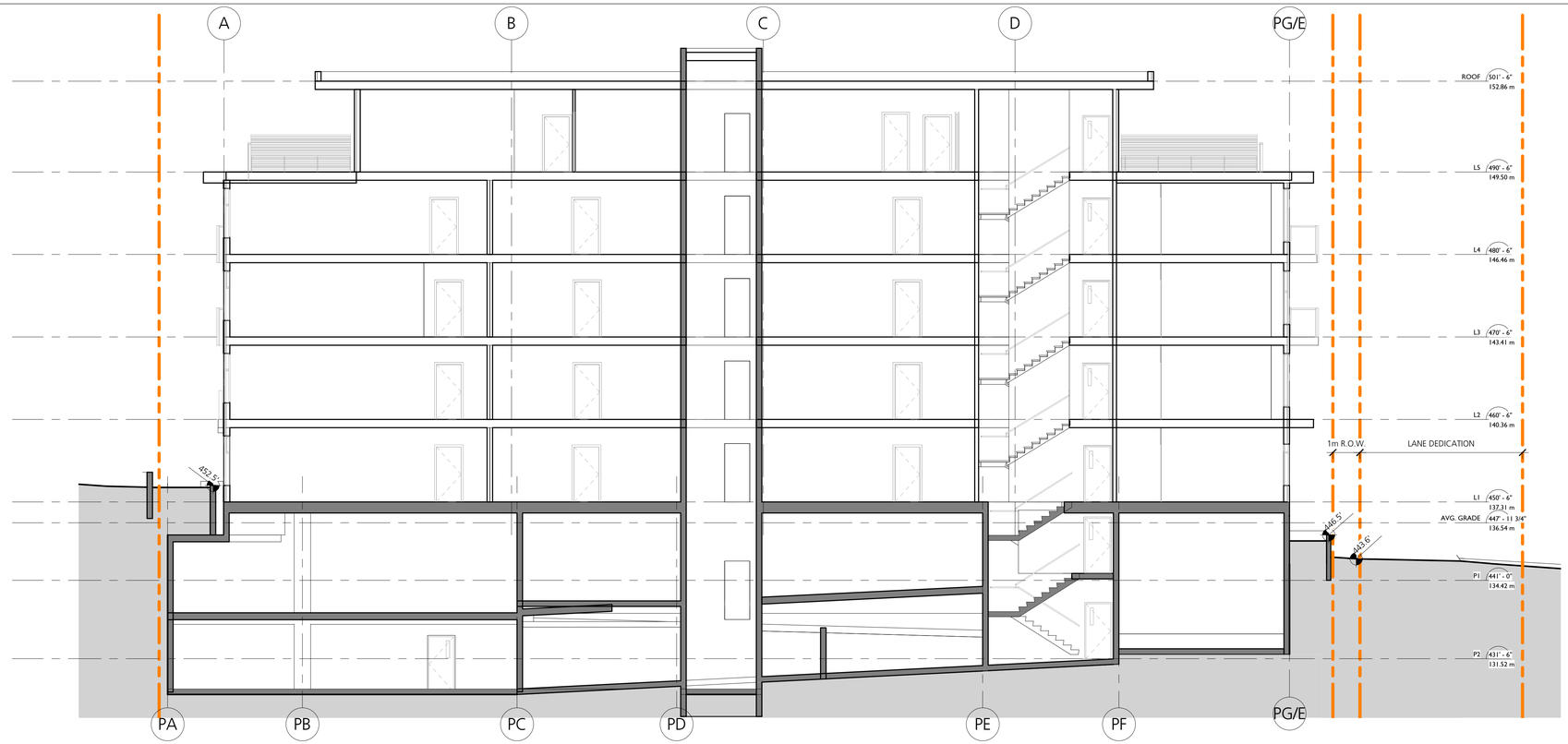

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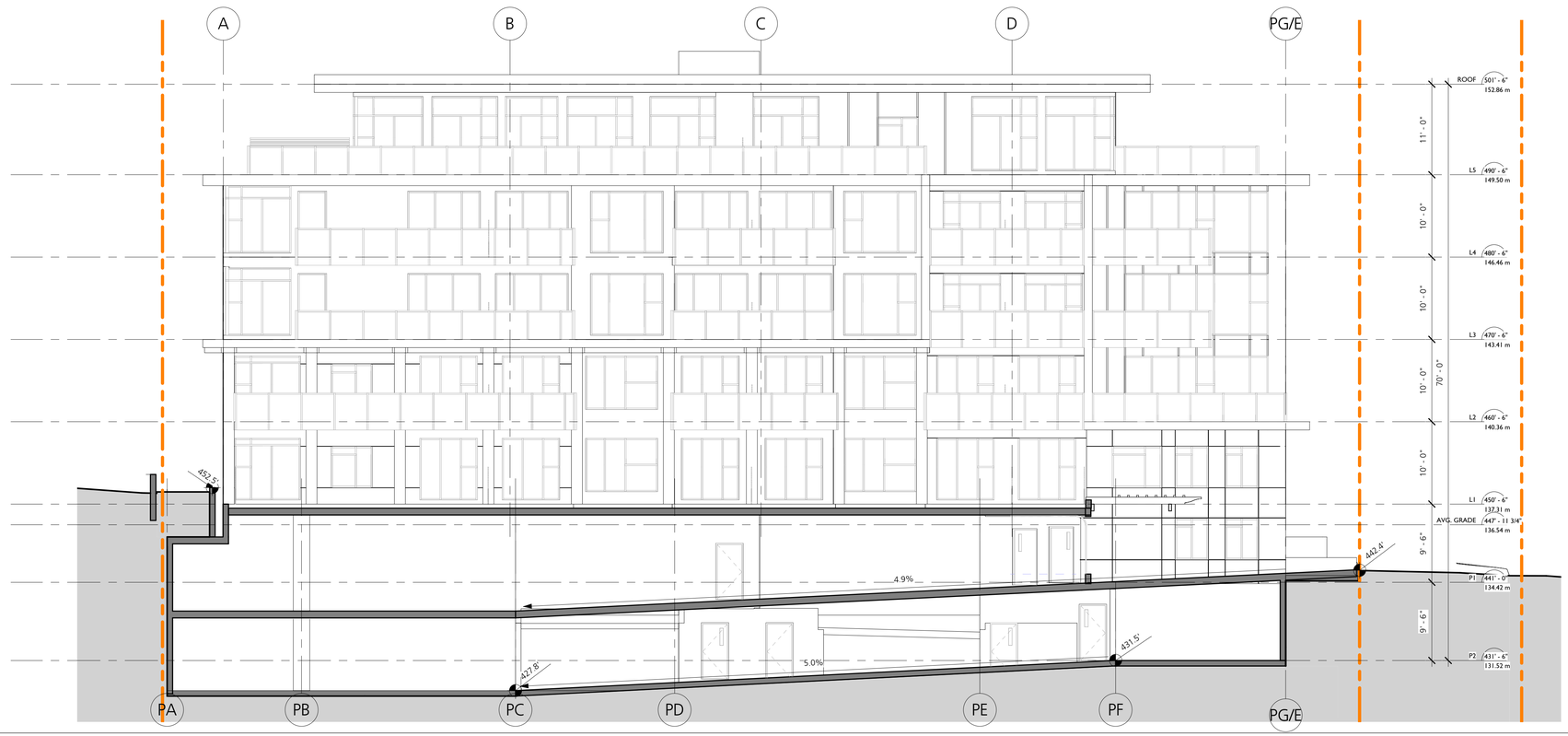

4 **SECTION 4**
1/8" = 1'-0"

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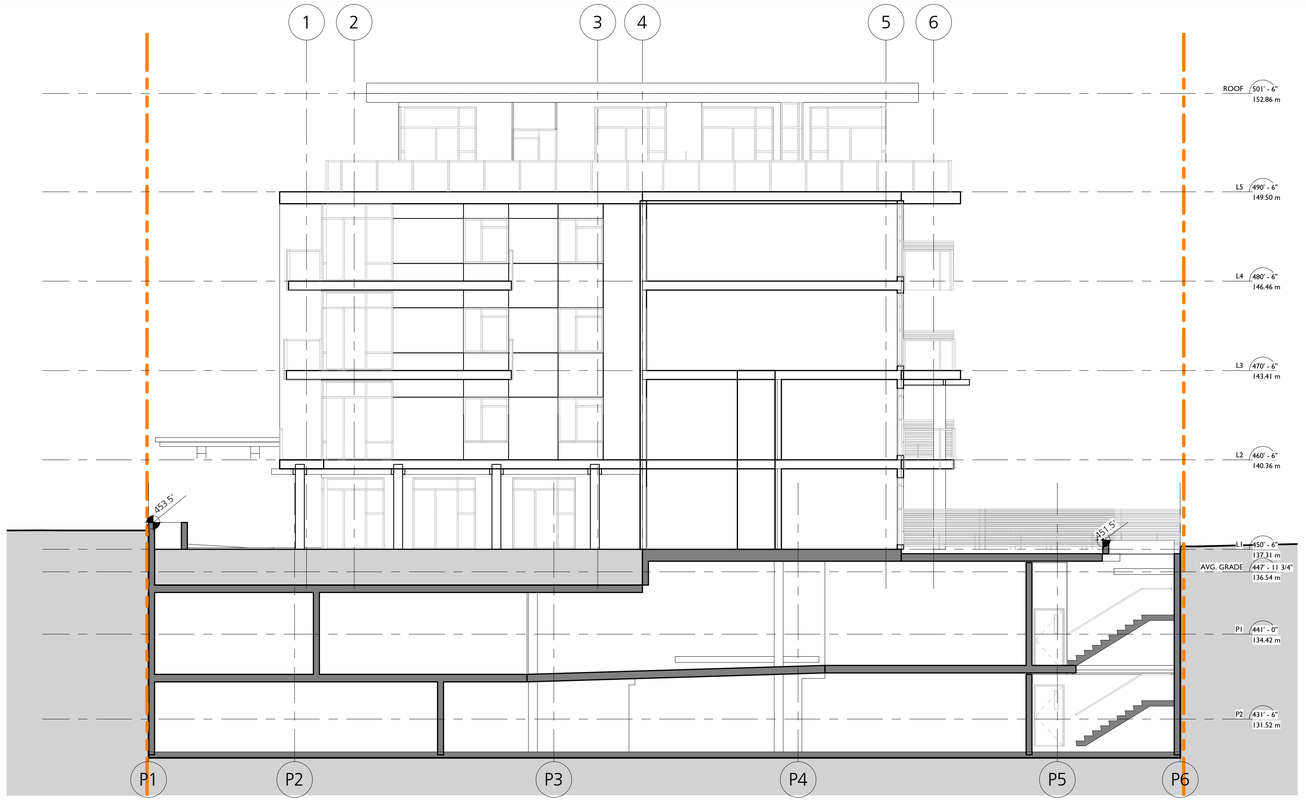

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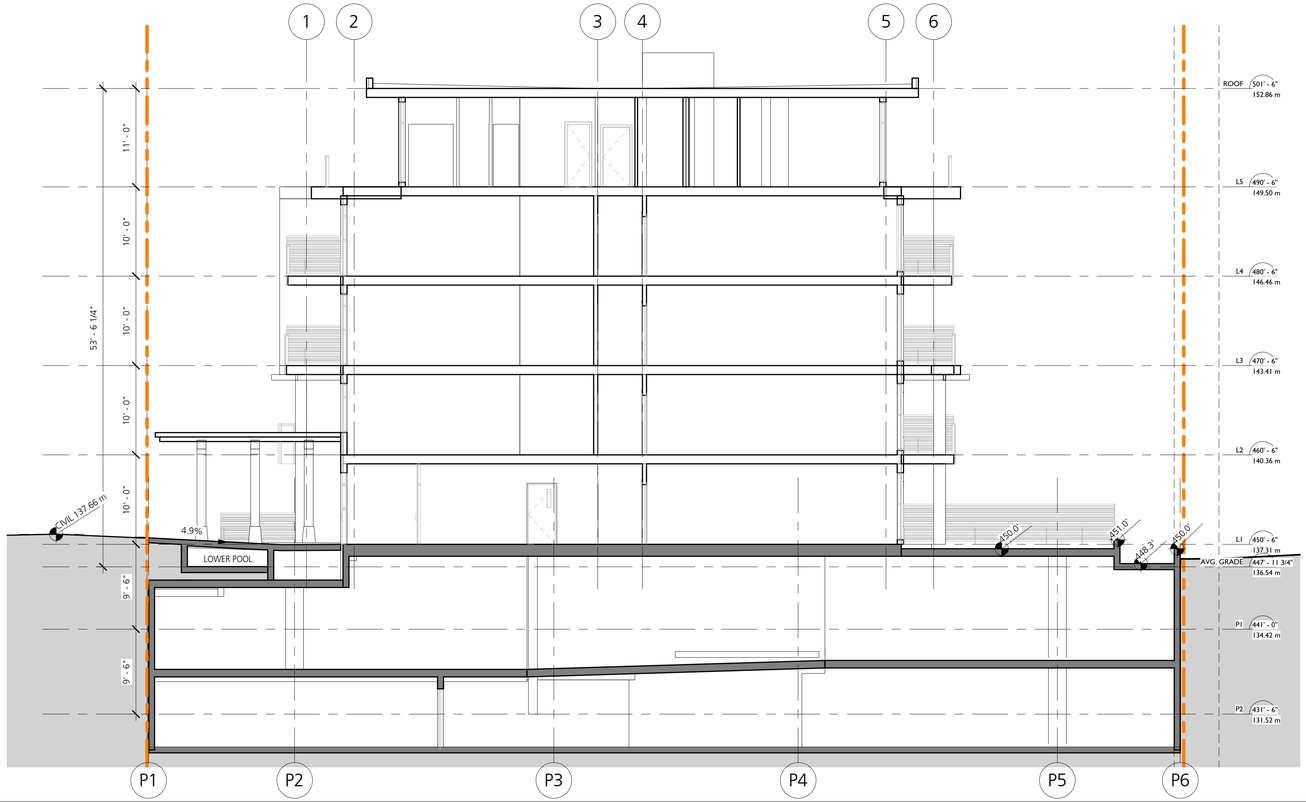

B **SECTION B**
1/8" = 1'-0"

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SECTIONS

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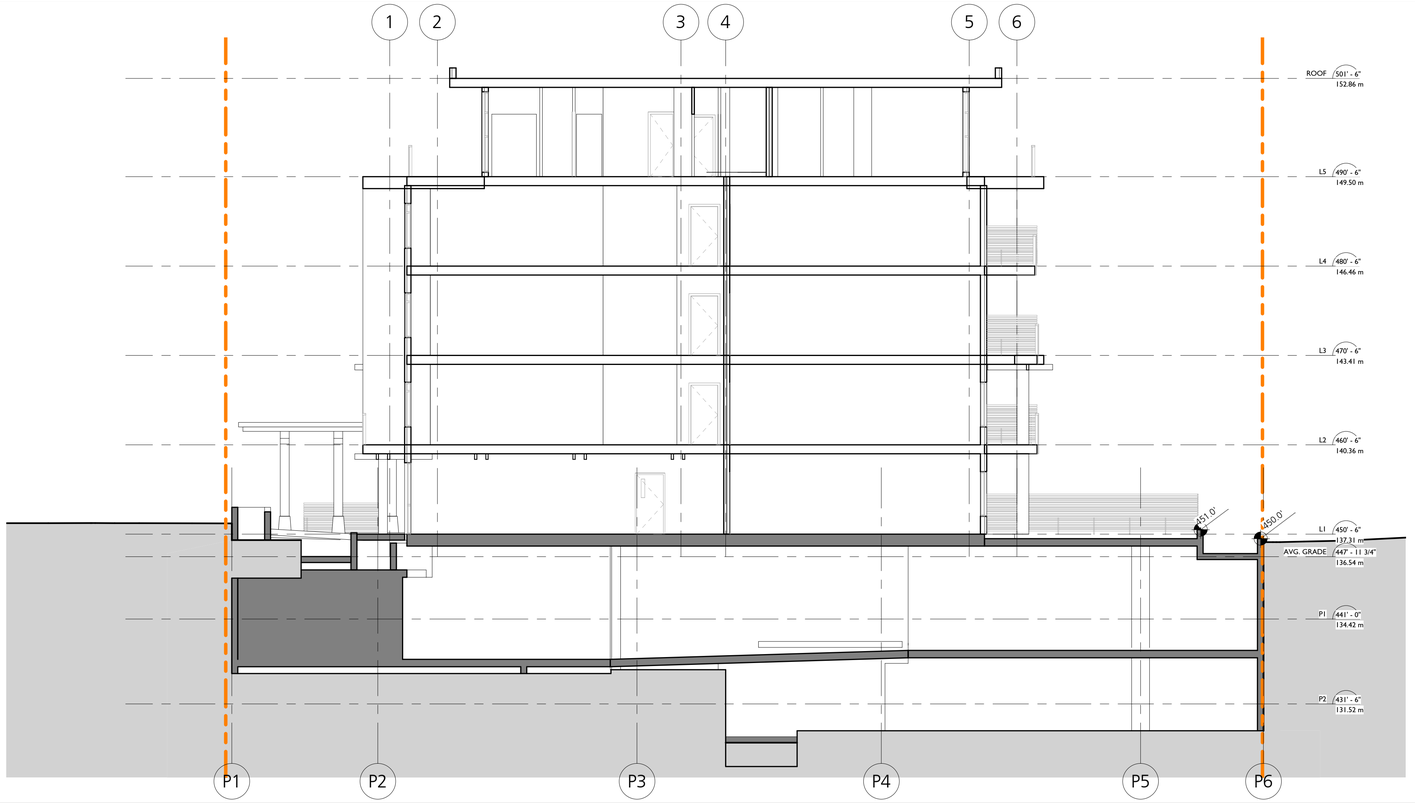

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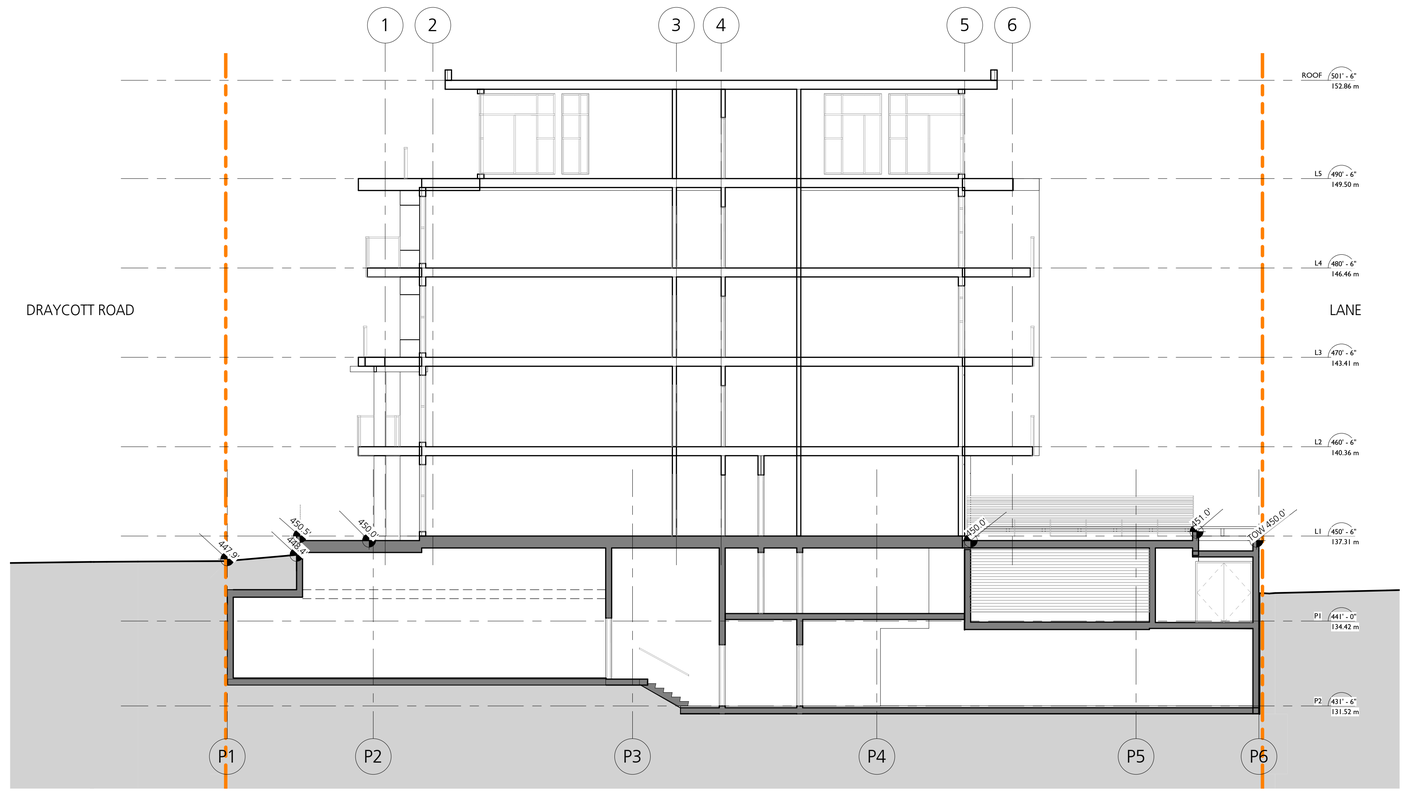

