



**AGENDA FOR THE REGULAR MEETING OF COUNCIL,  
HELD ELECTRONICALLY FROM CITY HALL,  
141 WEST 14<sup>TH</sup> STREET, NORTH VANCOUVER, BC, ON  
MONDAY, NOVEMBER 30, 2020 AT 5:30 PM**

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“Live” Broadcast via City Website [www.cnv.org/LiveStreaming](http://www.cnv.org/LiveStreaming)  
Complete Agenda Package available at [www.cnv.org/CouncilMeetings](http://www.cnv.org/CouncilMeetings)

**CALL TO ORDER**

**APPROVAL OF AGENDA**

1. Regular Council Meeting Agenda, November 30, 2020

**PUBLIC HEARING – 402-438 East 3<sup>rd</sup> Street / 341-343 St. Davids Avenue**

“Official Community Plan Bylaw, 2014, No. 8400, Amendment Bylaw, 2020, No. 8806” (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, Land Use Designation and Permitted Height Change) and “Zoning Bylaw, 1995, No. 6700, Amendment Bylaw, 2020, No. 8807” (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, CD-730 and “Moodyville Development Permit Area Guidelines” amendment) would rezone the subject properties to permit the development of 3 buildings with a total of 169 market strata residential units, commercial uses (services, retail and offices) and a City-owned childcare facility.

- West Building – 4-storeys at the lane and 82 residential units, including live-work units at grade;
- East Building – 5-storeys at the lane, with commercial retail units at grade and office uses above, a childcare space, and 71 residential units;
- North Building – 4-storeys at the lane, stepping down to 2-storeys at East 4<sup>th</sup> Street, commercial retail units facing St. Davids Avenue and the lane, and 16 residential units.

The proposed total density for the entire project is 2.48 FSR. Two levels of underground parking are provided across the west and east buildings.

*Bylaw Nos. 8806 and 8807 to be considered under Items 2 and 3.*

**AGENDA**

Staff presentation  
Applicant presentation  
Representations from the public  
Questions from Council  
Motion to conclude the Public Hearing

## **BYLAWS – THIRD READING**

2. “Official Community Plan Bylaw, 2014, No. 8400, Amendment Bylaw, 2020, No. 8806” (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, Land Use Designation and Permitted Height Change)

### **RECOMMENDATION:**

THAT “Official Community Plan Bylaw, 2014, No. 8400, Amendment Bylaw, 2020, No. 8806” (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, Land Use Designation and Permitted Height Change) be given third reading.

3. “Zoning Bylaw, 1995, No. 6700, Amendment Bylaw, 2020, No. 8807” (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, CD-730 and “Moodyville Development Permit Area Guidelines” amendment)

### **RECOMMENDATION:**

THAT “Zoning Bylaw, 1995, No. 6700, Amendment Bylaw, 2020, No. 8807” (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, CD-730 and “Moodyville Development Permit Area Guidelines” amendment) be given third reading.

## **ADJOURN**





## THE CORPORATION OF THE CITY OF NORTH VANCOUVER

### PUBLIC HEARING GUIDELINES FOR ELECTRONIC MEETINGS

Public Hearings are included as part of a Regular Council agenda and governed by the provisions of the *Local Government Act*.

A Public Hearing is held to allow the public an opportunity to make representations to Council – in person at the Public Hearing or by written submission – on a proposed amendment to the City's Official Community Plan and/or Zoning Bylaw. All persons who believe their interest in property is affected by a proposed bylaw(s) are afforded a reasonable opportunity to be heard, voice concerns or present written submissions regarding matters contained within the bylaw(s).

All written submissions and representations made at the Public Hearing form part of the official public record. Minutes of the Public Hearing and a video recording of the proceedings will be posted on the City's website at [cnv.org](http://cnv.org).

All written submissions must include the person's name and address. If this information is not provided, it cannot be included as part of the public record. Electronic submissions are preferred, and hand-delivered or mailed submissions will also be accepted. The deadline to submit email submissions is 12:00 noon on the day of the Public Hearing. Due to COVID-19, safety quarantine restrictions have been put in place and the deadline for submissions by mail or delivery to City Hall is 4:00 pm on the Friday prior to the Monday Public Hearing (a minimum of one clear day prior to the Public Hearing).

If persons wish to speak at the Public Hearing, we ask that everyone pre-register to be placed on the speaker's list. The pre-registration form is available at [cnv.org/PublicHearings](http://cnv.org/PublicHearings), or speakers can pre-register by contacting the Corporate Officer's office. All pre-registrations must be submitted no later than 12:00 noon on the day of the Public Hearing, to allow City staff time to contact all participants and provide them with call-in/online access instructions.

Comments from the public must specifically relate to the proposed bylaw(s). Speakers are asked to avoid repetitive comments and not to divert to other matters.

Speakers will be asked to confirm their name and address for the record and will be provided one, 5-minute opportunity to present their comments. There will be no opportunity to speak a second time. After all persons who have pre-registered have spoken, the Mayor (Chair) will ask if anyone else from the public has new information to provide. Speakers who have not pre-registered will also have an opportunity to provide input at [cnv.org/PublicHearings](http://cnv.org/PublicHearings). Call-in details will be displayed on-screen at the Public Hearing (watch web livestream). Once all registered speakers have provided input, the Mayor will call for a recess to allow additional speakers time to phone in.

*Continued...*



## **THE CORPORATION OF THE CITY OF NORTH VANCOUVER**

### **PUBLIC HEARING GUIDELINES FOR ELECTRONIC MEETINGS (continued)**




Everyone will be given a reasonable opportunity to be heard and no one should feel discouraged or prevented from making their views known. The City asks for everyone's patience during the electronic Public Hearing.

Procedural rules for the conduct of the Public Hearing are set at the call of the Chair and Council's main function is to listen to the views of the public regarding the change of land use in the proposed bylaw(s). It is not the function of Council to debate the merits of an application with speakers. Questions from members of the public and Council must be addressed through the Chair.

Once the Public Hearing concludes, no further information or submissions can be considered by Council.

Following adjournment of the Public Hearing, the Regular meeting reconvenes and the Zoning and/or Official Community Plan bylaw amendment(s) are discussed and debated by members of Council, followed by consideration of third reading of the bylaw(s).



 Department Manager	 Director	 CAO
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The Corporation of **THE CITY OF NORTH VANCOUVER**  
**PLANNING & DEVELOPMENT DEPARTMENT**

**REPORT**

To: Mayor Linda Buchanan and Members of Council

From: Yan Zeng, Manager, Development Planning

Subject: REZONING AND OFFICIAL COMMUNITY PLAN AMENDMENT  
APPLICATION: 402-438 EAST 3<sup>RD</sup> STREET AND 341-343 ST. DAVIDS  
AVENUE

Date: November 4, 2020 File No: 08-3400-20-0005/1

*The following is a suggested recommendation only. Refer to Council Minutes for adopted resolution.*

**RECOMMENDATION**

PURSUANT to the report of the Manager, Development Planning, dated November 4, 2020, entitled "Rezoning and Official Community Plan Amendment Application: 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue":

THAT "Official Community Plan Bylaw, 2014, No. 8400, Amendment Bylaw, 2020, No. 8806" (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, Land Use Designation and Permitted Height Change) be considered and referred to a Public Hearing;

THAT "Zoning Bylaw, 1995, No. 6700, Amendment Bylaw, 2020, No. 8807" (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street, and 341-343 St. Davids Avenue, CD-730 and "Moodyville Development Permit Area Guidelines" amendment) be considered and referred to a Public Hearing;

THAT the community benefits listed in the report section "Density Bonus and Community Benefits" be secured, including a 16-space childcare facility, through agreements at the applicant's expense and to the satisfaction of staff;

THAT the statutory requirements for "Official Community Plan Bylaw, 2014, No. 8400, Amendment Bylaw, 2020, No. 8806", as described in the Statutory Review section of this report, be considered;

AND THAT notification be circulated in accordance with the *Local Government Act*.



## ATTACHMENTS

1. Context Map (CityDoc [#1828789](#))
2. Existing and Proposed Official Community Plan Designations (CityDoc [#1982848](#))
3. Architectural and Landscape Plans, dated October 15, 2020 (CityDoc [#1980626](#))
4. Transportation Study (CityDoc [#1940752](#))
5. Applicant's Proposed Affordable Homeownership and Rent-to-Own Program (CityDoc [#1982699](#))
6. Off-Site Servicing Requirements (CityDoc [#1982929](#))
7. Required Legal Agreements (CityDoc [#1983011](#))
8. Developer Information Session Summary (CityDoc [#1983032](#))
9. Virtual Town Hall Report (CityDoc [#1983047](#))
10. Summary of Proposed OCP and Zoning Bylaw Amendments (CityDoc [#1989403](#))
11. Policy Review (CityDoc [#1989413](#))
12. Advisory Body Input (CityDoc [#1989418](#))
13. Official Community Plan Amendment Bylaw No. 8806 (CityDoc [#1989281](#))
14. Zoning Bylaw Amendment Bylaw No. 8807 (CityDoc [#1989179](#))

## PURPOSE

This report presents an application to amend the Official Community Plan (OCP) and Zoning Bylaw to allow for the redevelopment of properties at 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue. The proposed development is a residential strata building with townhouses and commercial units at grade.

## BACKGROUND

On October 7, 2019, a report was presented to Council that sought preliminary direction on the proposed OCP amendment and rezoning. At that time Council directed staff to receive and review the application, and to include a fulsome public consultation as part of that process. The application has been processed in accordance with Council's direction and the resulting evaluation and recommendations are provided in this report.

## DISCUSSION

### *Site Context and Surrounding Use*

This 5,516.5 sq. m. (59,379 sq. ft.) site is located at 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, in the Moodyville area. It is currently made up of 10 lots with detached dwellings, duplexes, and an unoccupied commercial building. Two houses located on 424-426 East 3<sup>rd</sup> Street and 428 East 3<sup>rd</sup> Street are identified as "B" listed heritage buildings.

Attachment #1 provides an aerial view of the existing lots. Existing zoning for these properties is listed in Table 1 below.

**Table 1. Existing Zoning**

Address	Description	Zoning
341-343 St. Davids Avenue	Two-Unit Residential 1	RT-1
438 East 3rd Street	Local Commercial	C-3
402-418, 428, 432 East 3rd Street	Medium Density Apartment Residential 2	RM-2
424-426 East 3rd Street	Comprehensive Development 421	CD-421

The buildings and uses immediately surrounding the subject site are described in Table 2 below.

**Table 2. Surrounding Uses**

Direction	Address	Description	Zoning
North	400-Block of East 4 <sup>th</sup> Street	A mixture of detached and semi-detached dwellings consistent with the Residential Level 2 designation.	RT-1; CD-130
South	400-Block of East 3 <sup>rd</sup> Street	A mixture of detached, semi-detached, and multi-family homes.	RM-2
East	502 East 3 <sup>rd</sup> Street	BC Hydro Transfer Station; TransLink former bus depot	M-1
West	372 East 3 <sup>rd</sup> Street	3 storey multi-family rental residential apartment building	RM-1
West	423 East 4 <sup>th</sup> Street	Residential semi-detached dwelling	RT-1

This centrally located site is adjacent to high-frequency transit along East 3<sup>rd</sup> Street as well as existing active transportation infrastructure along East 4<sup>th</sup> Street and future active transportation routes along both St. Davids Avenue and East 3<sup>rd</sup> Street. The site is also located within a secondary pedestrian generator area as identified in the City's Long Term Transportation Plan, and is expected to receive a higher than average amount of pedestrian traffic.

## Project Description

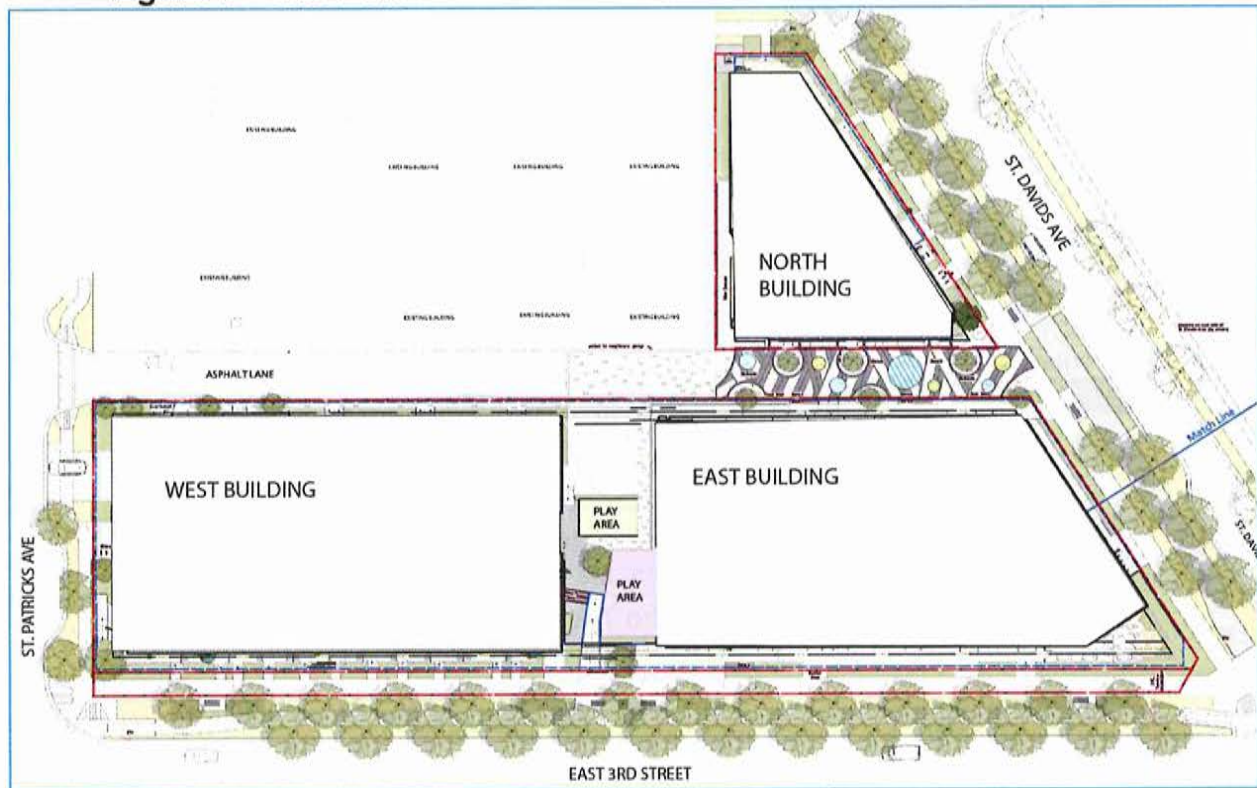
The mixed-use development proposal consists of three separate buildings identified in this report as the East, West and North buildings (see Figure 1):

- West Building: 4-storey building along East 3<sup>rd</sup> Street consisting of 82 market strata residential units, including ground-floor live-work townhouse units facing East 3<sup>rd</sup> Street;
- East Building: 5-storey mixed-use (commercial/residential) building consisting of 71 market strata residential units, 14 commercial retail units (CRUs) at grade



- facing East 3<sup>rd</sup> Street and the lane, office spaces on Level 1 facing East 3<sup>rd</sup> Street, and one childcare facility on Level 1; and
- North Building: 4-storey mixed-use (commercial/residential) building consisting of 16 market strata residential units and 3 CRUs facing the lane.

**Figure 1 – Site Plan**



In total, 169 market strata residential units are being proposed. The breakdown of the unit types is as follows:

- 1-Bedroom – 79 (47%)
- 2-Bedroom – 59 (35%)
- Greater than 2-Bedroom (2BR+Den, 3BR, 3BR+Den) – 31 (18%)

The total proposed floor area for the entire site is 13,680.5 sq. m. (147,255 sq. ft.), with a total density of 2.48 FSR.