D SECTION D
1/8" = 1'-0"

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SECTIONS

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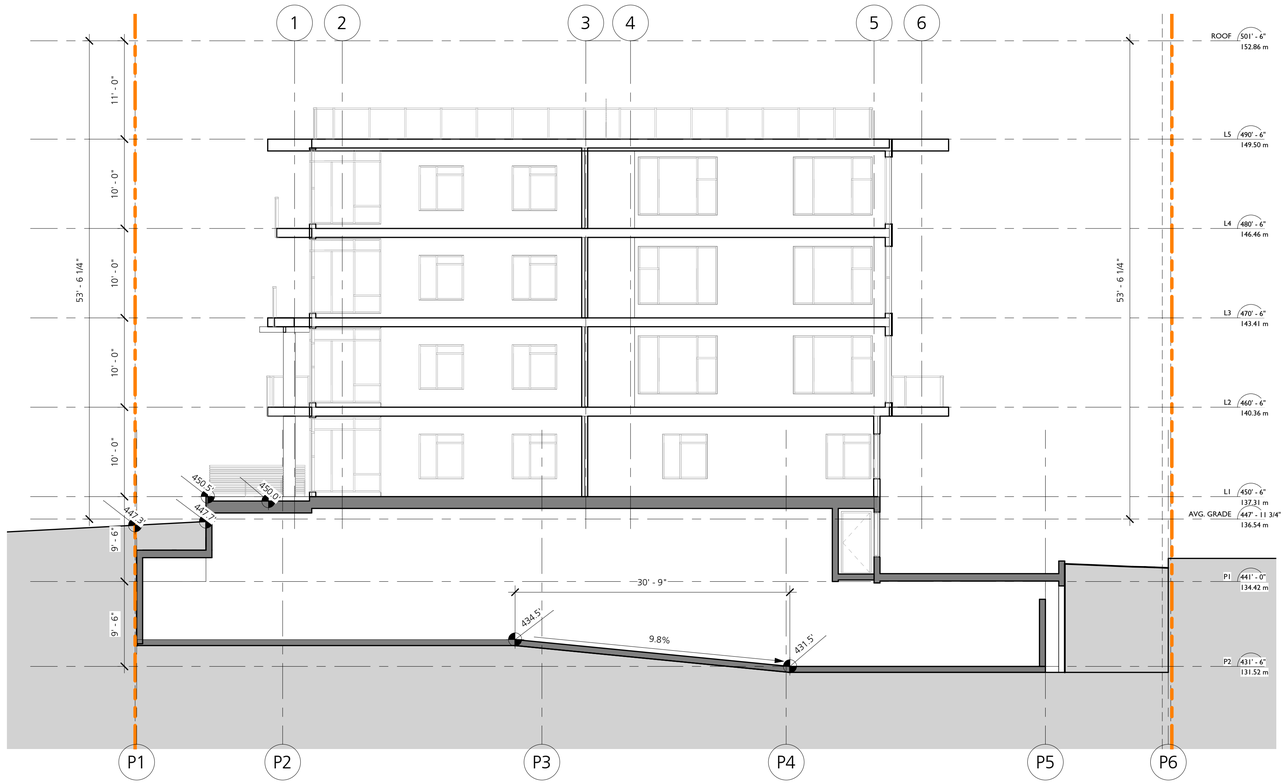

E SECTION E
1/8" = 1'-0"

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A-4.05



NW CORNER



2 NE CORNER

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3D VIEWS

DATE	2/18/2015 6:21:25 PM
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SCALE	
JOB NUMBER	1285

A-5.01

1325 DRAYCOTT
COLORS & MATERIALS



CEMENTITIOUS PANEL
Prefinished White

01

CEMENTITIOUS PANEL
Prefinished Charcoal

02

CEMENTITIOUS PANEL
Prefinished Gray

03

CULTURED STONE
West Coast Castlestone

04

CLEAR STAINED CEDAR

05

WOOD ACCENT
Painted Cementitious Board
Composite Metal Panel

06

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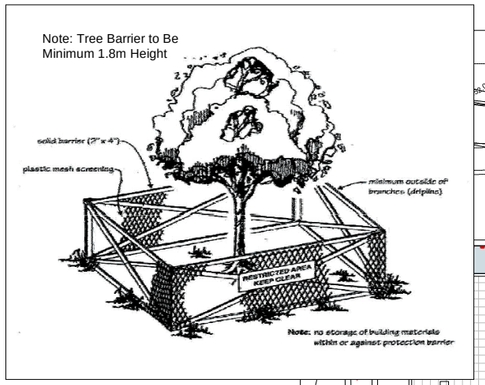
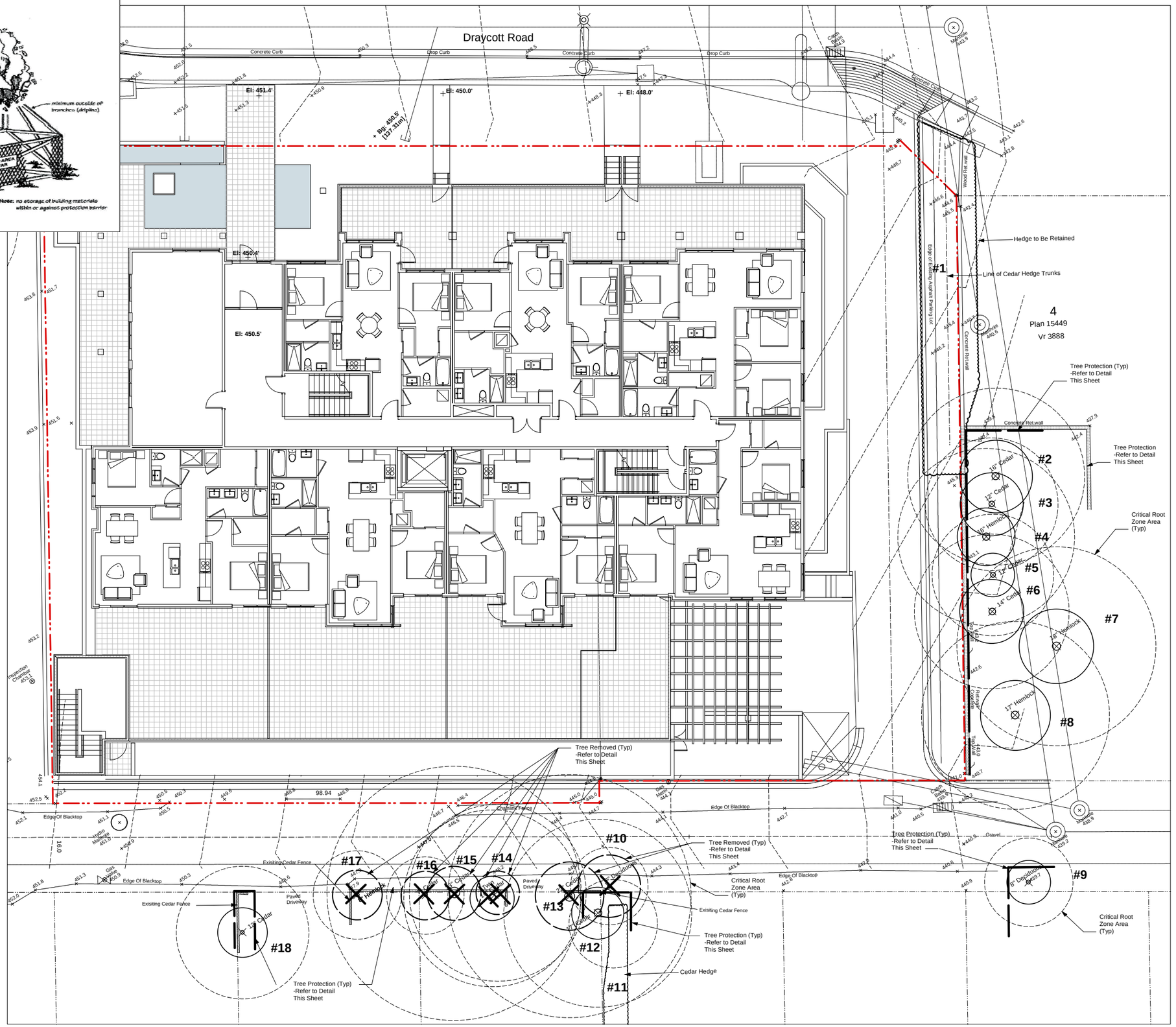
APPENDIX B





gBL

GOMBEROFF BELL LYON ARCHITECTS GROUP INC.
140 - 2034 WEST 11TH AVENUE TELEPHONE 604 736 1156
VANCOUVER, BC CANADA V6J 2C9 FACSIMILE 604 731 5279

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PLOT INFO.

PLOT STAMP LOCATION

REVISIONS

NO	DESCRIPTION	
1.	June 6/14	Issued for Detailed Application

Senga Landscape Architecture
4268 Fonteyn Way, North Vancouver
p: 6049298627 f: 6049296154
www.sengadesigns.com

PROJECT NAME

1325/1335
DRAYCOTT AVE
(Multi-Family)

NORTH VANCOUVER, BC

PROJECT DESCRIPTION

TREE RETENTION/
REMOVAL PLAN

DATE	Dec. 2013
DRAWN BY	SL/CV
CHECKED BY	SL/CV
SCALE	1/8" = 1'
JOB NUMBER	

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Excerpt from the Advisory Design Panel
September 14, 2014

NEW BUSINESS

a. 1325 Draycott Road – Detailed Rezoning and Development Permit Application for 35 unit, five storey apartment project. (File: 08.3060.20/023.14)

Ms. Casey Peters gave a brief overview of the detailed application and site context. The surrounding properties consist of single family lots to the south, commercial buildings to the west and north, and a townhouse development to the east. Ms. Peters noted that a preliminary application was reviewed by the Panel on January 16, 2014.

The District's Official Community Plan (OCP) split-designates of this site. Four of the five parcels are designated as Residential Level 5 (RES5): Low Density Apartment and one lot as Residential Level 6 (RES6): Medium Density Apartment. RES5 permits densities up to 1.75 FSR and RES6 permits densities up to 2.5 FSR. Maximum densities have been averaged over the entire site for a total of 1.9 FSR.

The site is within Development Permit Areas for Form and Character of Development (Multi-family) and for 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 Multi-Family Housing Guidelines.

Ms. Peters noted the existing hedge on the east side of the proposed north/south lane. Neighbours to the site have expressed a desire to retain this hedge and the applicant's proposal reflects this objective.

Ms. Peters introduced the design team, project architect Mr. Joey Stevens, and landscape architect, Ms. Senga Lindsay.

The Chair thanked Ms. Peters for her presentation, welcomed the applicant team to the meeting and outlined the procedure to be followed in reviewing the proposal.

Mr. Stevens of GBL Architects outlined the changes made to the application since it was reviewed by the Panel at the preliminary stage, including the public realm, landscaping, and building design. Mr. Stevens then reviewed the current building design, pointing out the top floor stepback, the visual break at the front entrance with vertical elements, walk-up patios on the north side for the ground floor units, as well as building elements such as vertical wood posts and deep cedar soffits to reflect the Lynn Valley character. He also noted the use of a mix of light silver-coloured and darker-coloured metal panels and the differing patterns of the siding on various elevations to create interest.

The new north/south lane was identified, as well as the widening of the existing south lane. It was noted that the previously-proposed children's play area at the northwest corner of the site has been replaced with an outdoor amenity space. Additional changes include increased parking (65 spaces), relocation of the garbage facility, reduced height of the building by 1.5 feet, additional patio planters and a trellis above the parking entrance.

Ms. Senga Lindsay, the project landscape architect, spoke to the landscape design and revisions that have been made to the project. She noted that the building's setback allows for the addition of more greenery to create a garden feel along the Draycott frontage, and a water feature is now proposed at the main entrance. The large patios will have a green buffer from the lane with increased use of evergreens that will surround the building. Ms. Lindsay noted the trellis added over the parking entrance with plantings to create more greenery. Ms. Lindsay is also the arborist for the project and noted the review of the condition of the existing hedge as well as the efforts being taken to ensure this hedge is retained.

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:

Could the stairs to the front patio at the west end of the site be changed to a ramp? Answer: Yes they could be and this will be explored.

Will the proposed bridge to the entrance create a drainage and maintenance issue? Answer: This will be resolved with curbing and appropriate drainage to direct run-off.

Cedar soffits are shown in the renderings but the material key is unclear as to inclusion of wood - please clarify? Answer: Soffits will be clear finish cedar, but the proposed vertical accent bands may be cementitious panels to address weathering issues.

Will there be a pad-mounted transformer and where will it be located? Answer: It has not been determined if one is required, but a space has been set aside near the driveway.

If installed, will the transformer block visibility at the driveway access to the lane? Answer: To be determined but steps can be taken to ensure a clear view.

What type of landscaping will be planted on the south side of the south patios? Answer: Cedars for hedges and trees that grow to a maximum of 25 feet.

What are the sustainability approaches for the project and what is the green building target? Answer: Target is "Built Green Gold" and specific features are still being resolved.

Are there plans to install security lighting along the laneway? Answer: Nothing has yet been integrated into the building or landscaping.

What is the finish for the wall at the rear lane? Answer: Cultured stone and cascading plants.

Was there a children's play area proposed at the Preliminary application? Answer: Yes, but it has been deleted partly due to close proximity to the Lynn Valley Park playground. A water feature and outdoor amenity space are proposed instead for this area.

Is public art proposed? Answer: Yes, public art is proposed and details are under review.

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 complimented the design team on how well the proposed building scheme and generous landscaping appear to reflect neighbourhood character. He noted how the south-east corner units will be overlooking the garage trellis, and suggested the grade level unit decks simply be extended into this area instead of showing a trellis. Mr. Ducote also supported narrowing of the lane to the east to ensure the existing hedge is retained. Mr. Ducote concluded by pointing out that a massing model would have been beneficial to assist in understanding the project.

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

Panel members thanked the design team for their presentation and noted a general appreciation for the changes made since reviewing the preliminary application. Several Panel members thanked the applicant team for including the 3D concept diagrams in the design package.

The Panel noted an appreciation for the improvements to the pedestrian access and the location of the waste disposal facilities in the project, and one member suggested the north-east unit on Draycott would benefit with a direct entrance from the street.

A Panel member noted that an increase in bicycle parking should be considered, and that as there are 35 units and only 31 storage lockers proposed, an increase in storage lockers might also be prudent.

Members of the Panel expressed the importance of ensuring the detailing is handled successfully as doing so would help support the positive design of the project. Related to this, some concerns were expressed regarding the interface between wood-clad columns and the balcony rails in terms of how this might be detailed and maintained.

One Panel member noted that Building Code issues should be reviewed for spatial separation at the west side of the building and for exiting from the unit near the main entrance lobby.

As a way to improve accessibility, a Panel member suggested the bathroom layout could use some review, specifically where doors are located and the direction the doors open into the bathroom.

One member suggested that adding a “play” element such as stepping stones could be a positive change to the proposed water feature, and it was noted the clearances between the landscaping to the building wall could be a maintenance challenge on the west side of the building.

The trellis over the garage entry was noted as generally positive and one member noted that residents on the upper floors may prefer to view the trellis rather than a patio - it was however suggested that an evergreen vine variety be selected for planting on the trellis.

Panel members suggested that a review of vehicle sightlines take place for the parking garage exit, as well as consideration of traffic calming of some type in the lane to the east, each to ensure safe movements at this driveway. In addition, it was suggested that lighting to improve surveillance and safety in the lane be considered.

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

Mr. Joey Stevens thanked the Panel for their positive input, assured the Panel that the design team understands the comments, and indicated that comments will be addressed 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 Tieg Martin:

THAT the ADP has reviewed the proposal and recommends **APPROVAL** of the project **SUBJECT** to consideration of the Panel's comments with specific attention to the following items to the satisfaction of staff:

- Review of Building Code compliance, such as specification of exterior accent cladding materials, while ensuring the project design reflects the images shown to the Advisory Design Panel in the presentation;
- Review of lighting and sightlines, particularly as they relate to any pad mounted transformer installation, to ensure safe vehicle movements in the north/south lane;
- Review of landscaping details, including the use of suitable evergreen species for trellis plantings; and
- Review of relationship of soft landscape materials to patio areas to better integrate landscape into the patios.

MOTION CARRIED

Planning, Permits and Bylaws
District of North Vancouver
355 Queens Road, North Vancouver
BC V7N 4N5

Date Inspected And Reporting: April 29/14
Date Report Revised To DNV Comments:

Study completed for: Milori Developments, 226-998 Harbourside Drive | North Vancouver, BC | V7P 3T2

Re: Proposed Multi-Family Development, 1325 Draycott Road/1335 Draycott Road, North Vancouver

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1.0 Introduction

S.L.A. Inc. (Senga Landscape Architecture Inc.) was retained to complete an arbouricultural assessment of the existing tree resources located on and adjacent lands located at the above noted address.

This report provides a summary of my findings:

2.0 Observation

Review of existing trees on site was conducted on April 29, 2014. A general record of trees on site have been photographed, recorded and are available upon request.

This field report is based only on tree survey and site observations on the date noted. Effort has been made to ensure that the opinions expressed are a reasonable and accurate representation of the general condition of all trees reviewed. The assessment was completed based on visual review on the date noted in the report only.

Below are the referenced table and existing tree survey plan denoting those trees on the survey and observed in field. Notations in table below regarding tree

retention and or removal recommendations based on lot layout review of plans. Plan referencing table is as per below. A tree preservation summary can be found in Appendix A and Tree Plan found in Appendix B.

Survey Tag #	Species	Size	Comment	Critical Root Zone (Radius)
1	Cedar Hedge	6”-8”	-Clipped hedge of tightly (2-3’o.c) spaced trees. -Hedge healthy and approximately 25’ High -Hedge sits atop an existing retaining wall to the East and growing approximately 2.5’ from existing asphalt parking lot on the West -Hedge is not impacted by new laneway as long as installation of curbing and paving does not encroach beyond existing edge of parking asphalt. -Hedge to be retained	8’
2	Cedar	16”	-Tree tall healthy straight with branching on the East side to within approximately 3’ of existing grade -Thin stunted branching on West side due to shading from existing adjacent building -Shaded, thin branches adjacent existing trees to the North and South. -Tree growing in area lightly covered with herbaceous groundcover - Lamium -Tree to be retained and is	16’

			not impacted by new laneway as long as installation of curbing and paving does not encroach beyond existing edge of wall.	
3	Cedar	12”	-Tree tall healthy straight with branching on the East side to within approximately 3’ of existing grade -Thin stunted branching on West side due to shading from existing adjacent building -Shaded, thin branches adjacent existing trees to the North and South. -Tree growing in area lightly covered with herbaceous groundcover - Lamium -Tree to be retained and is not impacted by new laneway as long as installation of curbing and paving does not encroach beyond existing edge of wall.	12’
4	Hemlock	16”	-Tree tall healthy straight with branching on the East side to within approximately 3’ of existing grade -Thin stunted branching on West side due to shading from existing adjacent building -Shaded, thin branches adjacent existing trees to the North and South. -Tree growing in area lightly covered with herbaceous	16’

			groundcover - Lamium -Tree to be retained and is not impacted by new laneway as long as installation of curbing and paving does not encroach beyond existing edge of wall.	
5	Cedar	11”	-Tree tall healthy straight with branching on the East side to within approximately 3’ of existing grade -Thin stunted branching on West side due to shading from existing adjacent building -Shaded, thin branches adjacent existing trees to the North and South. -Tree growing in area lightly covered with herbaceous groundcover - Lamium -Tree to be retained and is not impacted by new laneway as long as installation of curbing and paving does not encroach beyond existing edge of wall.	11’
6	Cedar	14”	-Tree tall healthy straight with branching on the East side to within approximately 3’ of existing grade -Thin stunted branching on West side due to shading from existing adjacent building -Shaded, thin branches adjacent existing trees to the North and South.	14’

			-Tree growing in area lightly covered with herbaceous groundcover - Lamium -Tree to be retained and is not impacted by new laneway as long as installation of curbing and paving does not encroach beyond existing edge of wall.	
7	Hemlock	18”	-Tree tall healthy straight with branching on the East side to within approximately 3’ of existing grade -Thin stunted branching on West side due to shading from existing adjacent building -Shaded, thin branches adjacent existing trees to the North and South. -Tree growing in area lightly covered with herbaceous groundcover - Lamium -Tree to be retained and is not impacted by new laneway as long as installation of curbing and paving does not encroach beyond existing edge of wall.	18’
8	Hemlock	18”	-Tree tall healthy straight with branching on the East side to within approximately 3’ of existing grade -Thin stunted branching on West side due to shading from existing adjacent building -Shaded, thin branches	18’

			adjacent existing trees to the North and South. -Tree growing in area lightly covered with herbaceous groundcover - Lamium -Tree to be retained and is not impacted by new laneway as long as installation of curbing and paving does not encroach beyond existing edge of wall.	
9	Maple	8”	-Tree located on Southern property adjacent the proposed new lane construction -Tree healthy but has a distinct lean to the NW – signs indicate this condition has existed for many years -Tree trunk offset approximately 2’ from edge of existing asphalt lane -Tree to be retained and is not impacted by new laneway as long as installation of curbing and paving does not encroach beyond existing edge of wall.	8’
10	Dec (Fraxinus)	7”	-Tree located on Southern property adjacent the proposed new lane construction -Tree healthy but trunk is a series of 3 multi-stems starting approximately 2.5’ above grade -Tree is part of a tight cluster of trees and a Cedar	7'

			hedgerow to the South -Fence boards are nailed to the trunk. -Tree trunk offset approximately 2' from edge of existing asphalt lane -Tree currently under review as current DNV standards for adjacent laneway requires removal of that tree	
11	Cedar Hedge	8"	-Hedgerow of existing Cedar trees to south of tree #10. -Hedgerow clipped and healthy -Tree to be retained	8'
12	Cedar	17"	-Tree located on Southern property adjacent the proposed new lane construction -Tree is part of a tight cluster of trees and a Cedar hedgerow to the South -Tree healthy and straight -Tree is located behind existing Cedar fence -Tree trunk offset approximately 2' from edge of existing asphalt lane -Tree to be retained	17'
13	Cedar	22"	-Tree located on Southern property adjacent the proposed new lane construction -Tree is part of a tight cluster of trees -Tree healthy and straight -Tree is located behind existing Cedar fence	22'

			-Tree trunk offset approximately 2' from edge of existing asphalt lane -Tree currently under review as current DNV standards for adjacent laneway requires removal of that tree	
14	Cedar	14" (Twin Trunks)	-Tree located on Southern property adjacent the proposed new lane construction -Tree is part of a tight cluster of trees -Tree healthy but is twin trunked -Tree is located behind existing Cedar fence -Tree trunk offset approximately 2' from edge of existing asphalt lane -Tree currently under review as current DNV standards for adjacent laneway requires removal of that tree	14'
15	Cedar	23"	-Tree located on Southern property adjacent the proposed new lane construction -Tree is part of a tight cluster of trees -Tree healthy and straight -Tree is located behind existing Cedar fence -Tree trunk offset approximately 2' from edge of existing asphalt lane -Tree currently under review as current DNV standards for	23'

			adjacent laneway requires removal of that tree	
16	Cedar	7”	-Tree located on Southern property adjacent the proposed new lane construction -Tree is part of a tight cluster of trees -Tree healthy but is twin trunked -Tree is located behind existing Cedar fence -Tree trunk offset approximately 2’ from edge of existing asphalt lane -Tree currently under review as current DNV standards for adjacent laneway requires removal of that tree	7’
17	Hemlock	8”	-Tree located on Southern property adjacent the proposed new lane construction -Tree is part of a tight cluster of trees -Tree healthy but is twin trunked -Tree is located behind existing Cedar fence -Tree trunk offset approximately 2’ from edge of existing asphalt lane -Tree currently under review as current DNV standards for adjacent laneway requires removal of that tree	8’

18	Cedar	12”	-Tree located on Southern property adjacent the proposed new lane construction -Tree healthy and straight -Tree is located behind existing Cedar fence -Tree trunk offset approximately 8’ from edge of existing asphalt lane -Tree to be retained	12’

4.0 Mitigation Measures and Methodology:

Trees identified as 2-8 inclusive on plans are located adjacent a proposed lane development that is to be paved. These trees are currently separated from the laneway from an existing concrete wall. This wall and the trees are on the adjacent property. It is anticipated this wall will not be disturbed during laneway construction, therefore no mitigation measures other than securing and maintaining tree barrier protection will be required.

Trees identified as 9-18 inclusive on plans are located adjacent an existing lane development that is to be paved. As this is a DNV standard, aforementioned will have to review and modify their standard in order to retain those trees. It is recommended that the laneway be reduced to 4m paved width in order to safely retain those trees.

5.0 Limitations

The opinions expressed in this report are valid for one year only and based inspection dated: April 29, 2014. We attach the following clauses to this document to ensure that you are fully aware of what is technically and professionally realistic in the assessment and preservation of trees.

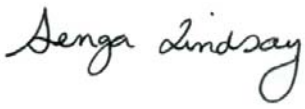
No trees were dissected, cored, probed or climbed. All trees or groups of trees have the potential to fail. No guarantees are offered or implied by S.L.A. inc. or their employees that the trees reviewed and referenced in this report are safe given all conditions. Trees can be managed, but they cannot be controlled. To live,

work or play near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

The information provided in this report may not be reproduced or distributed without permission of S.L.A. Inc. This report is to be used in its entirety and for its stated purpose only.

Please contact the undersigned if you have any questions or concerns regarding this matter - 604-929-8627.

Sincerely,



Senga M. Lindsay
ISA Certified Arbourist # PN-6257A

APPENDIX A

TREE PRESERVATION/REPLACEMENT SUMMARY (June 9, 2014)

Project Location: 1325/1335 Draycott Road, North Vancouver, BC

Certified Arbourist: Senga M. Lindsay**,** ISA, MBCSLA
PN-6257A

TREE TABLE – PROTECTED TREES

Species	**On-site**	**Off-Site**	**Total**
Cedar	**0**	**6**	**6**
Maple	**0**	**1**	**1**
Hemlock	**0**	**3**	**3**
Cedar Hedging (59' Long)	**0**	**1**	**1**

TREE TABLE – REMOVED TREES

Species	**On-site**	**Off-Site**	**Total**
Hemlock	**0**	**1**	**1**
Fraxinus	**0**	**1**	**1**
Cedar	**0**	**4**	**4**
Hemlock	**0**	**1**	**1**

E3 ECO GROUP

6 – June – 2014

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

705 West 15th Street

North Vancouver, BC

V7M 1T2

T: 604-874-3715

F: 1-866-563-8021

E:info@e3ecogroup.com

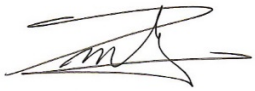
To Whom This May Concern,

E3 has been asked to review Draycott Road with respect to Built Green Canada's High Density (HD) program.

Based on E3's meetings with the design team and a review of the energy model that was completed by Recollective Consulting, we believe that Milori Homes will be able to achieve 135 points on the Built Green HD checklist and a preliminary energy rating of 35.1% energy savings to achieve a Built Green Gold rating compliance. Please see the attached Built Green checklist and preliminary energy model review.

Please contact me if you have any questions regarding this application. Thank you for your time with this matter.

Sincerely,



Troy Glasner, LEED AP BD+C, Homes, C.E.M., CEA, CSBA, Certified Green Rater
President
E3 ECO GROUP INC.

BUILT GREEN® High Density (HD) Enrollment Form

BUILDER INFORMATION

						Application Date:	
Company Name:	Milori Homes (Draycott) Ltd.						
Full Mailing Address:	226-998 Harbourisde Drive, North Vancouver, BC V7P 3T2						
Main Contact:	Hesam Deihimi			BG Verifier:	Troy Glasner - E3 Eco Group Inc.		
Email:	hesam@milorihomes.com			Email:	troy@e3ecogroup.com		
Phone:	604-781-9537	Fax:	604-770-2298	Phone:	604-874-3715	Fax:	1-866-563-8021

BUILDING INFORMATION

Community:	Lynn Valley, North Vancouver			Construction Start Date:		Completion Date (Expected):	
Address:	1325-1335 Draycott Road			City:	North Vancouver		
Project Name:	TBD			Total Qty. Units:	35	Approx. Project value:	$16.8M
Gross Square Footage:	37,000	Commercial GFA:	0	Floor Area:	37000	Parkade below grade?	YES

BUILT GREEN Target Level: GOLD **TOTAL CHECKLIST POINTS** **135**

# of Units	35	# of Storeys	5

In submitting this form and enrolling your project, you agree to the terms of payment and to provide all required documentation, including but not limited to the Built Green Checklist, energy Modeling files, and other support documentation as may requested by Built Green Canada, in order to fulfil the project certification requirements.

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: 34 Section 2: 10 Section 3: 22 Section 4: 29 Section 5: 15 Section 6: 16 Section 7: 9 TOTAL POINTS: 135

Builder Name: Milori Homes (Draycott) Ltd.

House Address: 1325-1335 Draycott Road

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 32 (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. A properly sized heating and cooling system can reduce costs as well as conserve energy. When properly sized, HVAC equipment will run for 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
1-6	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.		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.		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 co-axial 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 (new)	Install high efficiency pump drive motors for service water distribution with variable speed/flow capabilities. Pumps with variable speed drive motors operative more efficiently and help reduce electricity consumption.		1
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	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 gas 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
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 window 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 refrigerator 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
1-27a (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
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.		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

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.	2	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: iesna.org and the "Lighting for Exterior Environments" guide (IESNA RP-33-99) can be purchased there.		2
1-35	Common Area lit with high efficiency (non-incandescent) lamps. Incandescent lights 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.	1	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
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. 32 required):	**34**	

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 10 (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
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	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**	1 or 2
2-14	Insulation levels meet or exceed the MNECB (may include Roof-R28, Walls R14, Floor R14). Model New Energy Code minimums will help to keep heating and cooling costs to a minimum compared to a conventionally framed wall.	**1**	1
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 regroups 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 Materials 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 products 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
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.	**3**	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./ft^2 structural support, while Intensive roofs (8"-4') 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 buildings. 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. 10 required):	**10**	

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 10 (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 skinned 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. Uses trees from a forest managed system that prevents clear cutting trees, and replants trees to replace from which they've been harvested.		2
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 sawmill waste and Portland cement, is a strong, long lasting and fireproof material.	**5**	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 miss scraps into large pieces, which conserves natural resources and reduces landfill usage.	**4**	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 or 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 landfills due to long life of product.	**2**	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.	**2**	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 warrantied roof system saves money in replacement costs, and reduces the use of landfills due to the longevity of the product.	**2**	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**	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 sources 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**	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**	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	1
3-24	Finger-jointed casings, baseboards and jambs used throughout the project. Finger-jointed casing and baseboards maximize wood usage, buy using small 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	1 to 2
	TOTAL SECTION POINTS (min. 10 required):	**22**	

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 15 (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, pollens and more. The system is connected to the cold air return of the forced air heating/cooling system which provides a whole house filtration system. *Ultraviolet (UV) Air*	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 units.	1	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 (new)	Install bathroom exhaust fan controls in each unit using either an occupancy sensor, automatic humidistat controller, automatic timer, or continuously operating exhaust fan. Bathroom exhaust fan controls increase occupant comfort by further controlling indoor moisture and odour levels.	1	1

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	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	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.	3	3
	Sealed-combustion appliances draw all their combustion air from the outdoors, which eliminates any chance of back drafting. This feature is especially helpful in well sealed buildings. These types of appliances do not negatively affect indoor air quality.		
4-8	Install hardwired carbon monoxide detector within each unit, if combustion spillage susceptible appliances are used in the building.	1	1
	Carbon monoxide detectors warn against high levels of toxic carbon monoxide.		
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	2
	This process helps eliminate pollutants that drop into the HVAC ducting during the construction process from being circulated into the housing unit.		
4-9 a	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.	2	2
(new)	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		
4-11	All insulation in the project is third-party certified as low or zero formaldehyde.	2	2
	Formaldehyde may cause eye, nose, and throat irritation, headaches, loss of coordination, nausea, damage to liver, kidney, and central nervous system .		
4-12	Third-party certified low formaldehyde sub floor sheathing.		3
	Formaldehyde is colorless gaseous organic compound, water soluble, with a characteristic pungent and stifling smell. Building materials low in or free of formaldehyde glues are used in the floor underlayment, cabinetry and elsewhere to protect the indoor air quality.		
4-13	Third-party certified low formaldehyde underlayment is used in the project. (ANSI A208.1 – 2009 concentration ≤0.21 ppm).		1
	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.		
4-14	Low formaldehyde particle board/MDF used for cabinets (ANSI A208.2 – 2009 concentration ≤ 0.21 ppm).	1	1
	Urea formaldehyde-free fibreboard can be used in the same way as conventional fibreboard, but with the added caution of greater potential for water damage.		
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.).		2 to 4
	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.		
4-17	All interior wire shelving is factory powder coated.	2	2
	Vinyl coating on conventional shelving units off gas VOC toxins.		
4-18	Water-based urethane finishes used on all site-finished wood floors.		2
	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.		
4-19	All wood or laminate flooring in the project is factory finished.	2	2
	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.		
4-20	Water-based Lacquer or paints are used on all site built and installed millwork, including doors, casing and baseboards.	3	3
	Water based interior finish products reduces VOC off-gassing which improves indoor air quality.		
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.).	2	2 to 5
	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-VOC's", 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.		
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.).		1 to 3

To identify carpet products that are truly low-VOC, CRI has established a labeling program. The green and white logo displayed on carpet samples, of the CRI Indoor Air Quality Carpet Testing Program, in showrooms informs the consumer that the product type has been tested by 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.

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.	**3**	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. 15 required):	**29**	

V. WASTE MANAGEMENT

This section deals with the handling of waste materials on the construction site and encourages recycling.
Minimum 7 (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 landfills. 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**	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**	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.	**4**	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**	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**	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**	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**	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.).	**1**	1 to 2

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.

	TOTAL SECTION POINTS (min. 7 required):	**15**	

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 7 (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
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- 10 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 up the washing compartment 1/3 full to effectively wash clothing. 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 or 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.	**3**	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**	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**	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. 7 required):	**16**	

VII. BUSINESS PRATICE

This section deals more with manufacturers and builders office and business practices

Minimum 9 (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.	3	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	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	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
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	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	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. 9 required):	9	
	TOTAL CHECKLIST POINTS	135	





Screening Tool For New Building Design

Screening Tool Summary

Project Description

Your Project Description:

Milori Homes
1325-1335 Draycott Road, District of North
Vancouver,

Building Profile Summary

Proposed Building:	Multi-Unit Residential, 3691 m²
Location:	Vancouver (A), British Columbia
Heating System:	Fossil

Utility Rates

Your marginal utility rates (including any taxes and fees):

$ 0.075 per kWh	$ 11.060 per GJ
$ 0.000 per kW	$ 11.060 per litre oil/propane

Building Shell

	Reference Building	Your Design
Average window-to-wall-area ratio:	39	39 %
Overall window USI-value:	3.2	2.16 W/m²°C
Window shading coefficient:	0.736	0.44
Overall wall RSI-value:	1.235	4.4 m²°C/W
Gross exterior wall area:	1959	1959 m²
Roof type:	All other	All other
Overall roof RSI-value:	2.128	7
Gross exterior roof area:	768	768 m²

Mechanical System

	Reference Building	Your Design
Heating efficiency:	80	95 %
Minimum outside air:	0.3	0.3 l/s/m²
Demand control ventilation (DCV) type:	None	None
Percent of outside air controlled by DCV:	0	0 %
Percent of floor area cooled:	0	0 %
Cooling efficiency:	2.5	2.5 COP
Outdoor air economizer?	No	No
Efficiency of exhaust air heat recovery:	0	0 %
Service water heating fuel type:	Fossil	Fossil
Service water heating efficiency:	80	95 %
Service water savings:	0	30 %
Mechanical Efficiency Options (only applies to Your Design):		
Heating plant option:		Condensing
Variable speed fans:		Yes

Lighting

	Reference Building	Your Design
Average lighting density:	10	5 W/m²
Lighting controls (select if applicable and enter floor area):		
Occupancy sensor		19 %
None		0 %

Parkade lighting

	Reference Building	Your Design
Parkade floor area:	2303	2303 m²
Average lighting density:	3.2	2 W/m²
Percent of lighting load with occupancy sensor control:	0	50 %

Process Loads

	Reference Building	Your Design
Average process load density:	2.5	2.5
Percent served by electricity:	100	100 %

Building Performance Results

Based on the information you provided, your building design is at least 25% more energy efficient than the reference building that meets the Model National Energy Code for Buildings.

Current Design Performance

Annual Energy Use (GJ)		
Reference Building	2,160	
Your Design	1,402	
Energy Savings (with Process Loads)	**758**	**35.1%**

Annual Energy Cost Savings	**$10,938.06**

LEED® Canada 1.0 Energy & Atmosphere (EA)		
Reference Building	$24,643.13	
Your Design	$15,974.68	
Regulated Energy Cost Savings**	**$8,668.45**	**(35.2%)**

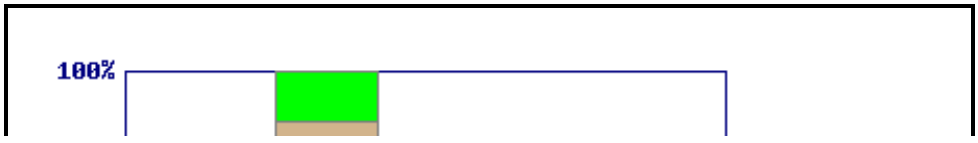
****Regulated energy costs exclude plug loads (equipment) for LEED.**

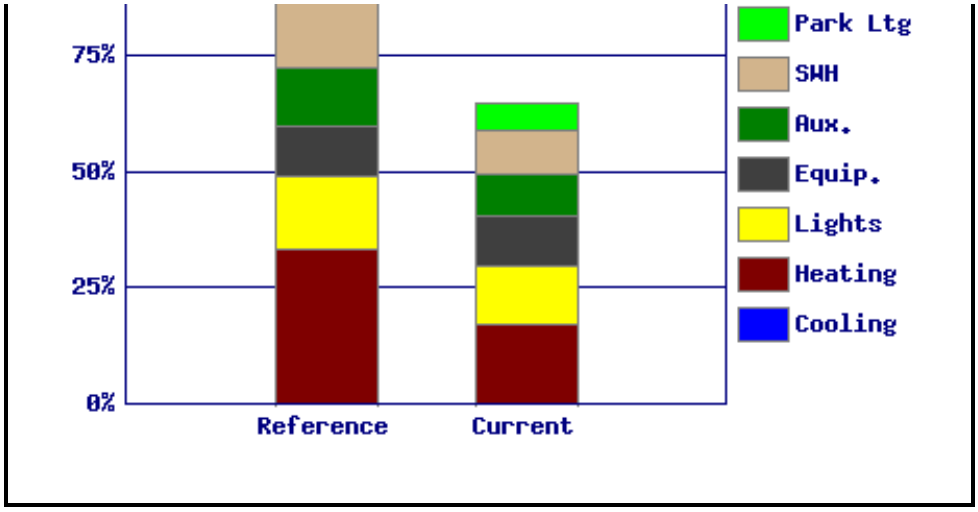
LEED Canada EA Credit 1	**3 points**

Emissions Savings

Carbon Dioxide (CO_2)	64,459 kg

Annual Energy Use Comparison





Your Design

Annual Energy and Costs				
End Use	**Electricity kWh**	**Fossil Fuel GJ**	**Total Energy GJ**	**Costs**
Cooling	0	0	0	$0
Heating	0	372	372	$4,113
Lights	74,795	0	269	$5,610
Equip.	65,968	0	237	$4,948
Aux.	51,887	0	187	$3,892
SWH	0	214	214	$2,361
Park Ltg	34,296	0	123	$2,572
Totals	226,946	585	1,402	$23,495

Reference Building

Annual Energy and Costs				
End Use	**Electricity kWh**	**Fossil Fuel GJ**	**Total Energy GJ**	**Costs**
Cooling	0	0	0	$0
Heating	0	719	719	$7,948
Lights	94,742	0	341	$7,106
Equip.	65,968	0	237	$4,948
Aux.	74,462	0	268	$5,585
SWH	0	362	362	$4,005

Park Ltg	64,558	0	232	$4,842
Totals	299,730	1,081	2,160	$34,433

Disclaimer

The information presented on this web page gives approximate values of energy cost breakdowns and potential savings. Because the input data are not as detailed as required under the MNECB or LEED, actual results will vary. A number of factors, such as weather variations, building occupancy, other building configurations, and operation schedules, also can affect energy usage and, consequently, energy performance and savings. Therefore, we cannot guarantee that the building will perform as indicated.

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GeoPacific
Consultants Ltd.

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

Milori Homes
226-998 Harbourside Drive,
North Vancouver, B.C.
V7P 3S1

May 20, 2014
File: 12194

Attention: Mr. Ehsan Deihimi

Re: Geotechnical Investigation Report: Proposed Residential Development
1325 and 1335 Draycott Road, North Vancouver, B.C.