CRUs are oriented along the easterly portion of East 3<sup>rd</sup> Street as well as St. Davids Avenue. There are also CRUs facing the lane between the east and north buildings. The commercial activation of the lane provides a weather-protected outdoor amenity for use by residents, employees, customers and the general public.

The proposal includes two storeys of underground vehicle parking, accessed off of St. Patricks Avenue. A commercial loading space is proposed off the lane in the breezeway between the west and east buildings. Bicycle parking spaces are provided at P1 of the West Building and at the ground floor of the North Building.



## Policy Framework

The subject site falls under three designations within the Official Community Plan (see Figure 2):

- Residential Level 5 along most of East 3<sup>rd</sup> Street (402-432 E 3<sup>rd</sup>);
- Mixed-Use Level 2 at corner of East 3<sup>rd</sup> and St. Davids (438 E 3<sup>rd</sup>); and
- Residential Level 2 on the lot north of the lane (341-343 St. Davids)

**Figure 2 – OCP Designation Map**



The Residential Level 5 designation is intended to provide multi-family housing with a mix of unit sizes, with a focus on creating attractive and active streets. The Mixed-Use Level 2 designation is intended to allow mid-rise multi-family and commercial uses and activities contributing to a pedestrian-scale village-feel, with an emphasis on street-fronting retail activities including shops, cafés and services. The Residential Level 2 designation is intended to provide a range of ground-oriented housing in areas located between detached residential and more intensive residential or mixed-use areas.

The site is within the Moodyville Development Permit Area, and is partly within three separate sub-areas, including the “Neighbourhood Centre” (438 East 3rd Street), the “East 3rd Street Corridor” (402-432 East 3rd Street), and the “St. Patricks Transition” (341-343 St. Davids Avenue). Of these three sub-areas, the Development Permit Guidelines apply to the “East 3rd Street Corridor” only. For these properties, a Development Permit would typically be required, however, because a thorough review of the proposed form and character of the development has been completed through the OCP and Zoning Bylaw amendment application review, a Development Permit



application is not recommended. Within the proposed Zoning Bylaw amendment, a condition is proposed to be added to the Moodyville Development Permit Guidelines that would allow for this and similar projects in the future to not require a Development Permit.

The proposed development would require an OCP amendment, including re-designation of a portion of the site and an amendment to maximum heights. Rezoning to a Comprehensive Development Zone would also be required. The proposed changes to the OCP and Zoning Bylaw are summarized in Attachment 10.

Attachment 11 provides a list of how this proposal is responding to higher level goals of Metro 2040 and the OCP as well as other relevant City objectives.

### **Use and Intensity**

Compared to the current OCP designations, the proposal represents a slight decrease in allowable residential floor area, and a significant increase in commercial floor area:

- The existing OCP designations permit a maximum density of 12,486.9 m<sup>2</sup> or 2.26 FSR, which would likely result in a development with approximately 12,200 m<sup>2</sup> of residential floor area, and approximately 280 m<sup>2</sup> of commercial floor area.
- The proposed rezoning and OCP amendment would permit a maximum density of 13,680 m<sup>2</sup> or 2.48 FSR with approximately 12,130 m<sup>2</sup> of residential floor area and approximately 1,548 m<sup>2</sup> of commercial floor area.

At present, Moodyville has very limited active commercial retail businesses operating to serve the neighbourhood. The nearest commercial centres are Queensbury (~800m away) and Lonsdale Avenue at East 3<sup>rd</sup> Street (~950m away). The proposed change to land use designation will support the emergence of a neighbourhood commercial hub for the developing Moodyville area, which, under the OCP, is envisioned to have more than 4,000 residents at build-out.

While the greatest increase in commercial floor area comes from re-designating a portion of the site along East 3<sup>rd</sup> Street, staff also support the re-designation of 341-343 St. Davids Avenue (northerly portion) in order to create this neighbourhood commercial hub. It is important to note that commercial entrances would be mainly from the pedestrian-only lane, away from residential entrances along East 4<sup>th</sup> Street.

Overall, staff are of the view that this large site assembly presents a good opportunity to expand the neighbourhood-serving commercial capacity on site, while a slight reduction in residential capacity can be supported. The development concept for the site is consistent with the City's over-arching policy framework that prioritizes complete communities where residents/workers can walk to local commercial and retail services.



## **Form**

As outlined in the last section, the proposed overall density is marginally higher than what would otherwise be permitted under the OCP. How the overall density is integrated onto the site and the surrounding context is the focus of staff evaluation.

The site slopes significantly from north to south, with an approximately 7 m (23 ft.) grade difference between 4<sup>th</sup> and 3<sup>rd</sup> streets. The proposal is broken down into three separate buildings – the West Building, the East Building and the North Building.

While the two buildings facing East 3<sup>rd</sup> Street are generally of four to five-storeys in height at the lane, the North Building, which borders lower density residential development, is significantly sculpted to integrate into the surrounding built form – it presents a four-storey form at the lane side, terracing down to a two-storey form along East 4<sup>th</sup> Street.

A breezeway is proposed between the west and east buildings to bring more pedestrian permeability through the site. The West Building activates the street by lining it with live/work units, while the east building has multiple CRUs to engage and serve pedestrians. A large size patio is also proposed at the corner of East 3<sup>rd</sup> Street and St. Davids Avenue, creating a space for people to meet and linger.

The application proposes to close the easterly portion of the lane to traffic and create a pedestrian “mews”. Staff are supportive of this concept and see this as an opportunity to experiment with activating the City’s laneways for pedestrian activities separated from vehicle traffic and protected from the elements by a covering. Along the lane, the West Building includes townhouse units, while the East Building proposes commercial retail units as well as the childcare facility entrance.

The overall development, if approved, will help to create an amenity-rich neighbourhood hub for neighbours and residents alike. In addition, for the exclusive use of the residents, a rooftop amenity is proposed on the West Building that would help encourage social interactions. It includes a barbeque and dining area, a children’s play area, and a community garden.

## **Existing Heritage “B” Buildings**

Two heritage “B” buildings currently exist on site: 424-426 East 3<sup>rd</sup> Street and 428 East 3<sup>rd</sup> Street.

The existing house at 424 East 3<sup>rd</sup> Street was constructed in 1927, in a craftsman style. In 2001, a heritage covenant was registered on title to provide some legal protection of the building. On July 20, 2016, Council approved the discharge of the heritage covenant based on the following considerations:

- No density bonus was granted as a result of the registration of the covenant;
- A “B” rating is of lesser heritage significance and would normally be allowed to be demolished without any referral to Council;



- The OCP has a significantly higher apartment designation for this entire block.

In directing staff to discharge the covenant, Council also asked staff to consider the merits of retaining this building as part of future redevelopment applications.

The existing house at 428 East 3<sup>rd</sup> Street is also a “B” listed building. Built in 1908, it was of the Gabled Vernacular style, however, there is no heritage covenant on title.

As part of this application, both houses were presented to the Heritage Advisory Committee (see Attachment 12). The committee recommended where possible, attempts should be made to relocate these buildings to the satisfaction of staff and the applicant consider a contribution to the cost of relocation, in scale with saving gained from the demolition cost.

Committee members further recommend that public art for this project should reflect the historic context of the Moodyville neighbourhood.

### **Building Sustainability**

The proposed residential component would achieve minimum Step 3 of the BC Building Code Step Code and the proposed commercial portion would achieve minimum Step 2 of the BC Building Code Step Code. Outlets capable of supporting Level 2 electric vehicle charging capacity will be provided for all required residential parking spaces, with the exception of visitor stalls. Stormwater will also be addressed through on-site mitigation, including retention tanks to support stormwater management during significant storm events.

### **Parking and Transportation**

Vehicle Parking and Loading - The project includes 162 residential parking spaces, 51 commercial parking spaces, and 10 shared commercial/visitor parking spaces for a combined total of 223 parking spaces. Additionally, one parking space will be reserved for car share, and a car share vehicle will be provided for use by residents, tenants and the general public.