1.0 INTORDUCTION

We understand that Milori Homes is considering the acquisition of the above referenced property with the intent of developing a five story residential building constructed over one and half levels of below grade parking. We anticipate reinforced concrete construction for both above and below grade development so that loading would be moderately heavy. A new 6 m wide municipal standard lane will be constructed along the east side of property and the existing lane to the south is to be widened.

GeoPacific Consultants were onsite on May 13, 2014 to carry out a geotechnical investigation program. This report presents the results of our geotechnical investigations and provides recommendations for construction of the proposed building and roads.

The report was prepared exclusively for Milori Homes for their use and the use of others on their design and construction team.

2.0 SITE DESCRIPTION

The site is rectangular in shape and measures approximately 48 m in the east-west and 36 m in the north-south directions, respectively. The property is bounded to the north by Draycott Road, to the south by a municipal lane and to the west and east by a parking lot and driveway of the neighbor property, respectively. Two one-story old wooden structures were present at the southeast and northwest corners of the site at the time of investigation. The site is relatively flat with a gentle slope from west to east and covered by asphalt at the investigated locations.

3.0 FIELD INVESTIGATION

On May 13, 2014 a total of four auger test holes and three Dynamic Cone Penetration Test (DCPT) soundings were advanced within the proposed development property. TH14-01 was located within 4 m from the eastern site limit to reflect the subsurface conditions at the location of the new proposed road. Test hole drilling was completed utilizing a truck mounted solid stem auger rig supplied and operated by Uniwide Drilling Co. Ltd. of Burnaby, BC. Three of the test holes (TH14-01, TH14-02, and TH14-04) were advanced to depths of between 7.6 and 9.1 m below current local grades. At the location of TH14-03, auger refusal occurred at the depth of about 2 m below existing grade. Three other locations within a distance of 2 m, from the location of TH14-03, were attempted for drilling. However, refusal at the noted depth occurred at all of the attempted locations. It is inferred that the presence of large boulder/rock at this location resulted in auger refusal. Test hole logs are presented as Appendix A, following the text of this report.

The DCPT sounding was completed at the site to assist in determining the in-situ relative density and/or consistency of the soils encountered. The DCPT sounding was completed adjacent to the auger test hole and thus the results are presented alongside the auger test hole log results.

Two monitoring wells were installed to assist in our evaluation about groundwater. The monitoring wells were installed at the location of TH14-01 and TH14-04 as shown on plan view (Drawings 12194-1).

The test holes were located and logged by a member of our technical team and the holes were backfilled in accordance with provincial requirements immediately after logging and sampling. The location of the test holes and DCPT soundings relative to the development property are shown on drawing 12194-01.

4.0 SUBSURFACE CONDITIONS

4.1 Soil Conditions

The subsurface soil conditions at the investigated locations generally consist of a 0.05 m thick layer of asphalt overlying up to 1.5 m thick layer of FILL in the form of fine-grained sand containing organic materials. The FILL is underlain by dense to very dense silty sand with some fine-grained gravel (Glacial Till). The depth of till was continued to the termination depth of test holes.

A detailed description of the soils encountered is given below.

FILL

FILL in the form of compact fine-grained brown or grey sand was encountered under the asphalt pavement in in the investigated locations. Dark brown organic material was identified within the FILL. Higher organic content within the FILL material was identified at TH14-02. The thickness of FILL is about 1.5 m.

SILTY SAND (GLACIAL TILL)

The FILL is underlain by dense to very dense silty sand with trace to some gravel and cobbles (glacial till) located at an approximate depth of 1.5 m below current local grades. The glacial till was noted to be grey in colour. The presence of cobbles in the till and its high relative density resulted in auger refusal at the location of TH14-03 at an approximate depth of 2 m. Our observations at all of the investigated locations show that the cobble content of till increases with depth. The glacial till was observed to continue to the termination depths of all test holes. Based on our experience in this area, we expect the extent of the glacial till to be to a minimum depth of 15 m below existing grades. Our laboratory test results on selected samples recovered during drilling, indicate that the native silty sand (glacial till) is well-graded and considering the high density observed during the field investigation, low permeability is expected for this material. Laboratory test results are presented as Appendix B, following the text of this report.

4.2 Groundwater Conditions

Two piezometers were installed at the locations of TH14-01 and TH14-04 as shown on Drawing 12194-1 to monitor the groundwater level. Our recorded field data from May 16, 2014, show that the static groundwater level at TH14-01 and TH14-04 are at approximate depths of 3.3 m and 2.4 m below existing grades. Groundwater is subject to seasonal variations with highest levels during wet winter and spring seasons.

5.0 DISCUSSION

5.1 General

Preliminary design drawings prepared by GBL Architects indicate that the site will be improved with five above grade levels and one and half below grade parking levels extending to a maximum depth of about 7 to 8 m. We understand from architectural drawings that the excavation in the southwest side of the site to about 8 m depth will occur near the property lines. Therefore, we expect that shoring will be required on the southern and western sides of the property. We expect conventional anchored shotcrete walls would be suitable for supporting vertical excavation faces. Temporary excavations with 1H:2V slopes, with the support of one or two rows of lock-block wall, can be considered to a maximum depth of about 4 m.

Excavation into the glacial till may be carried out using a conventional excavator, however some large boulders may be present and these may require splitting prior to removal from site.

The proposed structure may be supported on conventional strip and pad foundations at the proposed construction depth. We confirm, from a geotechnical point of view, that the proposed 5-story development with 1.5 levels of below grade parking is feasible provided the recommendations outlined in this report are incorporated into the overall design.

6.0 DESIGN RECOMMENDATIONS

6.1 Site Preparation

Prior to construction of foundations or floor slabs all asphalt, organic material, debris, and loose or otherwise disturbed soils must be removed from the construction areas to expose a subgrade of dense to very dense, grey silty sand. We expect, for a majority of the site, that the depth of stripping will be dictated by the proposed foundation elevations rather than the quality of the soils on-site.

Site stripping must be reviewed by the geotechnical engineer prior to the placement of foundation concrete.

6.2 Spread Foundations

Based on the review of subsurface data, we expect the proposed structures to be founded on dense to very dense silty sand (glacial till) using conventional shallow foundations. For a subgrade of dense to very dense silty sand (glacial till), foundations may be designed on the basis of a serviceability limit states (SLS) bearing pressure of 600 kPa and a factored ultimate limit states (ULS) bearing pressure of 900 kPa.

Foundation soil should be inspected by a member of our technical team prior to pouring concrete. In the event refuse soil is encountered at the proposed footing locations and elevations, it may be required to excavate through the unsuitable layer to a more competent layer below and reinstate the grade. For the bearing pressures provided, any grade reinstatement beneath the foundations must be carried out using lean mix concrete.

For foundations designed based on our recommendations we expect that settlements should be limited to less than 25 mm total and 1:300 differential.

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

6.3 Slab-On-Grade Floors

In order to provide suitable support for slab-on-grade floors we recommend that a 20 cm thick layer of engineered fill be placed under the slab. The fill should be minus 19 mm clear crushed gravel, with not more than 5% passing the #200 sieve and compacted to a minimum of 95% Standard Proctor (ASTM D698) maximum dry density with moisture content within 2% of optimum for compaction. The sub-slab gravel should be hydraulically connected to the perimeter drain.

Slab-on-grade fill compaction must be reviewed by the geotechnical engineer.

6.4 Seismic Design of Foundations

The upper 4 to 8 m of the soils at this site will be excavated resulting in the exposure of a subgrade of very dense till. Bedrock is expected to underlie the till soils at depth. For this condition, we recommend that the structural design be completed in accordance with a Site Class "C" design spectrum, as defined in Table 4.1.8.4.A. of the 2012 British Columbia Building Code.

6.5 Site and Foundation Drainage Systems

Based on the recorded data from monitoring wells, building foundations are anticipated to be constructed below groundwater level. The groundwater encountered in our well installations is considered to be perched and not reflective of the overall long term static groundwater level. Long term static groundwater is expected to be well below founding elevation. A conventional perimeter drainage system around the building is necessary to collect intermittent and perched groundwater. The granular drainage layer under the slab on grade should be hydraulically connected to the perimeter drainage system. It is important that all backfill placed against the below grade foundation walls be free draining material in order to prevent the generation of excess pore water pressures against the foundation walls.

We expect groundwater flows to be light, in the range of 20 l/min or less for the entire excavation.

6.6 Lateral Pressures on Foundation Walls

Lateral pressures against foundation walls are dependent on factors such as, available lateral restraint along the wall, method of construction, type of backfill, compaction of the backfill and drainage along the foundation wall.

The foundation wall is expected to be partially yielding between floors and fully restrained at the parkade floors. We assume that the excavation would be sloped and that foundation walls would be backfilled with clean sand or sand and gravel, lightly compacted in place.

We recommend that the foundation walls be designed to resist a static triangular soil pressure distribution of 5.0H (kPa), where H is equal to the total wall height in metres respectively. The dynamic loading induced by the design earthquake should be added to the static loads and should be taken as 3.0H (kPa) inverted triangular. The dynamic earth pressure is based upon unfactored soil parameters. The earth pressures presented assume that the area behind the wall is fully drained.

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

6.7 Road Construction

Based on the review of the test hole log of TH14-01 it is expected that organic materials are present to a depth of about 1 to 1.5 m at the location of proposed lane along the east property line. Therefore, prior to road construction, it is required to remove the asphalt layer, organic material, debris, and loose or otherwise disturbed soils from the construction area to expose a subgrade of dense to very dense, grey silty sand. We require to inspect the stripped soil prior to the placement of sub-base materials. It may be feasible to utilize the on site glacial till for subgrade fill beneath the recommended pavement structure.

The recommended pavement structure for the new proposed road on the east side of the property are presented in Table 1 below.

Table 1: Recommended Minimum Pavement Structure

Material	Thickness (mm)
Asphaltic Concrete	75
Crushed gravel base course - 19 mm minus	100
Clean sand and gravel sub-base course, well graded - 75 mm minus	200

The base and sub-base should be compacted to a minimum of 95% of the ASTM D1557 (Modified Proctor) maximum dry density at a moisture content that is within 2% of optimum for compaction and the results forwarded to the engineer.

GeoPacific requires to inspect the compaction quality of base and sub-base.

7.0 DESIGN REVIEWS AND CONSTRUCTION INSPECTIONS

The preceding sections make recommendations for the design and construction of the proposed development. We have recommended the review of certain aspects of the design and construction in this report. It is the responsibility of the contractor(s) undertaking the work to contact GeoPacific at least 24 hours in advance of construction for the required field reviews. In summary, reviews are required for the following construction activities.

1. Stripping	Review of site stripping.
2. Excavation	Review of temporary cut slopes and shoring.
3. Foundation	Review of foundation subgrade.
4. Slab on-grade	Review of subgrade and under-slab fill materials and compaction.
5. Backfill	Review of backfill materials and placement against foundation walls.

It is important that these reviews are carried out to ensure that our intentions have been adequately communicated. It is also important that any contractors working on the site review this document prior to commencing their work.

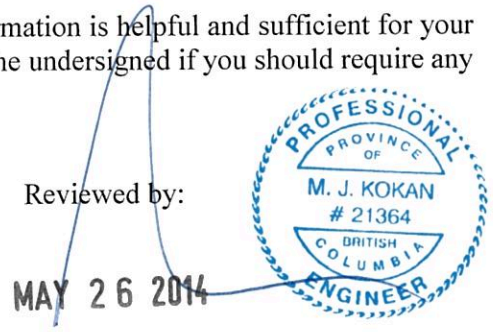
8.0 CLOSURE

This report is prepared solely for the use of our clients 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 in this project and we trust this information is helpful and sufficient for your purposes at this time. However, please do not hesitate to contact the undersigned if you should require any clarification or additional details.

For:
GeoPacific Consultants Ltd.

Reviewed by:



MAY 26 2014

Mohammad Deriszadeh, M.Sc., Ph.D.
Geotechnical Consultant

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



SITE PLAN

SCALE = 1:500

LEGEND:

TH14-# – TEST HOLE (TH) LOCATION
MW14-# – MONITORING WELL (MW) LOCATION

HOLE LOCATIONS AND MONITORING WELLS ARE APPROXIMATE

REFERENCE:

#215-1200 West 73-rd Ave.
Vancouver, B.C.
Canada V6P 6C5
Ph. (604) 439-0922
Fax (604) 439-9189
GeoPacific Consultants Ltd.

DATE:	MAY 15, 2014		
DRN. BY:		APP'D.	M.J.K.
SCALE:	AS SHOWN		

Proposed Residential Development
1325 and 1335 Draycott Rd., North Vancouver, BC
TEST HOLE PLAN

FILE NO.: 12194
DWG. NO.: 12194-1

REVISIONS:
A.
B.
C.

ANSI A (8.5"x11") SIZE PAPER

APPENDIX A

TEST HOLE LOGS

Test Hole Log: TH14-01 (MW14-01)

File: 12194
Project: Residential Development
Client: MILORI HOMES
Site Location: 1325 and 1335 Draycott Rd., North Vancouver

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		***Asphalt (0.05 m)***	
1		***Silty Sand (Fill)*** Compact, fine-grained Silty Sand, contains organic, brown, moist.	1.5
5 / 2		***Silty Sand (Glacial Till)*** Very dense, fine-grained Silty Sand, contains fine-grained Gravel, grey, moist.	
10 / 3		increasing moisture content	
12 / 4		increasing cobble content	
25 / 7.6			7.6
25 / 8		End of Borehole	

Moisture Content (%)

DCPT (blows per foot) 10 30 50 70 90

32
17
9
6
53
96
>100

Groundwater / Well: Bentonite; Soil cuttings; Bentonite; Filter sand

Remarks: Water Level Reading May 16, 2014

Logged: FB
Method: Solid Stem Auger
Date: May 13, 2014

Datum: Ground Elevation
Figure Number: A.1

Test Hole Log: TH14-02

File: 12194
Project: Residential Development
Client: MILORI HOMES
Site Location: 1325 and 1335 Draycott Rd., North Vancouver

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)	Moisture Content (%)	DCPT (blows per foot) 10 30 50 70 90	Groundwater / Well	Remarks
0 / 0		Ground Surface					
		Asphalt (0.05 m)					
		Silty Sand (Fill) Compact, fine-grained Silty Sand, contains considerable amount of organics, grey and brown, moist.	1.5				
		Silty Sand (Glacial Till) Very dense, fine-grained Silty Sand, contains fine-grained Gravel, grey, moist					
		increasing moisture content					
		increasing gravel and cobble content					
			9.1				
		End of Borehole					

Logged: FB
Method: Solid Stem Auger
Date: May 13, 2014

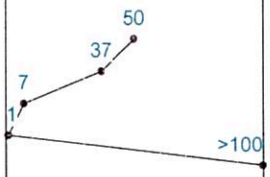
Datum: Ground Elevation
Figure Number: A.2
Page: 1 of 1

Test Hole Log: TH14-03

File: 12194
Project: Residential Development
Client: MILORI HOMES
Site Location: 1325 and 1335 Draycott Rd., North Vancouver

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 30 50 70 90	Groundwater / Well	Remarks
0 / 0		Ground Surface	0.0				
		Asphalt (0.05 m)					
		Silty Sand (Fill) Compact, fine-grained Silty Sand, contains organic, brown, moist.	1.2				
		Silty Sand (Glacial Till) Very dense, fine grained Silty Sand, contain fine-grained Gravel, grey, moist.	2.1				
		End of Borehole (refusal on Glacial Till)					



Logged: FB
Method: Solid Stem Auger
Date: May 13, 2014

Datum: Ground Elevation
Figure Number: A.3
Page: 1 of 1

Test Hole Log: TH14-04 (MW14-02)

File: 12194
Project: Residential Development
Client: MILORI HOMES
Site Location: 1325 and 1335 Draycott Rd., North Vancouver

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 30 50 70 90	Groundwater / Well	Remarks
0 / 0		Ground Surface					
0		***Asphalt (0.05 m)***					
1		***Silty Sand (Fill)*** Compact, fine-grained Silty Sand, contains organic, dark brown, moist.	1.5		32, 22, 7, 11, >100	Bentonite; Soil cuttings; Bentonite; Filter sand	Water Level Reading May 16, 2014
2		***Silty Sand (Glacial Till)*** Very dense, fine-grained Silty Sand, contain fine-grained Gravel, grey, moist.					
3		increasing moisture content (from 3m)					
4							
5							
6		increasing coble content					
7							
8							
9			9.1				
10		End of Borehole					
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
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26							
27							
28							
29							
30							
31							
32							

Logged: FB
Method: Solid Stem Auger
Date: May 12, 2014

Datum: Ground Elevation
Figure Number: A.4

APPENDIX B

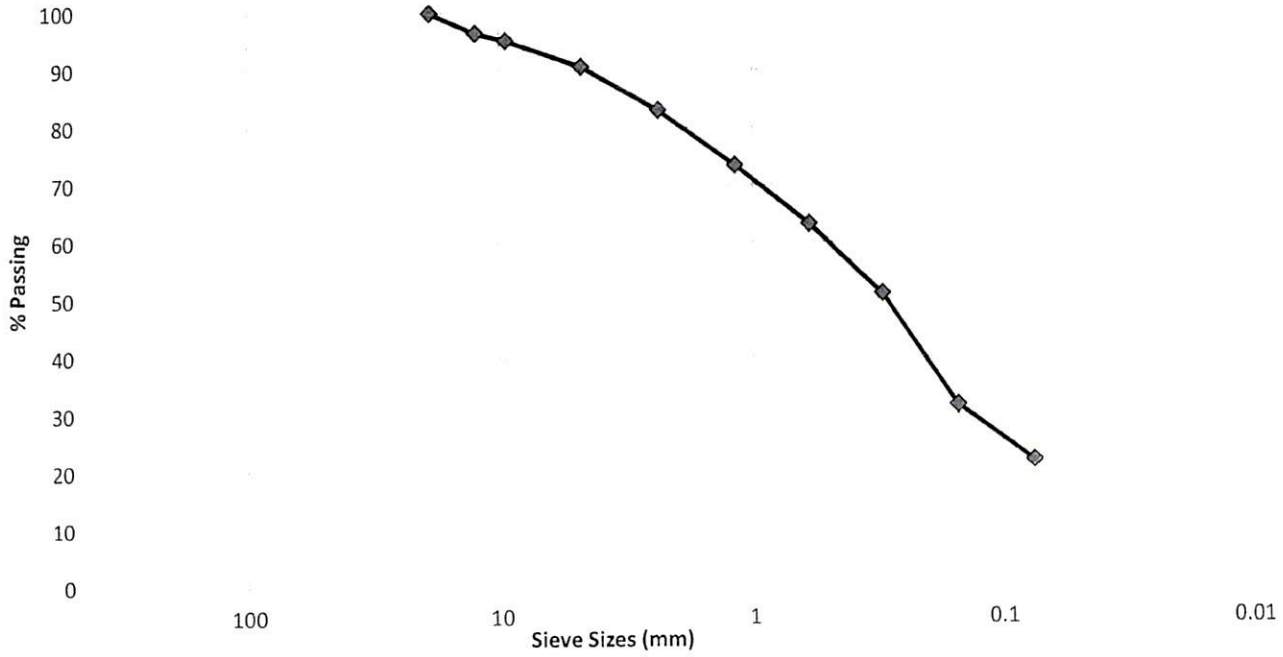
LABORATORY TEST RESULTS

GeoPacific Consultants Ltd.