The proposal requests a parking variance of 31 spaces. Review of similar projects in Metro Vancouver (TransLink and Metro Vancouver, March 2019) has shown that developments adjacent to the Frequent Transit Network generate a lower parking need. This site is 200m from a transit stop for the R2 RapidBus which provides connections to Lonsdale and Marine Drive to the west and Phibbs Exchange in the east. In addition to a lower number of residential parking spaces, commercial and residential visitor parking will be shared to make better use of the overlapping parking demands generated by the commercial uses, daycare and residential visitors. Because of the expected reduced demand for parking, the proposed variance is supported.

Prior to COVID-19, on-street parking in the surrounding area had an occupancy of approximately 41% in the peak period, recent review suggests that the occupancy has increased to approximately 60%. Available spaces are likely to reduce in the future with



the removal of parking on East 3<sup>rd</sup> Street for transit priority, and the removal of parking on St. Davids Avenue for Mobility Network infrastructure. Assuming that the parking demand remains the same, the parking occupancy with the reduced on-street parking is expected to increase to 70% or higher if current trends continue. Staff will closely monitor the on-street parking situation in the area.

*Bicycle Parking* - Requirements for short-term and secure bike parking as well as End Destination Facilities are met or exceeded, with a total of 302 secured residential bicycle spaces and 20 secure commercial bicycle spaces, 31 short-term bicycle parking spaces, and end of trip cycling facilities.

*Commercial Loading* - The proposed development includes a loading bay to serve the commercial units on site, located in the breezeway between the west and east buildings. A loading management plan will be required in order not to disrupt traffic flow in the area and mitigate impacts on neighbours.

*Transportation Study* - A transportation study was completed for the proposed development. The study projected that trips generated would be 115 per hour or 2 cars per minute in the busiest period (PM peak), with access to the site being through the East 3<sup>rd</sup> Street and St. Patricks Avenue intersection. These trips can be accommodated by the surrounding network with minimal delay, particularly with the proposed frontage and street network improvements listed below.

*Street Network Improvements* – The application is proposing significant on-site and off-site improvements to the public realm and street network.

Frontage improvements include:

- Provision of a west-bound separated bicycle lane on East 3<sup>rd</sup> Street;
- Improved streetscape including additional trees and a traffic calmed design on St. Davids Avenue;
- Provision of a sidewalk on St. Patricks Avenue (3<sup>rd</sup> Street to the lane).

The development proposes a partial closure of the east/west lane north of 3rd Street between St. Patricks Avenue and St. Davids Ave. This closure will further reduce the volume of traffic on St. Davids Avenue, improving the safety and comfort for active transportation uses on St. Davids Avenue.

Street network improvements include:

- A traffic signal at East 3<sup>rd</sup> Street and St. Patricks Avenue to facilitate access to the development and surrounding neighbourhood.
- Modification of the East 3<sup>rd</sup> Street and St. Davids Avenue intersection to right-in right-out for both legs of St. Davids Avenue, thereby reducing the volume of traffic on St. Davids Avenue. This intersection will be signalised using CNV capital funding.
- Provision of a new intersection at East 4<sup>th</sup> Street and St. Davids Avenue to: promote and improve the 4<sup>th</sup> Street and St. Davids AAA Bicycle routes, reduce

traffic speeds and volumes on both streets, and provide safer and more comfortable streets for all road users (design yet to be finalized).

- A cash contribution of \$20,000 towards pedestrian improvement in the vicinity of the project.

### Density Bonus and Community Benefits

The City's *Density Bonus and Community Benefits Policy*, in conjunction with the OCP, allows for density bonuses beyond 1.83 FSR in the Residential Level 5 and Mixed-Use Level 2 land use designations, up to a maximum of 2.48 FSR.

The proposed project would include community benefits valued at approximately \$7.67 million dollars, as outlined in Table 3 below.

**Table 3. Estimated Value of Community Benefits through Density Bonusing**

Density Value Calculation	Value
Density Bonus to 1.83 FSR / OCP Density (40,237.8 sq.ft. @ \$25 / sq. ft.)	\$1,005,945
Density Bonus to 2.48 FSR Max Bonus (38,093.05 @ \$175 / sq. ft.)	\$6,666,284
<b>Total Value of Community Amenity Contribution (CAC)</b>	<b>\$7,672,229</b>

The policy provides a number of community benefit options for projects seeking additional density and seeks to ensure the City receives value for additional density granted. Benefits to the City could be provided in-kind or as a cash contribution.

In response to this policy, the applicant is proposing two in-kind contributions: nine units of Affordable Home Ownership (AHO), in accordance with the criteria set out by BC Housing; and a childcare facility to be constructed turn-key and transferred to the City's ownership.

AHO Units – BC Housing's AHO Program aims to provide an opportunity for households earning approximately \$78,000-\$96,000 annually to afford a home. The applicant is proposing to make nine units in the building available for this program. Details of the proposed units and affordability are presented in Tables 4 and 5 below. The applicant is requesting the City to direct approximately \$2.5 million of the CAC towards securing a second mortgage on the nine units, which would reduce the cost of a unit by approximately \$123,000-\$470,000, depending on the size of the unit.

**Table 4. Summary of AHO Units**

Unit Type	Average Unit Area	Number of Units
1-bedroom (AHOP)	540	3
2-bedroom (AHOP)	794	4
3-bedroom (AHOP)	1059	2
<b>Total Number of Units</b>		<b>9</b>



**Table 5. Summary of AHO Affordability**

Type of Units	Market Sale Price	\$ / sq.ft	AHOP Sale Price	\$ / sq.ft	% AHOP 2 <sup>nd</sup> Mortgage	AHOP Mortgage Amount	Qualifying Income
1 Bedroom	\$492,052	\$912	\$369,039	\$684	25%	\$123,013	\$78,491
2 Bedroom	\$718,893	\$907	\$431,336	\$544	40%	\$287,557	\$90,103
3 Bedroom	\$940,262	\$888	\$470,131	\$444	50%	\$470,131	\$96,421
<b>Market Value (Sale price)</b>	<b>\$6,232,251</b>						
<b>Total AHOP Revenue</b>			<b>\$3,772,722</b>				
<b>AHOP 2<sup>nd</sup> Mortgage</b>					<b>\$2,459,529</b>		

As outlined in Table 5, the City's contribution to the AHO program on this site is forgoing a portion of the community benefits in an amount that is equivalent to the second mortgage on title, which is to \$2,459,529.

BC Housing will administer the program. When an AHO unit is sold in the future, the City has the ability to either provide the second mortgage amount to another qualified buyer, continuing the discount, or, if an unqualified buyer purchases the unit, the City can have its contribution returned which would allow the City to direct those funds to another community benefit.

An over-arching MOU was signed between the City and BC Housing to pilot this AHO program in the City of North Vancouver in order to advance housing affordability in the city for mid-income and first responder families. For this particular application, legal agreements will be in place to secure commitment to the program and the community benefits.

Childcare – The applicant has been in negotiations with staff for a City-owned childcare facility on Level 1. This is a 16-space childcare centre with programs for ages three to five. Given the high need for quality childcare spaces in the city, staff are prepared to work with the applicant to secure this space to the City's satisfaction. Details of the childcare facility are currently being resolved and will be brought forward to Council at the public hearing, should Council refer this application to a public hearing.

**Table 6 – Community Benefits Allocation**

<b>Amenity</b>	<b>Monetary Value</b>
Nine Affordable Home Ownership Units	\$2,459,529
In-kind Childcare – Recommended 16 Space Upper Floor (Level 1)	Estimated at \$2,914,000 (subject to third party valuation)
Cash Contribution to Civic Amenity Reserve Fund	Estimated \$2,298,700 (subject to confirmation of childcare value)
<b>Total</b>	<b>\$7,672,229</b>

In addition to the items above, the following items will be secured as conditions of this development:

- Public art incorporated into the project with a value of \$300,000;
- A public access right-of-way through the project breezeway to provide a pedestrian connection from East 3<sup>rd</sup> Street to the lane;
- One car share vehicle and dedicated car share parking space;
- Dedication of 3.048m for road widening;
- Improved offsite works, including expanded cycling and pedestrian facilities, intersection improvements and signalization, undergrounding of hydro infrastructure in the rear lane, and a \$20,000 contribution to local area pedestrian network improvements (see Attachment 6 – Off-Site Servicing Requirements).