GEOPACIFIC CONSULTANTS LTD.
215-1200 West 73rd Avenue
Vancouver, B.C V6P 6G5
604-439-0922 lab@geopacific.ca

SIEVE ANALYSIS
(ASTM C136 and C117)

CLIENT:	MILORI HOMES	PROJECT #	12194
PROJECT NAME:	PROPOSED RESIDENTIAL DEVELOPMENT		
PROJECT LOCATION:	1325 - 1335 DRAYCOTT ROAD, NORTH VANCOUVER		
SPECIFICATION:	N/A		
TYPE OF SAMPLE:	SAND, SOME SILT - BROWN	METHOD:	COMBINED
SOURCE:	NATIVE	DATE SAMPLED:	12-May-14
TEST #:	TH14-01 4'-5'	DATE TESTED:	14-May-14



COBBLE SIZES		% PASSING	GRADATION LIMITS	GRAVEL SIZES		% PASSING	GRADATION LIMITS	SAND SIZES		% PASSING	GRADATION LIMITS
(INCH)	(mm)			(INCH)	(mm)			(No.)	(mm)		
12	300			3	75			4	4.75	90.6	
10	250			2	50			8	2.36	83.0	
8	200			1.5	37.5			16	1.18	73.3	
6	150			1	25			30	0.6	63.1	
5	125			3/4	19	100.0		50	0.3	51.0	
4	100			1/2	12.5	96.5		100	0.15	31.6	
3.5	87.5			3/8	9.5	95.2		200	0.075	21.9	

Comments:

Per: Ian Hardy, Dip.Tech, GradTech

Lab Technician

Reviewed by: Dion Lauriente, B.A.Sc., EIT

MAY 15 2014

Lab Manager

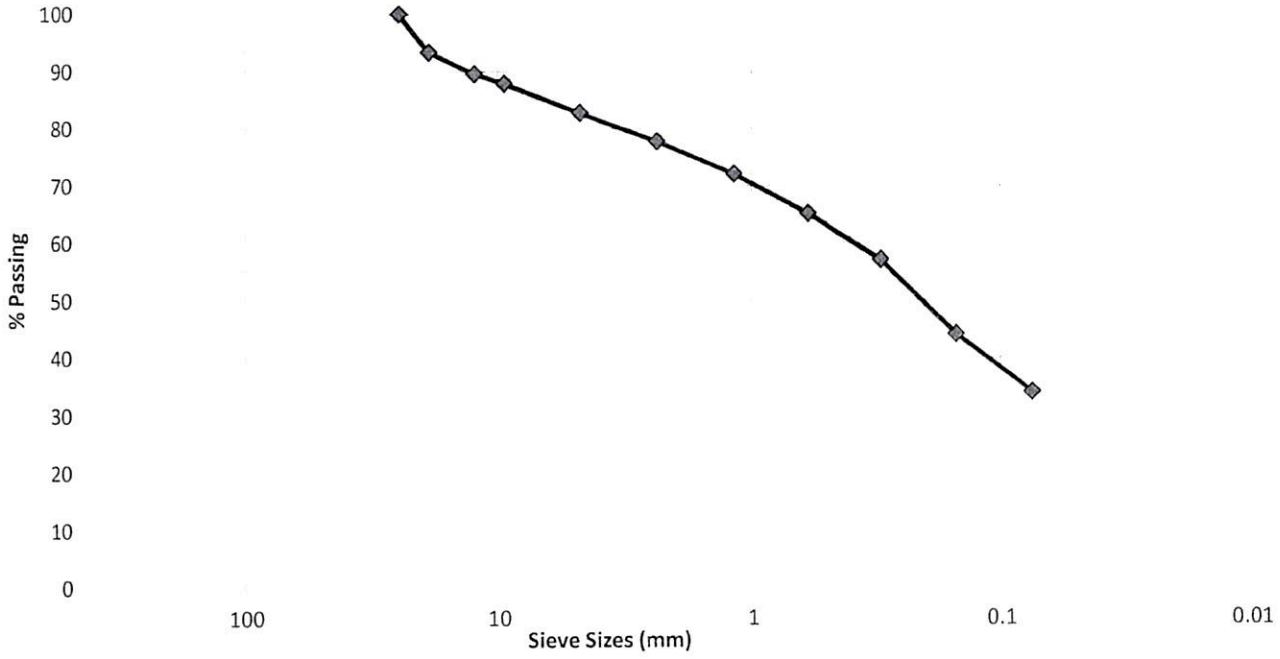
CERTIFIED BY CCIL
For specific tests as listed on www.ccil.com

GeoPacific Consultants Ltd.

GEOPACIFIC CONSULTANTS LTD.
215-1200 West 73rd Avenue
Vancouver, B.C V6P 6G5
604-439-0922 lab@geopacific.ca

SIEVE ANALYSIS
(ASTM C136 and C117)

CLIENT:	MILORI HOMES	PROJECT #	12194
PROJECT NAME:	PROPOSED RESIDENTIAL DEVELOPMENT		
PROJECT LOCATION:	1325 - 1335 DRAYCOTT ROAD, NORTH VANCOUVER		
SPECIFICATION:	N/A		
TYPE OF SAMPLE:	SILTY SAND - BROWN	METHOD:	COMBINED
SOURCE:	NATIVE	DATE SAMPLED:	12-May-14
TEST #:	TH14-04 24'-25'	DATE TESTED:	14-May-14



COBBLE SIZES		% PASSING	GRADATION LIMITS	GRAVEL SIZES		% PASSING	GRADATION LIMITS	SAND SIZES		% PASSING	GRADATION LIMITS
(INCH)	(mm)			(INCH)	(mm)			(No.)	(mm)		
12	300			3	75			4	4.75	82.8	
10	250			2	50			8	2.36	77.7	
8	200			1.5	37.5			16	1.18	72.1	
6	150			1	25	100.0		30	0.6	65.1	
5	125			3/4	19	93.3		50	0.3	57.1	
4	100			1/2	12.5	89.6		100	0.15	44.1	
3.5	87.5			3/8	9.5	87.9		200	0.075	34.1	

Comments:

Per: Ian Hardy, Dip.Tech, GradTech

Lab Technician

MAY 16 2014

Reviewed by: Dion Lauriente, B.A.Sc., EIT

Lab Manager

CERTIFIED BY CCIL
Canadian Council of Independent Laboratories
For specific tests as listed on www.ccil.com

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AGENDA INFORMATION	
❒ Regular Meeting	Date:_____
❒ Workshop (open to public)	Date:_____
❒ Information Package	Date:_____

Dept. Manager	GM/ Director	CAO

The District of North Vancouver

REPORT TO COUNCIL

June 11, 2014
File: 08.3060.20/23.14

AUTHOR: Casey Peters, Community Planning

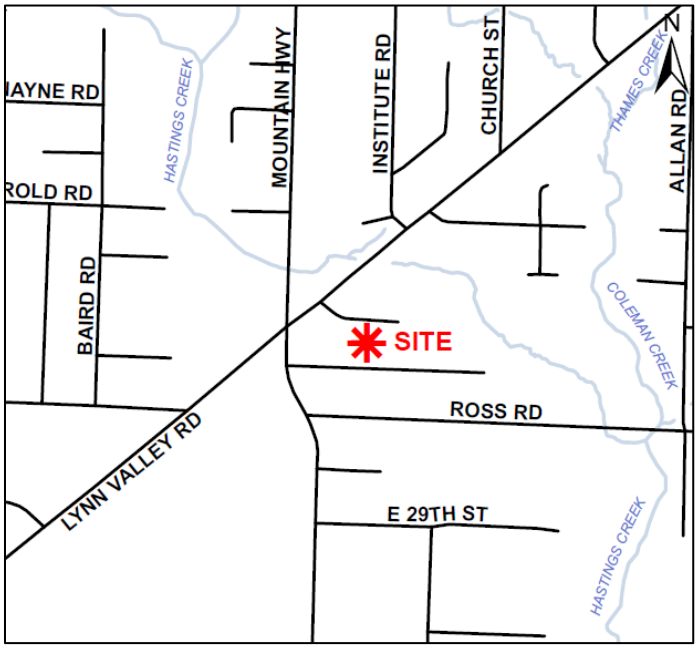
SUBJECT: **PUBLIC INFORMATION MEETING – 35 Unit Apartment Project 1325 and 1335 Draycott Road**

RECOMMENDATION:

It is recommended that this report be received for information.

SUMMARY:

GBL Architects is holding the required facilitated Public Information Meeting for a Rezoning and Development Permit application for a 35 unit apartment project located at 1325 and 1335 Draycott Road. The staff report on the detailed application will include a summary of the input received at and after the Public Information Meeting.

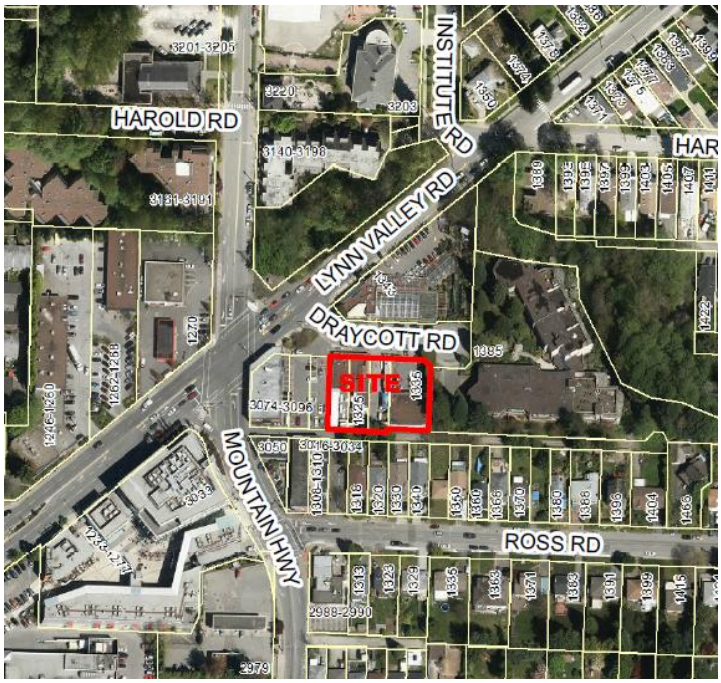


PUBLIC INFORMATION MEETING DETAILS:

Date:	Tuesday, June 24, 2014
Time:	6:30-8:30 p.m. Presentation: 7:00.pm.
Location:	Community History Centre 3203 Institute Road

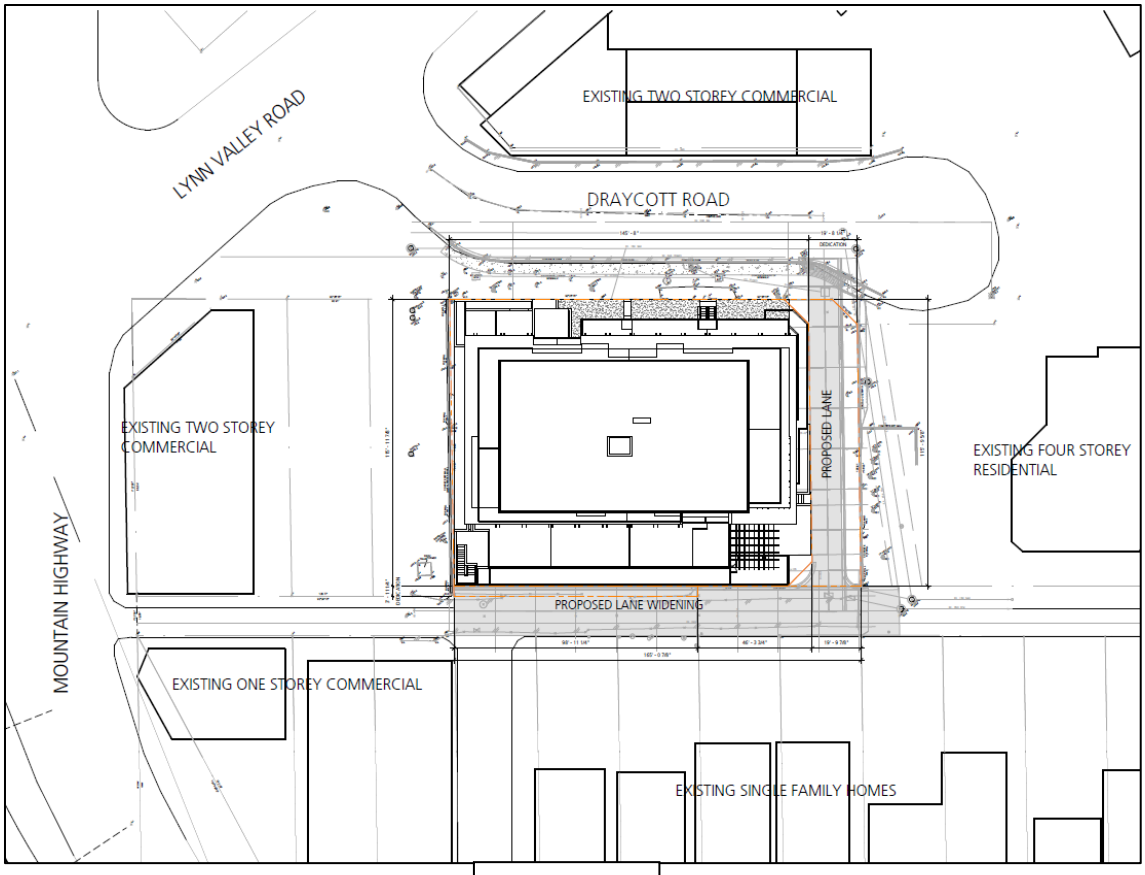
SITE AND SURROUNDING AREA:

The development site consists of 4 lots located on the south side of Draycott Road as illustrated on the following aerial photograph.



The District's Official Community Plan (OCP) split designates this site. Four of the five parcels are designated "Residential Level 5: Low Density Apartment" and one lot as "Residential Level 6: Medium Density Apartment". Level 5 permits densities up to 1.75 FSR and Level 6 permits densities up to 2.5 FSR. The available square footage for each lot under each designation has been calculated and the floor space has been averaged over the entire site for a total FSR of 1.9.

Surrounding development consists of commercial uses to the north and west, multifamily residential to the east and single family residential to the south.



Site Plan

PROJECT DESCRIPTION:

The project includes 35 apartment units in a five storey building. The units are a mix of two and three bedroom layouts ranging in size from 71m^2 to 106m^2 (767sq ft to 1,140 sq ft). The project includes sixty five parking spaces and access to the underground parking is from the proposed new lane on the east side of the site.



Public Input:

An independent facilitator will oversee the scheduled Public Information Meeting. Public input and a summary of the facilitated public information meeting will be forwarded to Council in the staff report at the introduction stage. A copy of the meeting notification package is attached.

Casey Peters
Community Planner

REVIEWED WITH:	REVIEWED WITH:	REVIEWED WITH:	REVIEWED WITH:
❑ Sustainable Community Development	❑ Clerk's Office	External Agencies:	Advisory Committees:
❑ Development Services	❑ Corporate Services	❑ Library Board	❑ _____
❑ Utilities	❑ Communications	❑ NS Health	❑ _____
❑ Engineering Operations	❑ Finance	❑ RCMP	❑ _____
❑ Parks & Environment	❑ Fire Services	❑ Recreation Commission	
❑ Economic Development	❑ Human resources	❑ Other: _____	
	❑ ITS		
	❑ Solicitor		
	❑ GIS		

YOU ARE INVITED

PUBLIC INFORMATION MEETING

1325 - 1335 DRAYCOTT ROAD

WHEN	Tuesday, June 24, 2014
WHERE	Community History Centre, 3203 Institute Road
TIME	Open House: 6:30pm Presentation: 7:00pm Discussion: 7:30 - 8:30pm



Rendering of the proposed development, looking south-east on Draycott Road

This information package is being distributed to the owners and occupants within 75m of the proposed development site in accordance with District of North Vancouver policy

MILORI
FAMILY OF COMPANIES

gbl
EMERGENT ARCHITECTURE

THE INVITATION

GBL Architects and Milori Homes are hosting a public information meeting for neighbours regarding a proposed 35-unit multifamily residential development located at 1325 - 1335 Draycott Road.

Come to the meeting to learn more.

Tell us what you think to inform the project!

Tuesday, June 24, 2014
6:30pm – 8:30pm

Community History Centre
3203 Institute Road, North Vancouver

1325 - 1335 Draycott Road



THE PROPOSAL

GBL Architects, on behalf of Milori Homes (Draycott) Ltd., is proposing to construct a 5-storey condominium building for 35 households on Draycott Road in the Lynn Valley Town Centre.

A new lane is proposed on the east side of the property, and the lane to the south will be widened. Underground parking access is proposed at the south-east corner of the site via the new lane to the east.

Design changes were made since the project was presented to the public in January 2014:

- the existing hedge along the east side of the property will be preserved
- 7 additional underground parking stalls have been added. No parking variance is proposed. The proposal complies with the parking requirements in the Zoning Bylaw.
- a new landscape plan for the north-west corner of the building to enhance the public realm
- 31 storage units and a dog washing station have been added.

FURTHER INFORMATION

We would love to hear from you! For questions or comments please call:

604.781.9537 Hesam Deihimi, Milori Homes
604.736.1156 Joey Stevens, GBL Architects
604.990.2387 Casey Peters, District of North Vancouver Planning Department

The Corporation of the District of North Vancouver

355 West Queens Road
North Van., BC V7N 4N5

COMMUNITY PLANNING

FACT SHEET

APPLICANT: **GBL Architects**
SITE: **1325-1335 Draycott Road**

PROPOSAL: A rezoning and development permit application has been submitted by GBL Architects for 1325 and 1335 Draycott Road to construct a 35 unit apartment development. The units are a mix of two and three bedroom units ranging in size from 71m^2 to 106m^2 (767sq ft to 1,140 sq ft). The project includes sixty five parking spaces and access to the underground parking is from the proposed lane on the east side of the site.

The District's Official Community Plan (OCP) split designates this site. Four of the five parcels are designated "Residential Level 5: Low Density Apartment" and one lot as "Residential Level 6: Medium Density Apartment". Level 5 permits densities up to 1.75 FSR and Level 6 permits densities up to 2.5 FSR. The available square footage for each lot under each designation has added together and the floor space has been averaged over the entire site for a total of 1.9 FSR.

The current zoning of the site is General Commercial (C2). The proposal is to rezone the site to a new Comprehensive Development Zone.

MUNICIPAL REVIEW: As part of the development review process, various municipal departments are reviewing the application to ensure compliance with municipal regulations. The project will also be reviewed by the DNV's Advisory Design Panel.

PROCESS: The application process is designed to ensure that local residents who may be affected by a development are informed early in the process so that their comments, and the comments of the local Community Association, may be considered and incorporated into the proposal. Following the Public Information Meeting, the project may be revised to reflect comments and concerns identified. There will be an additional opportunity for public comment when Council considers the project. Watch for the feature "District Dialogue" in the Sunday edition of the North Shore News for information on when this project will be considered by Council, or phone the Community Planning Department at 604-990-2387.

If you have comments, please inform DNV Planning staff by completing the attached "Comments Sheet" at the Public Information Meeting or by forwarding it directly to the Community Planning Department by mail, by fax at 604-984-9683 or by email. If you would like more information on this proposal, you are invited to call District of North Vancouver Planning staff at 604-990-2388 or email Casey Peters at cpeters@dnv.org.

COMMENT SHEET
The District of North Vancouver

PROPOSAL: **GBL Architects**
1325-1335 Draycott Road
Proposed 35 unit apartment development

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

Your Name _____ Street Address _____

The personal information collected on this form is done so pursuant to the *Community Charter* and/or the Local Government Act and in accordance with the *Freedom of Information and Protection of Privacy Act*. The personal information collected herein will be used only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver's Manager of Administrative Services at 604-990-2207.

Please return, by mail, fax, or email by July 15, 2014 to:

Casey Peters
Tel: 604 990-2388
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
FAX: 604-984-9683 or Email: cpeters@dnv.org

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Milori Homes: 1325 – 1335 Draycott Road Development Application

Public Input Meeting Summary Report

Event Date: June 24, 2014
Time: 6:30pm – 8:30pm
Location: Lynn Valley Community History Centre
Attendance: 20 members of the public
Comment Forms: One comment sheet and one email were submitted.

Meeting Purpose:
1) To present development application materials to neighbours and demonstrate how the development application had been modified to address feedback provided at the Early Public Input Opportunity in January
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

The principals of Milori Homes hand-delivered meeting invitations with fact and comment sheets to residents within a 75 metre radius of the site.

Site Sign

A sign was erected on the site two weeks prior to the meeting to notify neighbours. A photograph of the erected notification sign is included in Appendix A: Notification.

Email Notification

Participants who provided their email on the sign-in sheet at the January 2014 Early Public Input Opportunity meeting were emailed invitations to the Public Information Meeting.

Newspaper Ad

The Public Information Meeting was advertised in the North Shore News the week of June 16 to invite the public to the meeting. A copy of the June 18 ad is included in Appendix A: Notification.

Attendance:

19 members of the public signed in for the meeting. 20 members of the public were counted at the meeting. Fourteen participants indicated that they lived in the adjacent condominium building east of the proposed development site.

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

District of North Vancouver:

- Casey Peters, Development Planner, District of North Vancouver
- Natasha Letchford, Development Planner, District of North Vancouver

Project Team:

- Hesam Deihimi, Milori Homes
- Ehsan Deihimi, Milori Homes
- Joey Stevens, GBL Architects
- Gary Vlieg, Transportation Engineer, Creative Transportation Solutions

Facilitator:

- Steven Petersson, Petersson Planning Consulting

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 30 minutes, where participants could browse display boards and have informal discussion with the proponent, architect and transportation consultant.

The Open House was followed by a fifteen minute presentation by the architect and transportation consultant. Since this was the second public engagement session this year, the presentation focused on changes to the project to respond to public feedback given in January's Early Public Input Opportunity.

The presentation was followed by a seventy-five-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. Many of the questions were directed to the transportation consultant. The audience applauded the transportation consultant and the proponents at the end of the meeting, and several participants commended the proponent team for responding to feedback provided in the Early Public Input Opportunity meeting last January.

The key theme of the evening was transportation. Participants were particularly interested in knowing how traffic would circulate from Draycott to Lynn Valley Road, and the function of the proposed lane. The participants were also pleased to hear that the hedge separating the subject site from 1385 Draycott Road could be preserved.