In order to secure the items listed above, the City will require legal agreements to be entered into and registered at the applicant's expense. A list of required legal agreements is attached to this report (Attachment 7). The agreements will be settled and executed by the owner prior to final adoption of the bylaws.

Other Non-monetary Contribution – The applicant is proposing a Rent-to-Own component in the development (Attachment 5). Staff support this initiative and applaud the applicant for proposing it. Staff will monitor the success of this program for future replication.

## **STATUTORY REVIEW**

When an amendment to the OCP is being considered, Sections 475, 476 and 477 of the Local Government Act require municipalities to consult with persons, organizations and authorities it considers will be affected, including school districts, and consider whether the change would have any impact on the City's Financial Plan or Waste Management Plan. The proposed change to the OCP do not present a significant impact on the City's infrastructure; therefore, no significant impact to the City's Financial Plan or Waste Management Plan are anticipated. Following introduction of the Bylaws, they will be formally referred to interested agencies (School District, Metro Vancouver) for comment.



## **ADVISORY BODY INPUT**

The application was reviewed and supported unanimously by the Advisory Planning Commission, Advisory Design Panel, Integrated Transportation Committee and the Heritage Advisory Commission.

See Attachment 12 for details on commentary from these committees.

## **COMMUNITY CONSULTATION**

In accordance with the City's best practices on public consultation as well as Council's earlier direction to fully engage with the public, the applicant hosted a town hall meeting, as is required for any OCP amendment application, in addition to a Developer Information Session (DIS).

A DIS was held November 19<sup>th</sup>, 2019. Ninety-two members of the public signed into the event, 85 comment sheets/emails were collected concerning the proposal. The applicant has prepared a summary of the DIS (Attachment 8). Attendees included local residents, and a number of individuals who live outside of the neighbourhood, either elsewhere on the North Shore or in Metro Vancouver generally.

A virtual town hall was hosted on July 14<sup>th</sup>, 2020. The virtual town hall provided an opportunity for the applicant to share with interested parties the changes that had been made in the project since the DIS, as well as to receive additional feedback concerning their proposal. Two-hundred individuals registered for the virtual town hall, and 142 participants attended the meeting. The meeting resulted in 316 comments. A third-party facilitator prepared a report concerning the virtual town hall (Attachment 9).

Overall, support for the application referred to the AHO and Rent-to-Own units as well as provision of commercial spaces in the development. The proposed live/work units also have been mentioned as reasons for support.

Key concerns were raised regarding:

- Height, massing, and shadow impacts;
- Change of use and character on East 4<sup>th</sup> Street in particular;
- Impacts of childcare (parking, pick-up/drop-off, noise) on East 4<sup>th</sup> Street;
- Traffic impacts (on-street parking, volume on residential streets and the lane); and
- Change from existing OCP land uses and heights.

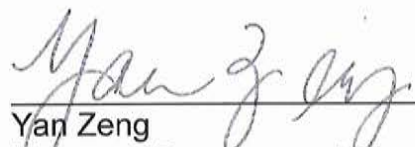
Public feedback has assisted staff in the evaluation of this application. In particular, the North Building has been redesigned in order to respond to the neighbouring houses along East 4<sup>th</sup> Street. Site circulation has been improved to significantly calm traffic surrounding the site. Childcare space is now located at the breezeway, away from East 4<sup>th</sup> Street.

## CONCLUSION

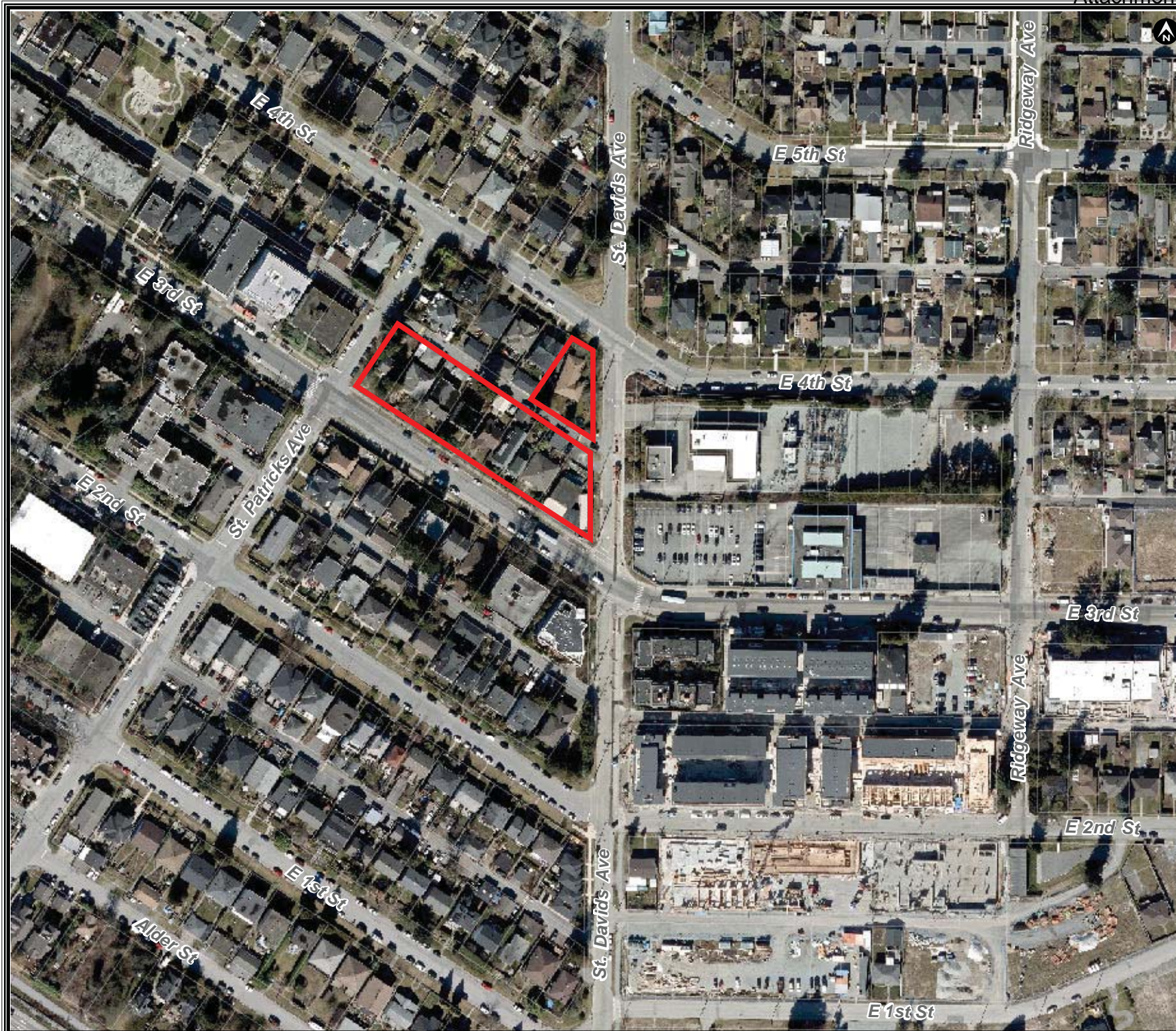
This application has been assessed and staff support the OCP amendment to increase the amount of commercial component in the development to provide significant amenities to the Moodyville area. Further, the inclusion of childcare, improvements to active transportation infrastructure and intersections, and housing pilot programs are consistent with the City's policy framework. The form of development has also been evaluated and considered appropriate in the site context.

On balance, the proposed application will support the continued growth of Moodyville into a more sustainable neighbourhood – environmentally, socially, and economically.