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

C1 I am glad to hear that your transportation study predicts that the proposed development will generate less traffic than the existing Irly Bird building centre business.

C2 It is difficult to turn left from Draycott Road to Lynn Valley Road because of queuing cars on Lynn Valley Road.

Q3 How much visitor parking will be provided?
A3 8 visitor stalls are proposed in the underground parkade.

C4 Please consider painting hatched lines on Lynn Valley Road to facilitate egress from Draycott to Lynn Valley Road.

C5 Please consider installing a “do not block the intersection” sign on Lynn Valley road to raise driver awareness of vehicles wishing to turn left from Draycott Road to Lynn Valley Road.

C6 Please consider traffic light sequencing to facilitate turning left from Draycott Road to Lynn Valley Road.

C7 The lane will be used by garbage trucks and other traffic. It is often used by pedestrians to access trails. I am concerned about pedestrian safety.

C8 Drivers use driveways on neighbouring properties to turn around. Sometimes drivers will turn right (north-east) on Lynn Valley road, and then turn around in a driveway to proceed south-west.

C9 Traffic from the Canada Trust bank frequently blocks traffic.

C10 The lane on Mountain Highway will be used for egress: please consider installing a “no left turn” sign.

C11 We need on-street parking.

C12 Construction might block access to 1385 Draycott (the neighbouring condominium building).
A12 A Construction Traffic Management Plan will be submitted to the DNV. This plan will seek to minimize impacts to neighbours.

C13 Turning left from Draycott Road to Lynn Valley Road means effectively crossing five lanes of traffic. It is very challenging now.

Q14 Will there be lane access behind Tommy’s (Ross Road at Mountain Highway)?
A14 Although it looks like a lane, it is actually private property. There is no legal access there.

C15 The portion of the lane south of the site and heading east is a fire access road. I am concerned about safety if emergency access is blocked by service vehicles.

C16 I am concerned about the sight lines where the proposed lane east of the site meets Draycott Road: the driveway at 1385 Draycott is close by.
A16 The proposed sight lines are sufficient for the proposed east lane at Draycott Road. I understand that the hedge separating 1385 Draycott from the proposed driveway is very important to residents. Trimming or removing the hedge would, however, improve sight lines.

Q17 When was the traffic study done?
A17 The study was done after Irly Bird closed. It was based on a combination of projections and counts made at Lynn Valley Road and Mountain Highway.

C18 Consider adding a “no right turn on red light” sign to increase traffic safety (i.e. for the Mountain Highway to Lynn Valley Road turning movement).

Q19 Will the lane have one-way or two-way traffic? Will it be used by fire trucks?
A19 The lane is designed to accommodate two-way traffic. The proposed lane east of the subject site is not intended for use as a fire lane because the turning radius is too tight for a fire truck. Fire trucks will back out.

Q20 Will the lane be able to accommodate the volume of traffic? There will be room for only one vehicle at a time in the lane south of the site. Cars driving from the other direction will need to wait. I'm concerned about pedestrian safety.
A20 Multi-family uses generate less traffic per dwelling unit than single family uses. Relatively low traffic volumes make the lane safe for pedestrians. It will be easier to egress by Draycott than the lane. Widening the lane may not increase safety because narrow lanes slow traffic speed.

Q21 Can the lane be designed for a larger volume of traffic and include sidewalks?
A21 That is up to the DNV. The current lane standard is 6m wide and does not include sidewalks. The lane dedication on the south side of the site will improve the lane. The long-term plan for the neighbourhood includes extending lane access south to Ross Road.

Q22 Will the (informal) trails east of the site be affected by this proposal?
A22 The trails are not located on the subject site: there will be no impact from this development.

Q23 How will sight lines in the lane be affected by the development?
A23 After development, the sight lines will be similar to today.

C24 The architecture and site plan is beautiful.

C25 The proposed new lane east of the site has a portion that is more narrow than the 6m lane standard.
A25 A portion of this lane is proposed to be 4m wide to protect the existing hedge. One-way traffic is proposed at that location: 4m lane width is sufficient for one-way traffic. The hedge is on the subject site now, but will be given to the DNV. The DNV will manage the hedge in the future. The DNV wants to preserve the hedge.

Q26 Why is proposed access to the garage via a lane east of the site, rather than directly off Draycott?
A26 The parkade ramp works with the slope of the site and is relatively flat. Access from Draycott Road would be steeper.

Q27 Where will the solid waste bin be located?
A27 The architect showed the location on the site plan and indicated that it was proposed to be screened by landscaping.

Q28 Where will people wash cars?
A28 We need to work on this point. We may dedicate a parking stall for car wash use in off-peak times.

Q29 Will this be a leaky condo?

A29 No: there are new building standards to meet that will prevent this from being a leaky condo.

Q30 What will happen to the planter retaining wall?
A30 The planter retaining wall will remain.

C31 I appreciate how Milori Homes responded to our concerns raised in the first meeting in January.

Comment Sheet and Email Summary
One comment sheet and one email were submitted to the DNV after the meeting. A copy of the correspondence is attached as an Appendix to this report.

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

Access During Construction

- I walk nearly every day with my walker and would like to know if I will still be able to use the sidewalk during construction.

Landscaping

- Preserving the hedge will provide noise protection and privacy

Traffic

- My main concerns are with traffic and parking, especially the ability to turn left from Draycott Road onto Lynn Valley Road
- I think the DNV should change the intersection at Lynn Valley Road and Mountain Highway to not allow right turns on red when turning east on Lynn Valley Road off of Mountain Highway. This will stop the steady flow of vehicles and perhaps allow more left turns off Draycott onto Lynn Valley Road. There is an issue regarding pedestrians at this intersection. Motorists see the red light, check to the left for vehicular traffic, and then proceed to the right without stopping at the red light which they are required to do. The pedestrian standing there about two seconds after the light turns red has the walk sign.
- I support this project if these traffic concerns are publicly debated if need be and I commend the Milori group for its public engagement.

Conclusion

The purpose of this public meeting was to present to neighbours the proposed development concept, demonstrate how the proposal had been updated to respond to earlier public feedback, and provide an opportunity for neighbours to ask clarifying questions and comment on the proposal. 19 people signed in, and 20 people were counted participating in the meeting. More than half of the participants came from an adjacent condominium building on the Draycott Road cul-de-sac. By this measure, the meeting successfully engaged local residents.

Participants asked the development team and DNV planner a variety of specific questions. The key theme raised at the meeting was transportation, particularly egress from Draycott Road turning south-west onto Lynn Valley Road. Participants were also interested in traffic circulation in the proposed lane. Participants were keen to learn if the hedge east of the site could be preserved: the lane design was modified to preserve the hedge. Several participants remarked on the beautiful design of the proposed building.

The meeting format and length was sufficient to provide all participants an opportunity to learn more, ask questions, and make the comments they wished to provide that evening. Residents expressed appreciation to the applicant for responding to all concerns raised at the previous early public input opportunity meeting held in January 2014.

Appendix A: Notification

Newspaper Advertisement

Wednesday, June 18, 2014 - North Shore News - A11

ses citizen concern

they don't create this safe pocket, there's a risk that the officer can get hit by a car," he said.

However, McKenzie is still worried about cars veering around the bylaw officer's car and into oncoming traffic.

"I'm not one of your notorious people who's on a mission to save the world," she said, laughing. "But I do have a five-year-old . . . and I'm not prepared to have the elderly or young people hurt."

Most drivers know when it's safe and legal to pass, according to Chan.

"In our experience, drivers are pretty accustomed to seeing this kind of situation," he said. "It may create some kind of temporary inconvenience for drivers, but . . . there's good reasons for why we do this."

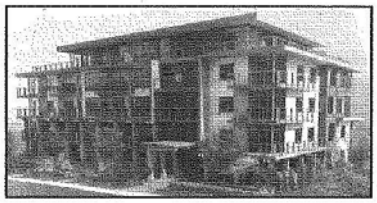
Besides emergency lights, bylaw vehicles display a Notice of Frequent Stops sign.

Chan added that West Vancouver police and many other communities use the ticketing technique.

Public Information Meeting

A redevelopment is proposed for 1325-1335 Draycott Road. You are invited to a meeting to learn more and discuss the project.

Date: Tuesday, June 24, 2014, 6:30 pm – 8:30 pm
Place: Community History Centre, 3203 Institute Road



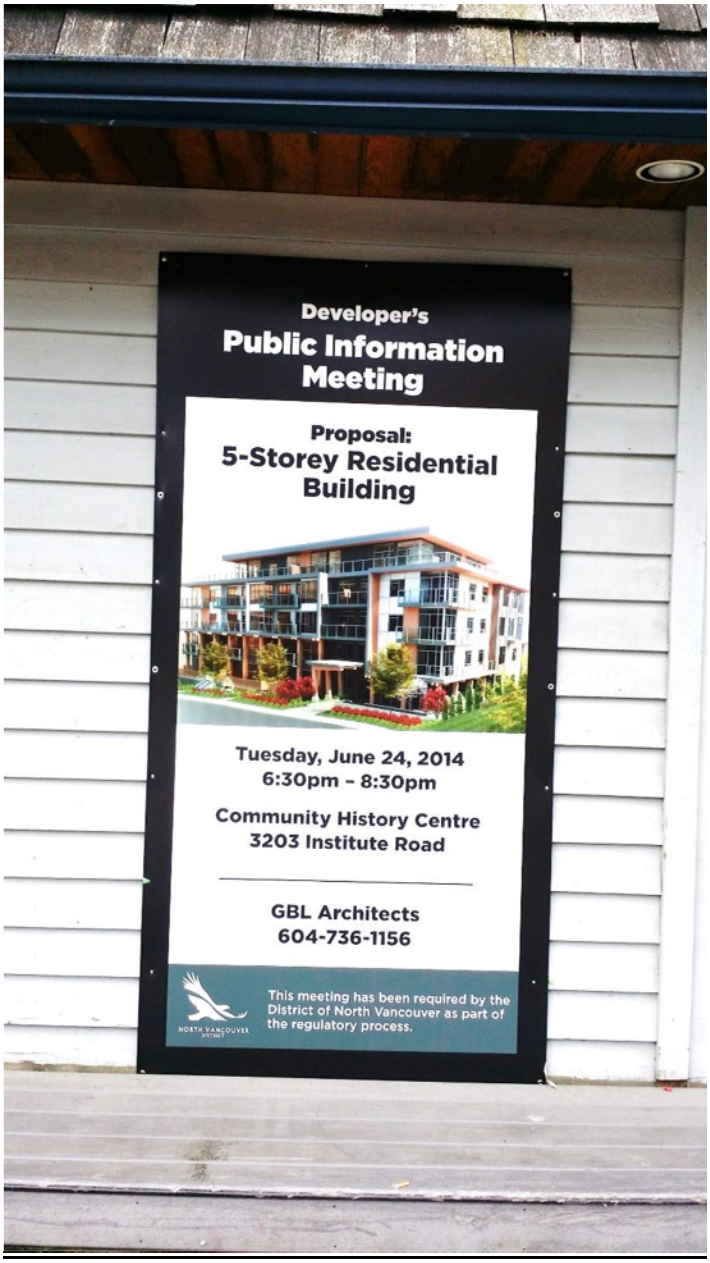


Milori Homes proposes to rezone the site to a Comprehensive Development Zone and requires a Development Permit to construct a 5-storey, 35-unit multifamily residential building with underground parking. A new lane is proposed on the east side of the property.

Information packages are distributed within 75 meter radius of the site. If you would like an information package or more information, contact Hesam Deihimi of Milori Homes (Draycott) Ltd. (604-781-9537), Joey Stevens of GBL Architects (604-736-1156), or Casey Peters of the District of North Vancouver Community Planning Department (604-990-2387).

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.

Site Sign


Developer's
Public Information Meeting
Proposal:
5-Storey Residential Building
Tuesday, June 24, 2014
6:30pm - 8:30pm
Community History Centre
3203 Institute Road
GBL Architects
604-736-1156
This meeting has been required by the District of North Vancouver as part of the regulatory process.

Appendix B: Sign-In Sheet

Public Information Meeting: June 24, 2014

Milori Homes: 1325 – 1335 Draycott Road Development Application

Sign-In Sheet

NAME	ADDRESS	EMAIL	TELEPHONE
C.R McDERMID	1385 DRAYCOTT		778 338 4316
ART TESKE	1363 ROSS Rd	ARTTESKE AT HOTMAIL.COM	604-988-7247
KAREN CHORE	1385 DRAYCOTT RD	Karenchore@gmail.com	
CAROL COOK	1385 DRAYCOTT		604-987-3366
x2 ANN MARIE Mossman	"	Ann.Marie.mossman@gmail.com	
OLWEN HARRIS	312-1385 DRAYCOTT	Oharris@shaw.ca	
Cameron Ugonec	1393 Harold Rd	Cameron@cameronu.com	604-762-6513
J. Maureen Tuttle	#207-1385 Draycott Rd	—	604-990-4552
Carole & Grant Bosworth	1422 Draycott Rd	ceboswortha@me.com	
Rose BRAY	1385 Draycott Rd.	—	604-984-6541
MARIE WESTERVELT	1385 Draycott Rd.	marie3@shaw.ca	604 987-5658
Wendy Qureshi	1385 Draycott Rd.	Wendyqureshi@shaw.ca	604-980-1885
John MacMillan	1385 Draycott Rd		604-983-9455
[illegible]	1330 ROSS		604-984-9912
Diana Bruce	1385 Draycott Rd	dee_stick@hotmail.com	604-782-1270
Steve Mossman	1385 Draycott Rd	STEVE_mossman@hotmail.com	

Information collected on this form will only be used to understand public feedback for community planning purposes and provide a record of public consultation. It will not be used for any other purpose.

Public Information Meeting: June 24, 2014

Milori Homes: 1325 – 1335 Draycott Road Development Application

Sign-In Sheet

NAME	ADDRESS	EMAIL	TELEPHONE
Fabrina Osborne	106-1385 Draycott	poodlepaws@shaw.ca	604-986-0551

Information collected on this form will only be used to understand public feedback for community planning purposes and provide a record of public consultation. It will not be used for any other purpose.

Appendix C: Comment Sheets and Emailed Comments

COMMENT SHEET
The District of North Vancouver

PROPOSAL: **GBL Architects**
1325-1335 Draycott Road
Proposed 35 unit apartment development

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

I live [redacted]
I walk nearly every day, shopping etc. with my walker I'm [redacted] years old and I would like to know while the building is in process if I will still be able to use the side walk.

Yours sincerely

[redacted]

Your Name [redacted] Street Address [redacted]

The personal information collected on this form is done so pursuant to the *Community Charter* and/or the Local Government Act and in accordance with the *Freedom of Information and Protection of Privacy Act*. The personal information collected herein will be used only for the purpose of this public consultation process unless its release is authorized by its owner or is compelled by a Court or an agent duly authorized under another Act. Further information may be obtained by speaking with The District of North Vancouver's Manager of Administrative Services at 604-990-2207.

Please return, by mail, fax, or email by July 15, 2014 to:

Casey Peters
Tel: 604 990-2388
District of North Vancouver - Community Planning Department
355 West Queens Road, North Vancouver, BC V7N 4N5
FAX: 604-984-9683 or Email: cpeters@dnv.org

RECEIVED
JUN 16 2014
Planning Department
District of North Vancouver

Spoke w/ her June 20.
→ CMP required
Document: 2348852
→ all efforts made to keep sidewalk open as much as possible.

Casey Peters

From: Casey Peters
Sent: Monday, July 07, 2014 8:31 AM
To: [redacted]
Cc:
Subject: RE: PROPOSAL: GBL Architects, 1325-1335 Draycott Road

Hello [redacted]

Thank you for your email. I did note the idea of a "no right turn on red" for Mountain Hwy at the meeting on June 24th. I have forwarded this to our Transportation department for review.

Regards,

Casey

-----Original Message-----
From: [redacted]
Sent: Saturday, July 05, 2014 2:48 PM
To: Casey Peters
Cc: [redacted]
Subject: PROPOSAL: GBL Architects, 1325-1335 Draycott Road

Dear Ms. Peters,

I attended the two meetings regarding this proposal, the most recent being June 24th at Lynn Valley Elementary.

All is well and good that the hedge will be "preserved." However the facilitator talked twice about "the price we would have to pay" might be the hedge (or part of the hedge). This is incorrect.

My main concerns are with traffic and parking as represented by most of the contributors at both meetings. The idea of having the "new" lane run just west of the HEDGE is great! This will basically preserve everything [redacted] the hedge will shield [redacted] vehicles and afford [redacted] noise protection and privacy.

My #1 concern is the ability we have now to turn left on Lynn Valley Road. It's a long way around and other neighbours will be affected if we are forced to turn right.

I think the DNV should change the intersection at Lynn Valley Road and Mountain Highway to not allow right turns on red when turning east on Lynn Valley Road off of Mountain Highway. This will stop the steady flow of vehicles and perhaps allow more left turns off Draycott onto Lynn Valley Road.

This is also a huge issue regarding pedestrians at this intersection, of which I am one at least 5 times a week. Motorists see the red light, check to the left for vehicular traffic, and then proceed to the right without stopping at the red light which they are required to do. The pedestrian standing there about 2 seconds after the light turns red, has the WALK SIGN.

Thank you very much for your consideration and I support this project if these traffic concerns are publicly debated if need-be and I commend the Milori group for its public engagement.

1

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 (Parcel IDentifiers – Land Title Registry system) must be provided for *each* parcel as well as the appropriate legal description.

If the property is untitled Crown land (no PID number), then the appropriate PIN numbers (Parcel Identification Numbers – Crown Land registry system) for each parcel with the appropriate land description should be supplied.

If available, the Crown Land File Number for the site should also be supplied.

Anything submitted in relation to this site profile will become part of the public record and may be made available to the public through the Site Registry as established under the *Environmental Management Act.*

Under section 43 of the *Environmental Management Act,* corporate and personal information contained in the site profile may be made available to the public through the Site Registry. If you have questions concerning the collection of this information, contact the Site Registrar, at site@gov.bc.ca. For questions on site profiles, please send a message to siteprofiles@gov.bc.ca.

I CONTACT IDENTIFICATION

A. Name of Site Owner:

Last_____ First_____ Middle Initial(s) ____ (and/or, if applicable)

Company DISTRICT OF NORTH VANCOUVER

Owner's Civic Address 355 W. QUEENS RD

City NORTH VANCOUVER Province/State BC

Country CANADA Postal Code/ZIP V7N4N5

B. Person Completing Site Profile (Leave blank if same as above):

Last_____ First_____ Middle Initial(s) ____ (and/or, if applicable)

Company_____

C. Person to Contact Regarding the Site Profile:

Last MALCOLM First RYAN Middle Initial(s) P (and/or, if applicable)

Company DISTRICT OF NORTH VANCOUVER

Mailing Address 355 W. QUEENS RD

City N. VAN Province/State BC

Country CAN Postal Code/ZIP V7N4N5

Telephone (604) 990-2264 Fax (604) 990-2401

II SITE IDENTIFICATION

Please attach a site location map

All Property

Coordinates (using the North American Datum 1983 convention) for the centre of the site:

Latitude: Degrees____ Minutes____ Seconds____ 49.3688° N

Longitude: Degrees____ Minutes____ Seconds____ -123.03700 W

Please attach a map of appropriate scale showing the boundaries of the site.

For Legally Titled, Registered Property

Site Street Address (if applicable) 1335 DRAYCOTT RD

City NORTH VANCOUVER Postal Code V7J 1W1

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

PID	Legal Description
007-659-954	LOT 5 DISTRICT LOT 2023 PLAN 15449

Total number of titled parcels represented by this site profile is: 1

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
	NOT APPLICABLE

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?		X
B.	Residue left after removal of piled materials such as chemicals, coal, ore, smelter slag, air quality control system baghouse dust?		X
C.	Discarded barrels, drums or tanks?		X
D.	Contamination resulting from migration of substances from other properties?		X

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?		X
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?		X
C.	Dredged sediments, or sediments and debris materials originating from locations adjacent to foreshore industrial activities, or municipal sanitary or stormwater discharges?		X

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?		X
B.	Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?		X
C.	Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?		X
D.	Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?		X
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?		X

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?		X
B.	Above ground fuel or chemical storage tanks other than storage tanks for compressed gases?		X

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?		X
B.	Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?		X
C.	Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?		X

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?		X
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?		X
C.	Government notifications relating to past or recurring environmental violations at the site or any facility located on the site?		X

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.

_____ 2013-11-29

Signature of person completing site profile **Date completed: (YY-MM-DD)**

XII OFFICIAL USE

Local Government Authority

Reason for submission *(Please check one or more of the following)*

Subdivision application ❑ **Zoning application** ❑ **Development permit** ❑ **Variance permit** ❑ **Demolition permit** ❑ **Soil removal** ❑

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:

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IMPORTANT INFORMATION

B.C. Reg. 375/96

Deposited December 16, 1996

O.C. 1480/96 and M271/2004

effective April 1, 1997

Environmental Management Act

CONTAMINATED SITES REGULATION

Note: Check the Cumulative Regulation Bulletin 2013

for any non-consolidated amendments to this regulation that may be in effect.