RESPECTFULLY SUBMITTED:

  
\_\_\_\_\_  
Yan Zeng  
Manager, Development Planning





City of North Vancouver  
Context Map

Legend

Subject Site



DISCLAIMER

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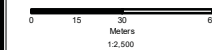
**city**  
of north  
vancouver





# City of North Vancouver Existing Land Use Designations

- Legend**
- 2014 OCP Maximum Height Limits (m)
  - 2014 OCP Special Study Areas
  - Residential Level 1
  - Residential Level 2
  - Residential Level 3
  - Residential Level 4A
  - Residential Level 4B
  - Residential Level 5
  - Residential Level 6
  - Mixed Use Level 1
  - Mixed Use Level 2
  - Mixed Use Level 3
  - Mixed Use Level 4A
  - Mixed Use Level 4B
  - Harbourside Waterfront (Mixed Use)
  - Parks, Recreation & Open Space
  - School & Institutional
  - Commercial
  - Mixed Employment
  - Industrial
  - Legal\_Parcel
  - Subject Site



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**city**  
of north  
vancouver





City of North Vancouver  
Proposed Land  
Use Designations

Legend

 Subject Site

Designations

 Mixed-Use Level 2

 Residential Level 5



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PLOTTED: 8/18/2014  
SOURCE: SURVEY  
COORDINATE SYSTEM: NAD 83 UTM Zone 10

**city**  
of north  
vancouver





**Integra**  
ARCHITECTURE INC.  
2330-200 Granville Street  
Vancouver, BC, V6C 1S4  
www.integra-arch.com  
Telephone: 604 688 4220

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(PROJECT TEAM)



CONTACT LIST

Client	Cascade Green Development 100-200 Columbia Street North Vancouver, BC, V7M 1B0	Facial Mascari 779-853-8388 604-688-4220 604-688-4220	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>
Architect	Integra Architecture 2330-200 Granville Street Vancouver, BC, V6C 1S4	Shane Sachs 604 688 4220 604 688 4220	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>
City	Blond 300-660 Columbia Street Burnaby, BC, V5C 4H2	David Wilson 779-853-8388 604-688-4220	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>
Landscape	Perry & Associates 112 East Broadway Vancouver, BC, V7T 1V9	Michael Pedersen 604-728-4116	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>
Geotechnical	Hansen Engineering Inc. 100-10 Columbia Street North Vancouver, BC, V7M 3G3	John Hansen 604 590 0545 604 590 0545	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>
Code	BC Building 100-10 Columbia Street North Vancouver, BC, V7M 3G3	Sam Elliott 604 684 2384	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>
Traffic	West Consulting Group 100-10 Columbia Street North Vancouver, BC, V7M 3G3	Elizabeth 403 273 9001 779 306 1073	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>
Mechanical	Smith & Anderson 100-10 Columbia Street Burnaby, BC, V5C 4H2	Chris Liu 604 637 1482	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>
Electrical	Smith & Anderson 100-10 Columbia Street Burnaby, BC, V5C 4H2	Jeff Chan 604 637 1475	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>
Authority	City of North Vancouver 100-10 Columbia Street North Vancouver, BC, V7M 1B0	Mika Plessen 604 590 4200	<a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a> <a href="mailto:info@integra-arch.com">info@integra-arch.com</a>

402-438 E 3rd St & 341-343 St Davids Ave

North Vancouver BC

DRAWING LIST

Cover	A-0.000 COVER SHEET	1/18" = 1/4"
A-0.000 DATA SHEET	A-0.100 ZONING & OCP	1/18" = 1/4"
A-0.100 SITE CONTEXT	A-0.110 SITE CONTEXT	1/18" = 1/4"
A-0.130 SITE CONTEXT MAP	A-0.140 SUN PATH DIAGRAM	1/18" = 1/4"
A-0.150 PRECEDENT IMAGES	A-0.200 PERSPECTIVES - EAST BUILDING	1/18" = 1/4"
A-0.210 PERSPECTIVES - WEST BUILDING	A-0.220 PERSPECTIVES - NORTH BUILDING	1/18" = 1/4"
A-0.230 PERSPECTIVES - NORTH BUILDING ADJACENCY	A-0.240 PERSPECTIVES - VIGNETTES	1/18" = 1/4"
A-0.250 PERSPECTIVES - CANEWAY BUILDING	A-0.300 SURVEY (PROPOSED)	1/18" = 1/4"
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118' Overall Plans	A-2.000 P1 & P2 PARKING PLAN - OVERALL	1/18" = 1/4"
A-2.010 GROUND FLOOR PLAN - OVERALL	A-2.015 LEVEL 1 PLAN - OVERALL	1/18" = 1/4"
A-2.020 LEVEL 2 PLAN - OVERALL	A-2.030 LEVEL 3 PLAN - OVERALL	1/18" = 1/4"
A-2.040 LEVEL 4 PLAN - OVERALL	A-2.050 LEVEL 5 PLAN - OVERALL	1/18" = 1/4"
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A-2.120 WEST BUILDING - LEVEL 2 PLAN	A-2.130 WEST BUILDING - LEVEL 3 PLAN	1/18" = 1/4"
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A-2.160 WEST BUILDING - LEVEL 6 PLAN	A-2.200 EAST BUILDING - GROUND FLOOR PLAN	1/18" = 1/4"
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A-2.250 EAST BUILDING - LEVEL 5 PLAN	A-2.260 EAST BUILDING - LEVEL 6 PLAN	1/18" = 1/4"
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A-2.340 NORTH BUILDING - LEVEL 4 PLAN	A-2.350 NORTH BUILDING - LEVEL 5 PLAN	1/18" = 1/4"
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A-3.004 ADAPTABLE UNIT PLANS	Elevations	1/18" = 1/4"
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Cascade Green Development

402-438 E 3rd St & 341-343 St Davids Ave

North Vancouver, BC

COVER SHEET

471 (PROJECT)

Not To Scale (SCALE)

2026-10-15 (DATE)

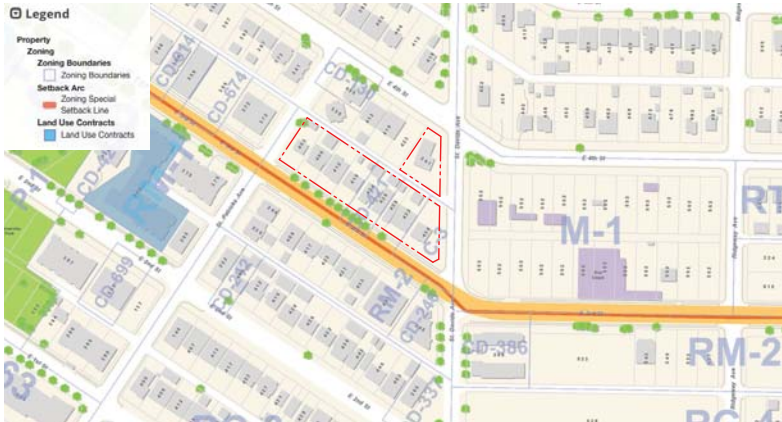
Issue 06 - RZ /DP Resubmission (ISSUE)

(DRAWING)

A-0.000







#### OCF - RESIDENTIAL LEVEL 5 + MIXED USE LEVEL 2 (MEDIUM DENSITY)

- RESIDENTIAL L5: 1.6 FSR (MAX BONUS OF 1.0 FSR)
- MIXED USE L2: 2.0 FSR (MAX BONUS OF 0.5 FSR)
- FSR BONUS WITH PUBLIC BENEFITS:
  - SECURE MARKET RENTAL HOUSING FOR NON-MARKET RENTAL
  - COMMUNITY AMENITY SPACE
  - EMPLOYMENT GENERATION
  - HERITAGE CONSERVATION
- MAX HEIGHT 4 STOREYS (12-13 METRES)