[includes amendments up to B.C. Reg. 6/2013, March 18, 2013]

Schedule 2

[am. B.C. Regs. 17/2002, s. 16; 239/2007, s. 5; 343/2008, s. 12; 62/2013, s.1.]

Industrial and Commercial Purposes and Activities

COLUMN I Item	COLUMN II Purpose or Activity
A	**Chemical industries and activities** 1. adhesives manufacturing or wholesale bulk storage 2. chemical manufacturing or wholesale bulk storage 3. explosives or ammunition manufacturing or wholesale bulk storage 4. fire retardant manufacturing or wholesale bulk storage 5. fertilizer manufacturing or wholesale bulk storage 6. ink or dye manufacturing or wholesale bulk storage 7. leather or hides tanning 8. paint, lacquer or varnish manufacturing, formulation, recycling or wholesale bulk storage 9. pharmaceutical products, or controlled substances as defined in the *Controlled Drugs and Substances Act* (Canada), manufacturing or operations 10. plastic products (foam or expanded plastic products) manufacturing 11. textile dying 12. pesticide manufacturing, formulation or wholesale bulk storage 13. resin or plastic monomer manufacturing, formulation or wholesale bulk storage

B	**Electrical equipment and activities** 1. battery (lead acid or other) manufacturing or wholesale bulk storage 2. communications stations using or storing equipment that contains PCBs 3. electrical equipment manufacturing, refurbishing or wholesale bulk storage 4. electrical transmission or distribution substations 5. electronic equipment manufacturing 6. transformer oil manufacture, processing or wholesale bulk storage 7. electrical power generating operations fuelled by coal or petroleum hydrocarbons and supplying electricity to a community or commercial or industrial operation
C	**Metal smelting, processing or finishing industries and activities** 1. foundries or scrap metal smelting 2. galvanizing 3. metal plating or finishing 4. metal salvage operations 5. nonferrous metal smelting or refining 6. welding or machine shops (repair or fabrication)
D	**Mining, milling or related industries and activities** 1. asbestos mining, milling, wholesale bulk storage or shipping 2. coal coke manufacture, wholesale bulk storage or shipping 3. coal or lignite mining, milling, wholesale bulk storage or shipping 4. milling reagent manufacture, wholesale bulk storage or shipping 5. nonferrous metal concentrate wholesale bulk storage or shipping 6. nonferrous metal mining or milling
E	**Miscellaneous industries, operations or activities** 1. appliance, equipment or engine repair, reconditioning, cleaning or salvage 2. ash deposit from boilers, incinerators, or other thermal facilities 3. asphalt tar manufacture, wholesale storage and distribution 4. coal gasification (manufactured gas production) 5. medical, chemical, radiological or biological laboratories 6. rifle or pistol firing ranges 7. road salt storage facilities 8. measuring instruments (containing mercury) manufacture, repair or wholesale bulk storage 9. dry cleaning facilities or operations and dry cleaning chemical storage 10. sites which have been or likely have been contaminated by substances migrating from other properties 11. controlled substances, as defined in the *Controlled Drugs and Substances Act* (Canada), manufacturing or operations
F	

	Petroleum and natural gas drilling, production, processing, retailing, distribution and storage other than the storage of residential heating fuel in tanks 1. petroleum or natural gas drilling 2. petroleum or natural gas production facilities 3. natural gas processing 4. petroleum coke manufacture, wholesale bulk storage or shipping 5. petroleum product, other than compressed gas, dispensing facilities, including service stations and card locks 6. petroleum, natural gas or sulphur pipeline rights of way excluding rights of way for pipelines used to distribute natural gas to consumers in a community 7. petroleum product, other than compressed gas, or produced water storage in above ground or underground tanks 8. petroleum product, other than compressed gas, wholesale bulk storage or distribution 9. petroleum refining wholesale bulk storage or shipping 10. solvent manufacturing or wholesale bulk storage 11. sulphur handling, processing or wholesale bulk storage and distribution
G	**Transportation industries, operations and related activities** 1. aircraft maintenance, cleaning or salvage 2. automotive, truck, bus, subway or other motor vehicle repair, salvage or wrecking 3. bulk commodity storage or shipping (e.g. coal) 4. dry docks, ship building or boat repair and maintenance, including paint removal from hulls 5. marine equipment salvage 6. rail car or locomotive maintenance, cleaning, salvage or related uses, including railyards 7. truck, rail or marine bulk freight handling
H	**Waste disposal and recycling operations and activities** 1. antifreeze bulk storage or recycling 2. barrel, drum or tank reconditioning or salvage 3. battery (lead acid or other) recycling 4. biomedical waste disposal 5. bulk manure stockpiling and high rate land application or disposal (nonfarm applications only) 6. construction demolition material, including without limitation asphalt and concrete, landfilling 7. contaminated soil storage, treatment or disposal 8. dredged waste disposal 9. drycleaning waste disposal 10. electrical equipment recycling 11. industrial waste lagoons or impoundments 12. industrial waste storage, recycling or landfilling 13. industrial woodwaste (log yard waste, hogfuel) disposal

	14. mine tailings waste disposal 15. municipal waste storage, recycling, composting or landfilling 16. organic or petroleum material landspreading (landfarming) 17. sandblasting waste disposal 18. septic tank pumpage storage or disposal 19. sewage lagoons or impoundments 20. hazardous waste storage, treatment or disposal 21. sludge drying or composting 22. street or yard snow removal dumping 23. waste oil reprocessing, recycling or bulk storage 24. wire reclaiming operations
I	**Wood, pulp and paper products and related industries and activities** 1. particle board manufacturing 2. pulp mill operations 3. pulp and paper manufacturing 4. treated wood storage at the site of treatment 5. veneer or plywood manufacturing 6. wafer board manufacturing 7. wood treatment (antisapstain or preservation) 8. wood treatment chemical manufacturing, wholesale bulk storage 9. sawmills

Contents | Parts 1 to 18 | Schedule 1 | Schedule 1.1 | Schedule 2 | Schedule 3 | Schedule 4 | Schedule 5 | Schedule 6 | Schedule 7 | Schedule 8 | Schedule 9 | Schedule 10 | Schedule 11

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SCHEDULE 1
Site Profile

Introduction

Version 4.0

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Schedule 2 of the Contaminated Sites Regulation sets out the types of industrial or commercial purposes or activities to which site profile requirements apply.

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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 site@gov.bc.ca. For questions on site profiles, please send a message to siteprofiles@gov.bc.ca.

I CONTACT IDENTIFICATION

A. Name of Site Owner:

Last STEPHENSON First TREVOR Middle Initial(s) _____ (and/or, if applicable)

Company TREV JOHN HOLDINGS LTD.

Owner's Civic Address 1335 DRAYCOTT ROAD

City NORTH VANCOUVER Province/State B.C.

Country CANADA Postal Code/ZIP V7J 1W1

B. Person Completing Site Profile (Leave blank if same as above):

Last _____ First _____ Middle Initial(s) _____ (and/or, if applicable)

Company _____

C. Person to Contact Regarding the Site Profile: SAME AS ABOVE.

Last _____ First _____ Middle Initial(s) _____ (and/or, if applicable)

Company _____

Mailing Address _____

City _____ Province/State _____

Country _____ Postal Code/ZIP _____

Telephone (604) 986 - 5281 Fax (604) 986 - 2874

II SITE IDENTIFICATION

Please attach a site location map

All Property

Coordinates (using the North American Datum 1983 convention) for the centre of the site:

Latitude: Degrees 49° Minutes 20' Seconds 12.768"

Longitude: Degrees -123 Minutes 2' Seconds 14.46"

Please attach a map of appropriate scale showing the boundaries of the site.

For Legally Titled, Registered Property

Site Street Address (if applicable) 1325 DRAYCOTT RD.

City NORTH VANCOUVER Postal Code V7J 1W1

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

PID	**Legal Description**
011-632-721	LOT 1 OF LOT 7 AND 8 BLOCK 2 DL 2023 Plan 4336
011-632-739	LOT 2 OF LOT 7 AND 8 BLOCK 2 DL 2023 PLAN 4336
011-632-755	LOT 3 OF LOT 7 AND 8 BLOCK 2 DL 2023 PLAN 4336

Total number of titled parcels represented by this site profile is: 3

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**
	RETAIL LUMBER STORAGE (NOT LISTED UNDER SCHEDULE 2

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?		X
B.	Residue left after removal of piled materials such as chemicals, coal, ore, smelter slag, air quality control system baghouse dust?		X
C.	Discarded barrels, drums or tanks?		X
D.	Contamination resulting from migration of substances from other properties?		X
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?		X
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?		X
C.	Dredged sediments, or sediments and debris materials originating from locations adjacent to foreshore industrial activities, or municipal sanitary or stormwater discharges?		X
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?		X
B.	Waste or byproducts such as tank bottoms, residues, sludge, or flocculation precipitates from industrial processes or wastewater treatment?		X
C.	Waste products from smelting or mining activities, such as smelter slag, mine tailings, or cull materials from coal processing?		X
D.	Waste products from natural gas and oil well drilling activities, such as drilling fluids and muds?		X
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?		X

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?		X
B.	Above ground fuel or chemical storage tanks other than storage tanks for compressed gases?		X
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?		X
B.	Waste asbestos or asbestos containing materials such as pipe wrapping, blown-in insulation or panelling buried?		X
C.	Paints, solvents, mineral spirits or waste pest control products or pest control product containers stored in volumes greater than 205 litres?		X
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?		X
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?		X
C.	Government notifications relating to past or recurring environmental violations at the site or any facility located on the site?		X

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.

J. Stephen — **Signature of person completing site profile**

2013 11 30 — **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:

NORTH VANCOUVER
DISTRICT

Memo

TO: File

SUBJECT: Draycott Land Transaction

The District is the registered owner of the property at 1335 Draycott Road (shown outlined in bold on the drawing below). In 1983 the District granted a ground lease of this property to Woodstop Building Supplies (IRLY Bird) for 99 years. Until recently Woodstop operated a building supplies business from this property and from 3 adjacent parcels that Woodstop owned in fee simple.

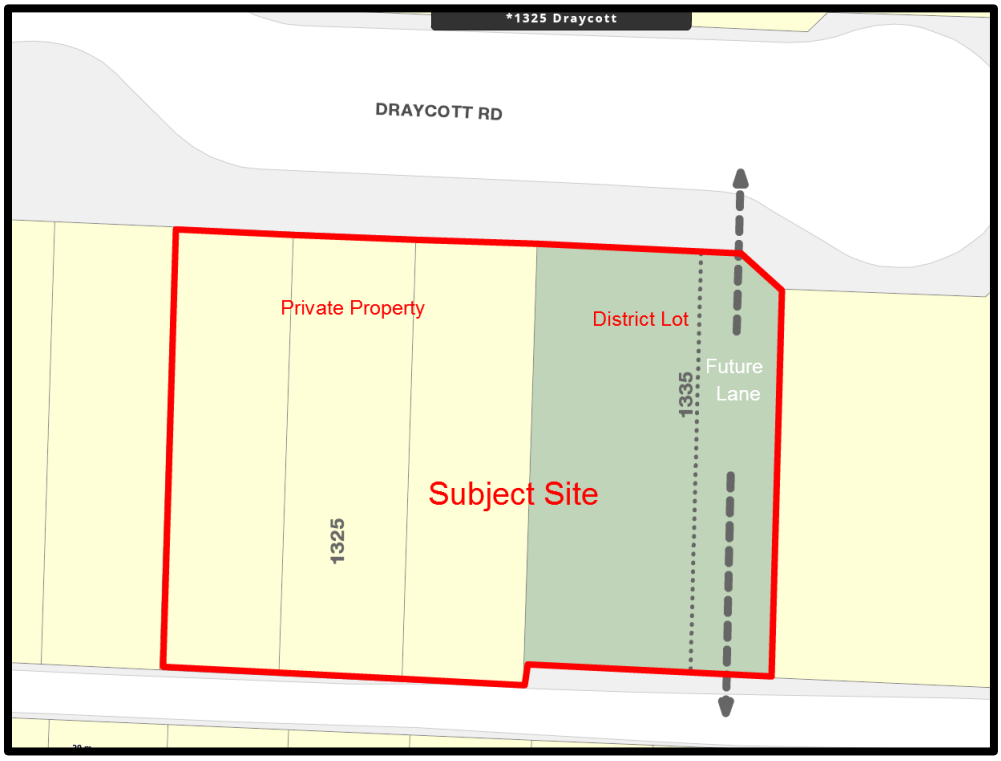
Milori Homes and Woodstop approached the District to investigate the possibility of the District buying out the remainder of Woodstop's long term lease at 1355 Draycott and then selling the unencumbered property to Milori Homes for consolidation with the other 3 adjacent lots that Milori Homes has now purchased from Woodstop.

An independent professional (AACI) appraisal was undertaken to provide an appraisal of the market value of the unexpired term of Woodstop's lease and the market value of the property unencumbered by the lease.

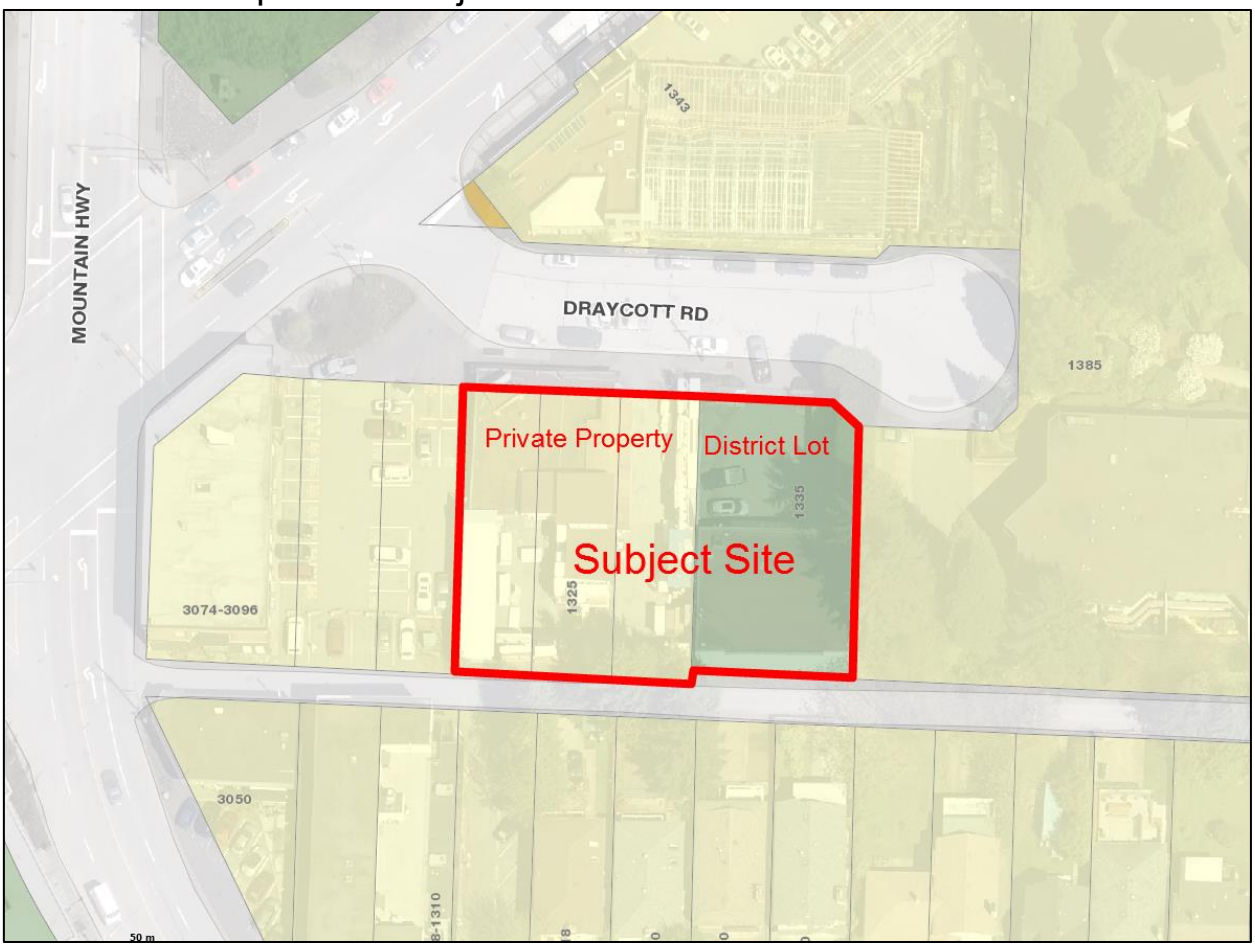
Based on this appraisal, the estimated market value of the remaining term of the lease is $517,503 and the estimated market value of the property without the lease is $1,200,000. Based on these appraised values the District negotiated with Woodstop a buy-out price of $500,000 to be paid by the District to Woodstop in relation to the ground lease, and negotiated with Milori Homes a purchase price of $1,200,000 to be paid by Milori to the District for the disposition of the property free and clear of the lease.

Accordingly, the District will net $700,000 from the sale of 1335 Draycott Road, but this is if (and only if) Council adopts the zoning amendment bylaw. The buy-out of Woodstop's lease and the sale of the property to Milori are both subject to adoption by Council, in its sole and unfettered discretion, of the zoning amendment bylaw that is the subject of this public hearing.

Woodstop has discontinued its building supplies business at this location.


*1325 Draycott
DRAYCOTT RD
Private Property
District Lot
Future
Lane
1335
Subject Site
1325

Land Ownership of the Subject Site





Land Ownership of the Subject Site

Detail showing Future Laneway



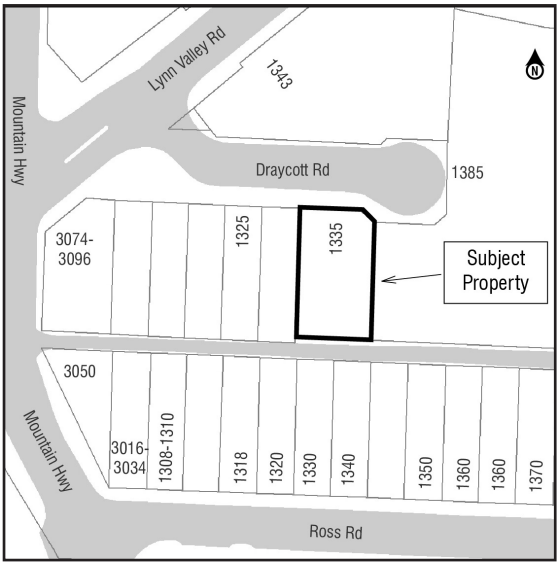


NORTH VANCOUVER
DISTRICT

NOTICE OF PROPERTY DISPOSITION

In accordance with section 26 of the Community Charter, the District of North Vancouver gives notice of its intention to sell the property located at 1335 Draycott Street, to Milori Homes (DRAYCOTT) Ltd. The purchase price for the property is $1,200,000.

The sale is subject to successful rezoning, OCP amendment and issuance of a Development Permit for the redevelopment of the property. The rezoning and OCP amendment bylaws have yet to be introduced and opportunities for public input, including a public hearing, will be provided prior to Council considering adoption of the bylaws.



If you have any questions please contact Ryan P. Malcolm, Manager, Real Estate and Properties at 604-990-2264, or email malcolmr@dnv.org.

District of North Vancouver
355 West Queens Road, North Vancouver, BC V7N 4N5
Main Line 604-990-2311

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@NVanDistrict

This Ad ran in the North Shore News on November 27th, and December 4th, 2013.

Feds spend $7B a

From page **9**

"We've heard time and again how less than 15 per cent of our youth get one-hour a day they're supposed to get of physical activity. The consequences are powerful and disturbing," Weston said, noting that federal government spends $7 billion per year in treating obesity related illnesses. "The answer is very clear. We have to get people out doing what they used to do more often, which is being physically active."