#### APPLICABLE GUIDELINES:

- 2018 DENSITY BONUS AND COMMUNITY BENEFITS POLICY
- AAA BICYCLE NETWORK FOR CITY OF NORTH VANCOUVER (ALL AGES AND ABILITIES)
- ACTIVE DESIGN GUIDELINES
- ADAPTABLE DESIGN GUIDELINES
- SUSTAINABLE DESIGN GUIDELINES
- CPTD PRINCIPLES





VIEW 1 - ST PATRICKS AVE



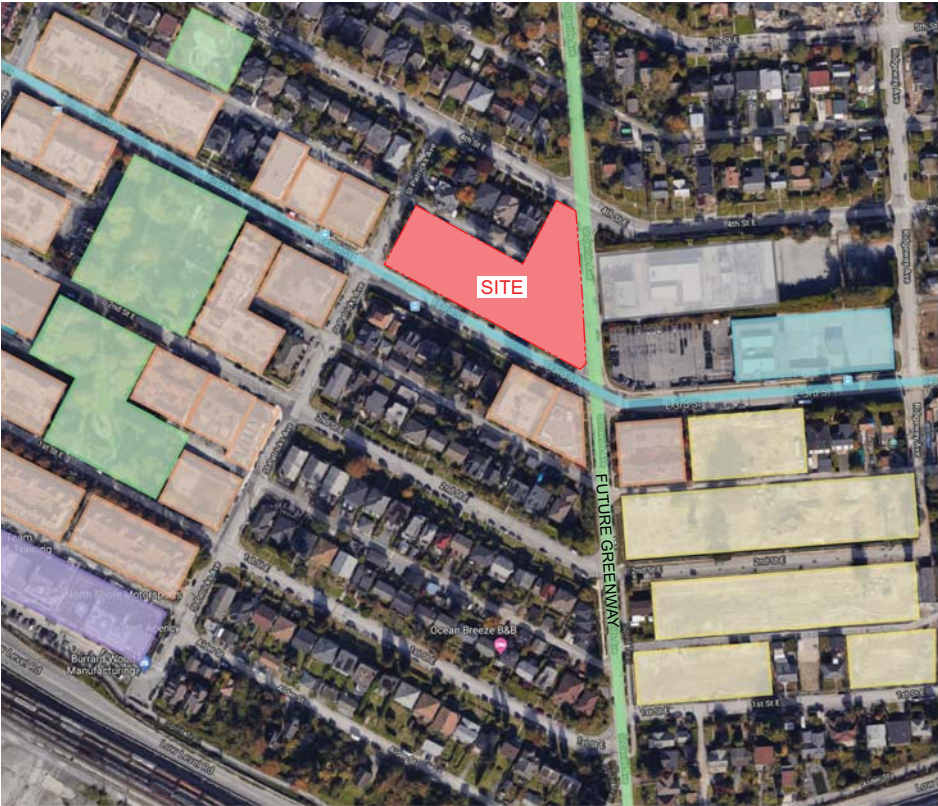
VIEW 2 - NORTH WEST CORNER



VIEW 3 - EAST LANE



VIEW 4 - SOUTH EAST CORNER



CONTEXT MAP

- NORTH VANCOUVER TRANSIT CENTRE
- TRANSLINK BUS ROUTE
- DEVELOPMENT SITES
- EXISTING MULTI-FAMILY BUILDINGS
- SUBSTATION
- PARKS
- COMMERCIAL





VIEW 5 - ELEVATION ALONG EAST 4TH ST



VIEW 6 - NORTH EAST CORNER



VIEW 7 - NORTH SITE



VIEW 8 - LANE LOOKING EAST







- PARKS
- TRANSIT ROUTE
- REZONING APPLICATION
- COMMUNITY BUILDINGS
- COMMERCIAL
- MIXED-USE
- MULTI-FAMILY RESIDENTIAL
- SINGLE-FAMILY & DUPLEX RESIDENTIAL
- GREENWAY



**Integra**  
ARCHITECTURE INC.  
2330-200 Granville Street  
Vancouver, BC, V6C 1S4  
www.integra-arch.com  
Telephone: 604 688 4220



(PROJECT TEAM)



Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

(TITLE)

**SITE CONTEXT  
MAP**

471 (PROJECT)

Not To Scale (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (ISSUE)

(DRAWING)

**A-0.130**





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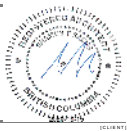
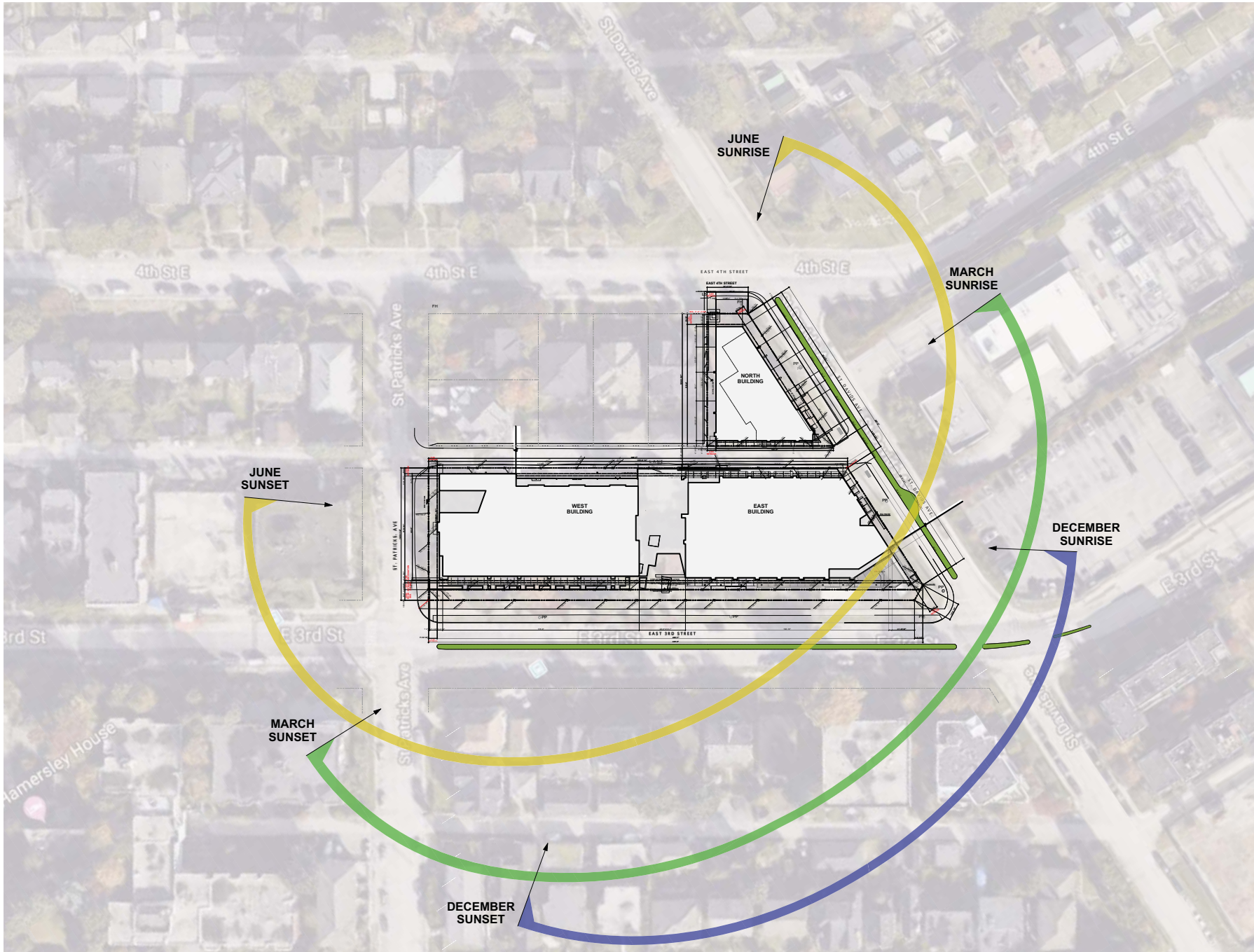
ARCHITECTURE INC.