Greene Raine attributes the trend, in part, to single parents and households where both parents work and there isn't e to ensure that ki exercise they ne

Beyond that, more afraid to le play unsupervise eyeshot, she add

"It's sad to sa have good facili they're not bein and programs a

NORTH VANCOUVER DISTRICT

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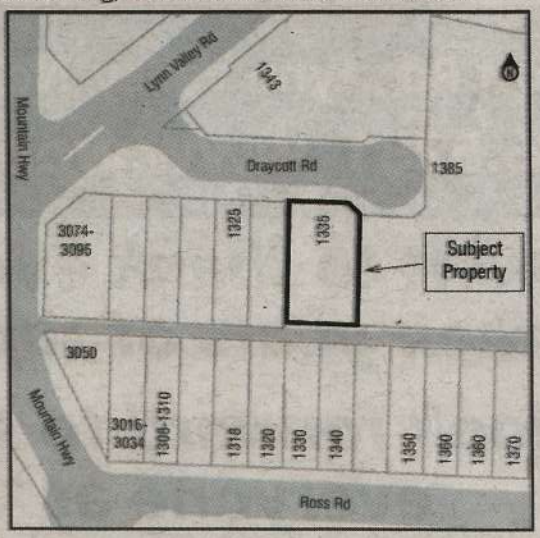

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@NVanDistrict





CREUS Engineering Ltd
P: 604-987-9070 F: 604-987-9071
200 – 901 WEST 16TH ST NORTH VANCOUVER, BC V79 1R2
Civil Engineers

December 12, 2014 File No. 14147

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

RE: 1325-1335 Draycott Road Redevelopment - Traffic Management Plan

1.0 Project Details

1.1 Introduction

This Traffic Management Plan has been developed for the construction of a development in North Vancouver. The contractor is responsible for obtaining all permits required by this traffic management plan.

1.2 Duration and Hours of Operations

The project schedule is still to be determined. (See section 1.3.3)

The project's hours of operations are determined by the District of North Vancouver's Noise Regulation Bylaw No. 7188.

Monday to Friday - 7:00 to 20:00
Saturday – 9:00 to 17:00
Sunday / Statutory Holiday - No work permitted

If, for any reason, works are required outside the allowable hours of operation, the contractor will apply to the District of North Vancouver for an exemption to the Noise Regulation Bylaw 45 days in advance of the scheduled works.

1.3 Permissible Delays / Closures

1.3.1 Delays

Delays of no more than two (2) minutes are acceptable to the District as long as traffic remains operating in a single lane-alternating capacity, with Certified Traffic Control Personnel on site to assist. Delays will be coordinated with available breaks in traffic flow. Deliveries to site are to be coordinated outside of peak hours as much as possible.

1.3.2 Closures

The developer will make application to the District of North Vancouver, five (5) working days in advance of any road or lane closures resulting in delays over two (2) minutes in length. A traffic control diagram detailing the closure as per the

Ministry of Transportation's *Traffic Control Manual for Work on Roadways* will be submitted.

1.3.3 Construction Schedule (approximate)

Start Date: TBD

Completion Date: TBD

2.0 Mobility Impact

2.1 Overview

Impacts to traffic in the area will be minimal. Repaving of the lane will require that the lane will be closed. Pedestrian traffic is not expected in the lane, but can be accommodated by work crews.

2.2 Truck Volumes

Phase of Work	Typical Vehicles Per Day	Max Vehicles Per Hour
Paving in Lane	4 Trucks/Day	2 Trucks/hr
Service Connection	4 Trucks/Day	2 Trucks/hr

2.3 Mitigation

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

- The general public is to be protected from construction activities at all times by appropriate fencing, hoarding and communication.
- Existing pedestrian routes (sidewalks, trails) to remain clear and open at all times unless specifically noted in the TMP.
- Bike routes, once constructed, to remain clear and open at all times unless specifically noted in the TMP.
- Transit service and access to bus stops to remain available at all times unless specifically noted in the TMP. Temporary relocation of bus stops, as required, to be coordinated with Coast Mountain Bus Company with notification to District of North Vancouver transportation department.
- There is to be no restrictions to emergency vehicles at any time. Emergency vehicles to be given priority access at all times. Emergency services (police, fire, ambulance) to be notified in advance of any construction activities with the potential to cause delays or detours (ie intersection construction, road paving).
- Truck marshaling is only available on site. No marshaling on District of North Vancouver (or City of North Vancouver) roads.
- A copy of the TMP including enter / exit procedures and truck routes is to be sent to the trucking contractor prior to starting construction.
- All heavy vehicle drivers will be given a copy of the site construction traffic procedures and truck routes. The flag person should have additional copies available on the site.

- Heavy vehicles are to be equipped with radios so that trucks can be delayed, diverted or cancelled as required by current site conditions. The general contractor will be responsible for communicating with the heavy vehicles.

3.0 Community Impact

3.1 Access and Egress Points

Site access and egress shall be per the attached traffic management plan drawings.

3.2 Dust and Dirt Control

The contractor will ensure that adjacent streets and haul routes are kept clean and free of dust and debris on a daily basis.

3.3 Parking Control

The contractor, their staff, and subcontractors are subject to the District's Street and Traffic Bylaw 7125 at all times.

We estimate that 10 parking spaces will be required for the site during peak construction periods. Some parking will be provided onsite, while the remaining parking will be on the street. See TMP drawings for parking details.

Construction vehicles are to not block or impede access to driveways for neighboring properties.

3.4 Material and Equipment

All materials and equipment will be stored within the fencing of the construction area, unless protected by traffic control devices and / or concrete barrier. No materials and / or equipment are permitted within the *traveled* lanes of any highway at any time, unless permission is granted by the District of North Vancouver.

3.5 Access to Existing Facilities

The contractor will maintain access to fire hydrants in the vicinity of the construction site, as well as ensuring that entrances and exits to adjacent properties are clear and unimpeded.

The use of District road right of way requires a street occupancy permit.

3.6 Signs

All signage, Construction and Warning signs, to be erected in accordance with the Ministry of Transportations, *Traffic Control Manual for Work on Roadways,* Manual. All signage will meet Transportation Association of Canada or Ministry of Transportation signing specifications.

3.7 Traffic Control Supervisor

The Traffic Control Supervisor will:

- Ensure that emergency traffic control operations are carried out in accordance with the contractor’s Site Safety Plan.

- Direct the implementation of the Traffic Control Plan and installation, maintenance and inspection of all traffic control measures.

- Be responsible for notifying the Civil Engineer and District of North Vancouver representative of any changes required to the approved traffic management plan.

4.0 Work Zone Traffic Control

A traffic management plan has been prepared for the site works. Attached is a copy of the overall traffic management plan for reference. Generally, the plan includes:

- Site plan.
- Truck routing to / from site including access / egress locations.
- Traffic control signage requirements.

5.0 Communication Plan

5.1 Day-to-Day Communications

The contractor's site supervisor / traffic control supervisor will be handling day-to-day issues which may arise regarding traffic control related and/or general public inquiries.

5.2 Contact List

	Contact	Employer	Phone
Site Supervisor	TBD		
Traffic Control Supervisor	TBD		
Owners Representative	Ehsan Deihimi	Milori Homes	604-719-3416
Civil Engineer	Creus	Creus Engineering	604-987-9070
District Representative	TBD	District of North Vancouver	

6.0 Monitoring

Once the traffic management plans have been implemented, periodic site inspections will be performed by the civil engineer to confirm performance. Refer to the CTMP and the District of North Vancouver Noise Regulation Bylaw (No. 7188) for details.

7.0 Incident Management Considerations

7.1 Unscheduled Obstructions

Should an unscheduled traffic obstruction take place, the Traffic Control Supervisor or the Site Supervisor shall contact both the Civil Engineer and District of North Vancouver Representative.

7.2 Emergency Phone List

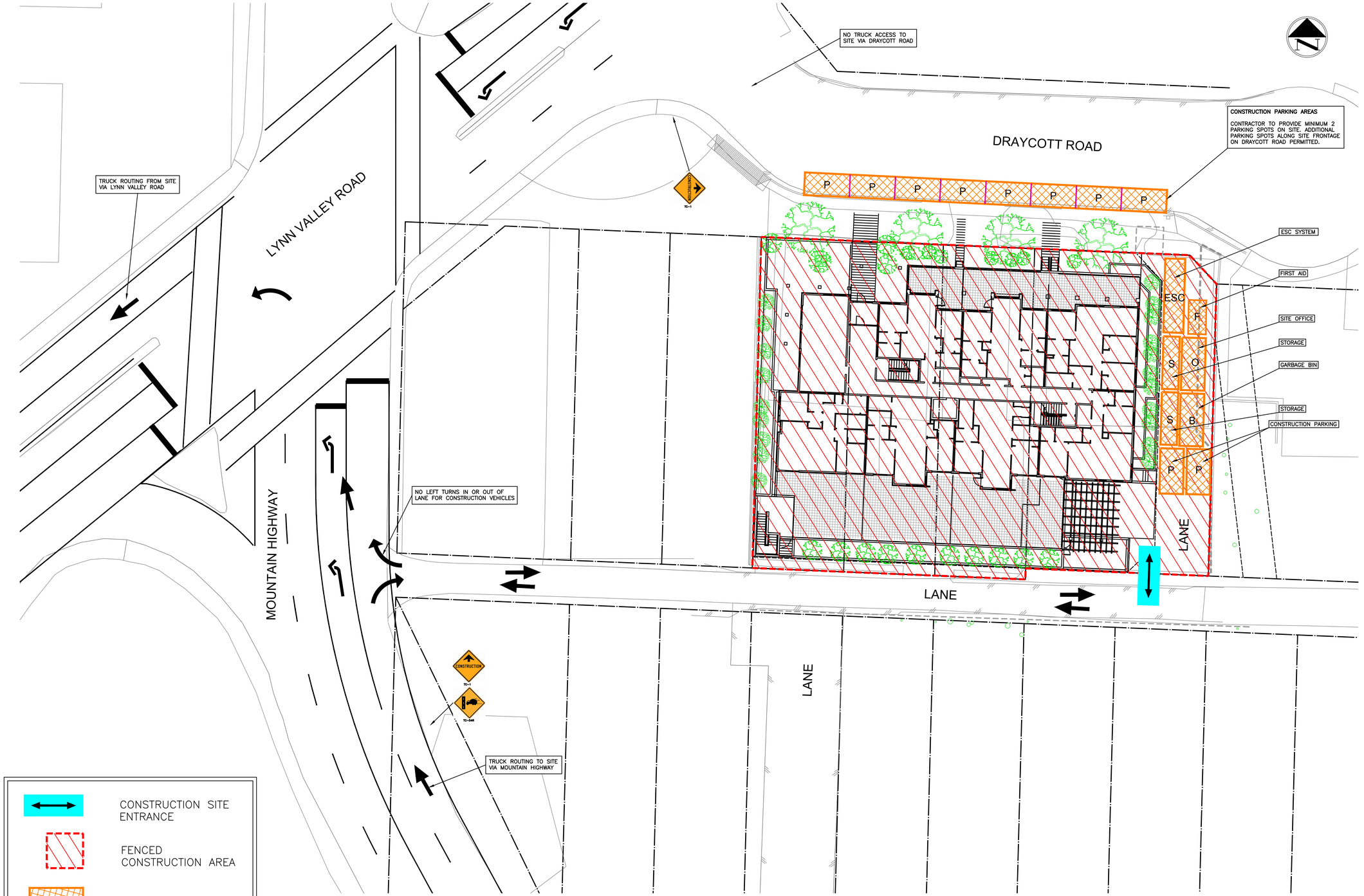
North Vancouver Police Department: 911 (Emergency) / 604-985-1311 (Non-Emergency)

North Vancouver Fire Department: 911 (Emergency) / 604-980-7575 (Non-Emergency)

BC Ambulance: 911 (Emergency)

CONSTRUCTION MANAGEMENT PLAN

AMBULANCE	911
FIRE	911
POLICE	911
BC HYDRO	1-888-769-3766
FORTIS BC	1-800-663-9911
DISTRICT OF N. VANCOUVER	604-990-2311
POISON CONTROL	604-682-5050
SEWER EMERG.	604-326-4680
WATER EMERG.	604-326-4800
WEEKEND	604-326-4650
WORK SAFE BC	604-276-3100
AFTER HOURS AND WEEKENDS	604-273-7711
CIVIL ENGINEER	604-983-9070



CONSTRUCTION SITE ENTRANCE

FENCED CONSTRUCTION AREA

PARKING STALLS / AREA

no.	date	revision	chk'd
2	JAN.12.15	REISSUED FOR DP	NGB
1	JUN.09.14	ISSUED FOR DP	AFG

www.creus.ca

CREUS Engineering Ltd
Civil Engineers

P: 604-987-9070 F: 604-987-9071
200 - 901 WEST 16TH ST NORTH VANCOUVER, BC V7P 1R2

client: MILORI HOMES

project: 1325-1335 DRAYCOTT ROAD
DISTRICT OF NORTH VANCOUVER

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designed by: A.F.G.
drawn by: C.W.B.
checked by: F.M.C.
date: MAY.13.14

title: TRAFFIC MANAGEMENT PLAN
SITE ACCESS AND TRUCK ROUTING

approved

"I, FRED CIAMBRELLI, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING STANDARDS AND IN ACCORDANCE WITH: THE DISTRICT OF NORTH VANCOUVER DESIGN CRITERIA MANUAL, DATED NOV 2005, THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD), VERSION 2000 AND THE DISTRICT OF NORTH VANCOUVER SUPPLEMENTARY MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (SUPPLEMENTARY SPECIFICATIONS AND SUPPLEMENTARY STANDARD DRAWINGS), ADOPTED BY THE DISTRICT OF NORTH VANCOUVER.

scales
hor: 1:200 vert:

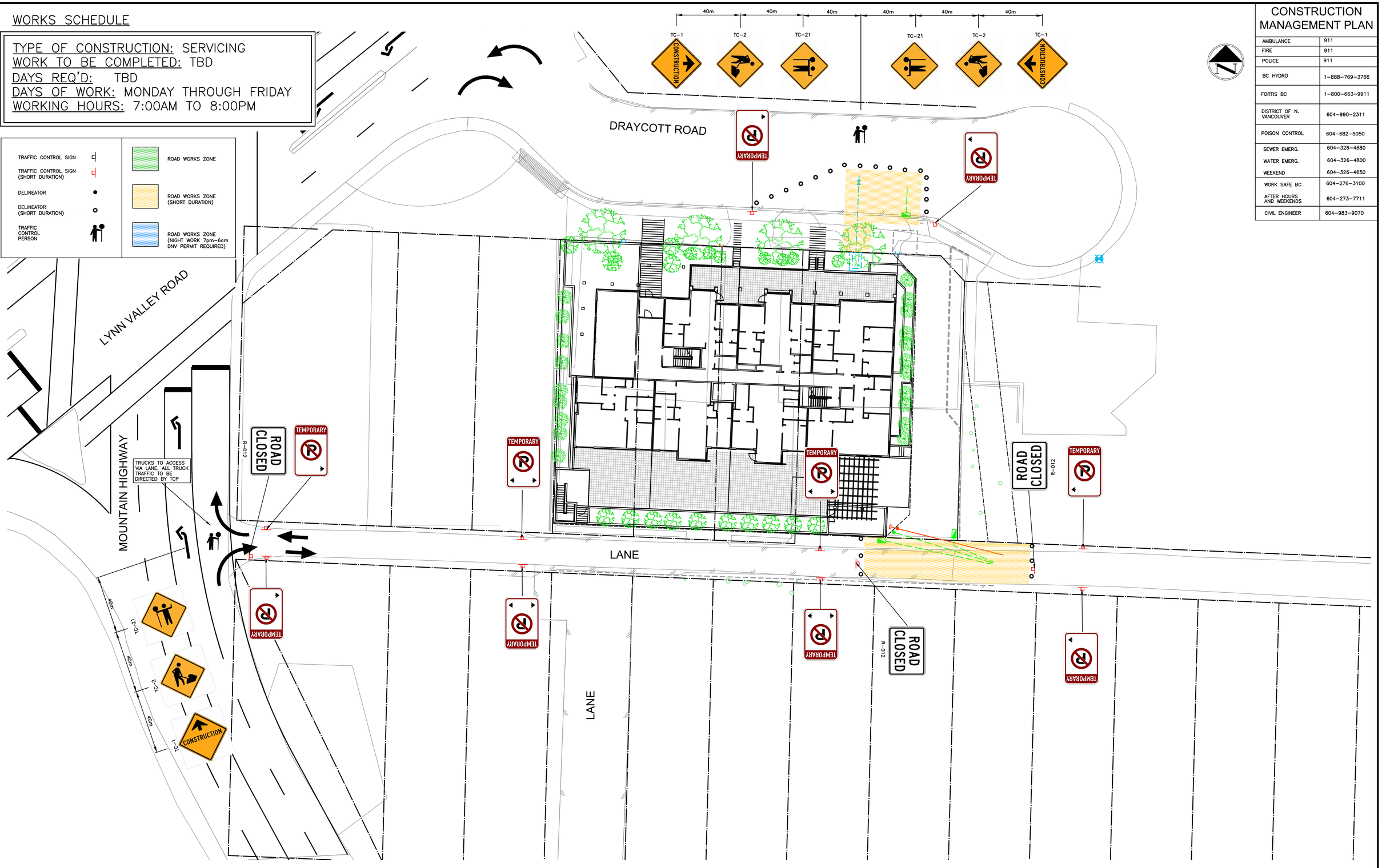
proj no. 14171 dwg. TMP-1

DNV file no. DFXXXX rev. 1

WORKS SCHEDULE

TYPE OF CONSTRUCTION: SERVICING
WORK TO BE COMPLETED: TBD
DAYS REQ'D: TBD
DAYS OF WORK: MONDAY THROUGH FRIDAY
WORKING HOURS: 7:00AM TO 8:00PM

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



CONSTRUCTION MANAGEMENT PLAN

AMBULANCE	911
FIRE	911
POLICE	911
BC HYDRO	1–888–769–3766
FORTIS BC	1–800–663–9911
DISTRICT OF N. VANCOUVER	604–990–2311
POISON CONTROL	604–682–5050
SEWER EMERG.	604–326–4680
WATER EMERG.	604–326–4800
WEEKEND	604–326–4650
WORK SAFE BC	604–276–3100
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CIVIL ENGINEER	604–983–9070

no.	date	revision	chk'd
1	JAN.12.15	REISSUED FOR DP	NGB

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CREUS Engineering Ltd
Civil Engineers
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200 - 901 WEST 16TH ST NORTH VANCOUVER, BC V7P 1R2

client: MILORI HOMES

project: 1325-1335 DRAYCOTT ROAD
DISTRICT OF NORTH VANCOUVER

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designed by: N.G.B.
drawn by: K.N.P.
checked by: F.M.C.
date: DEC.01.14

title: TRAFFIC MANAGEMENT PLAN
SERVICE CONNECTIONS

approved

"I, FRED CIAMBRELLI, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING STANDARDS AND IN ACCORDANCE WITH: THE DISTRICT OF NORTH VANCOUVER DESIGN CRITERIA MANUAL, DATED NOV 2005, THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD), VERSION 2000 AND THE DISTRICT OF NORTH VANCOUVER SUPPLEMENTARY MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (SUPPLEMENTARY SPECIFICATIONS AND SUPPLEMENTARY STANDARD DRAWINGS), ADOPTED BY THE DISTRICT OF NORTH VANCOUVER.

scales
hor: 1:200 vert:

proj no. 14171 dwg. TMP-2

DNV file no. DFXXXX rev. 1

WORKS SCHEDULE

TYPE OF CONSTRUCTION: ROADWORKS
WORK TO BE COMPLETED: TBD
DAYS REQ'D: TBD
DAYS OF WORK: MONDAY THROUGH FRIDAY
WORKING HOURS: 7:00AM TO 8:00PM

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

DRAYCOTT ROAD

LYNN VALLEY ROAD

MOUNTAIN HIGHWAY

TRUCKS TO ACCESS VIA LANE. ALL TRUCK TRAFFIC TO BE DIRECTED BY TCP

ROAD CLOSED R-012

TEMPORARY

LANE

TC-21 40m

TC-2 40m

TC-1 CONSTRUCTION

CONSTRUCTION MANAGEMENT PLAN

AMBULANCE	911
FIRE	911
POLICE	911
BC HYDRO	1–888–769–3766
FORTIS BC	1–800–663–9911
DISTRICT OF N. VANCOUVER	604–990–2311
POISON CONTROL	604–682–5050
SEWER EMERG.	604–326–4680
WATER EMERG.	604–326–4800
WEEKEND	604–326–4650
WORK SAFE BC	604–276–3100
AFTER HOURS AND WEEKENDS	604–273–7711
CIVIL ENGINEER	604–983–9070

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DISTRICT OF NORTH VANCOUVER

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designed by: N.G.B.
drawn by: K.N.P.
checked by: F.M.C.
date: DEC.01.14

title: TRAFFIC MANAGEMENT PLAN
ROADWORKS IN LANE

"I, FRED CIAMBRELLI, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING STANDARDS AND IN ACCORDANCE WITH: THE DISTRICT OF NORTH VANCOUVER DESIGN CRITERIA MANUAL, DATED NOV 2005, THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD), VERSION 2000 AND THE DISTRICT OF NORTH VANCOUVER SUPPLEMENTARY MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (SUPPLEMENTARY SPECIFICATIONS AND SUPPLEMENTARY STANDARD DRAWINGS), ADOPTED BY THE DISTRICT OF NORTH VANCOUVER.

approved

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hor: 1:200 vert:

proj no. 14171
dwg. TMP-3

DNV file no. DFXXXX
rev. 1