2330-200 Granville Street  
Vancouver, BC, V6C 1S4  
www.integra-arch.com  
Telephone: 604 688 4220

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(PROJECT TEAM)



Cascadia Green Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

(TITLE)

**SUN PATH  
DIAGRAM**

471 (PROJECT)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (DRAWING)

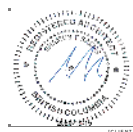




**Integra**  
ARCHITECTURE INC.  
2330-200 Granville Street  
Vancouver, BC, V6C 1S4  
www.integra-arch.com  
Telephone: 604 688 4220

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(PROJECT TEAM)



Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

(TITLE)

**PRECEDENT  
IMAGES**

471 (PROJECT)

Not To Scale (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-0.150**



# 1 EAST BUILDING SE CORNER



## 2 EAST/WEST BUILDING RESIDENTIAL ENTRY



## 3 EAST BUILDING COMMERCIAL FRONTAGE



## 4 EAST & NORTH BUILDING LANEWAY PAVILION



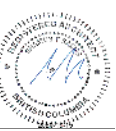
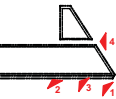
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(PROJECT TEAM)



Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

(TITLE)

**PERSPECTIVES -  
EAST BUILDING**

471 (PROJECT)

Not To Scale (SCALE)

2026-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (DRAWING)

**A-0.200**



# 1 WEST BUILDING SOUTH ELEVATION



## 2 WEST BUILDING SE CORNER



## 3 WEST BUILDING SOUTH ELEVATION



## 4 WEST BUILDING LANE TOWNHOMES



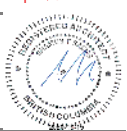
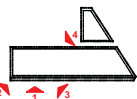
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(PROJECT TEAM)



(CLIENT)

Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

**PERSPECTIVES -  
WEST BUILDING**

(DRAWING)

471

Not To Scale

2026-10-15

Issue 06 - RZ /DP Resubmission

(DRAWING)

**A-0.210**



# 1 NORTH BUILDING



## 2 NORTH BUILDING



## 3 NORTH BUILDING



## 4 NORTH BUILDING



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Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

**PERSPECTIVES -  
NORTH BUILDING**

471 (PROJECT)

Not To Scale (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-0.220**



# 1 NORTH BUILDING



# 2 NORTH BUILDING



# 3 NORTH BUILDING



# 4 NORTH BUILDING



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Cascadia Green  
Development

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

**PERSPECTIVES -  
NORTH BUILDING  
ADJACENCY**

471

Not To Scale

2026-10-15

Issue 06 - RZ /DP Resubmission

(DRAWING)

**A-0.230**





**1** WEST BUILDING  
BALCONY DETAIL



**2** EAST BUILDING  
LIVE/WORK FRONTAGE



**3** NORTH BUILDING  
FRONT ENTRANCE



**4** EAST/WEST BUILDING  
DAYCARE



**5** EAST / WEST BUILDING  
ENTRY / BREEZEWAY



**6** EAST BUILDING  
RESTAURANT PATIO



**7** NORTH BUILDING  
ADJACENCY



**8** NORTH BUILDING  
ADJACENCY



**9** WEST BUILDING  
TOWNHOUSE FRONTAGE



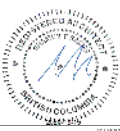
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Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

**PERSPECTIVES -  
VIGNETTES**

471 (PROJECT)

Not To Scale (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-0.240**





1 LANEWAY PAVILION



2 LANEWAY PAVILION



3 LANEWAY PAVILION



4 LANEWAY PAVILION



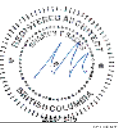
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Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

**PERSPECTIVES -  
LANEWAY  
PAVILION**

471 (PROJECT)

Not To Scale (SCALE)

2026-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (DRAWING)

**A-0.260**







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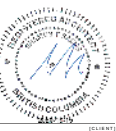
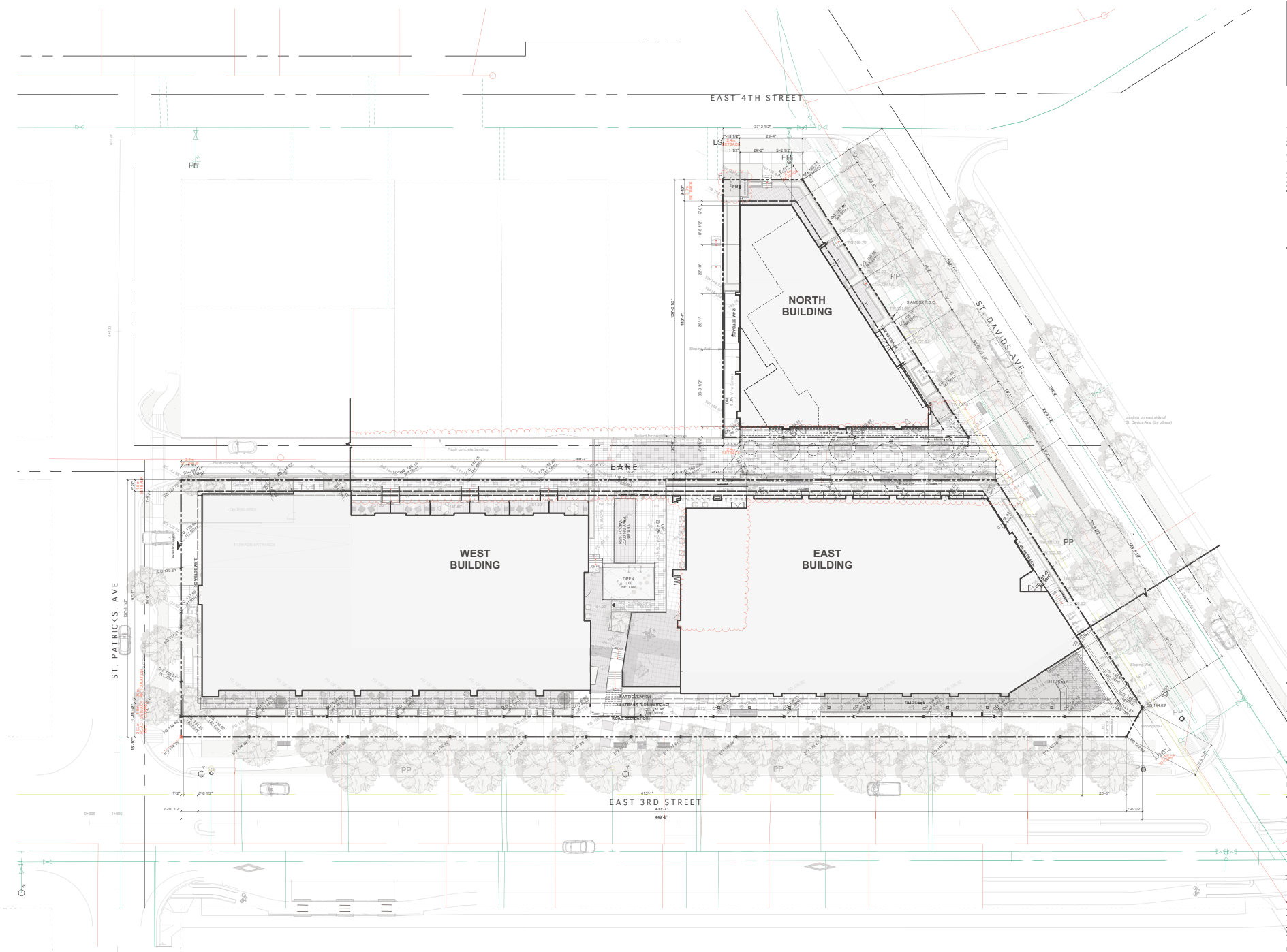
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(PROJECT TEAM)



**Cascadia Green Development**

(CLIENT)

**402-438 E 3rd St & 341-343 St Davids Ave**

North Vancouver, BC

(SITE)

**SITE PLAN**

471 (PROJECT)

1/16" = 1'-0" (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-1.000**





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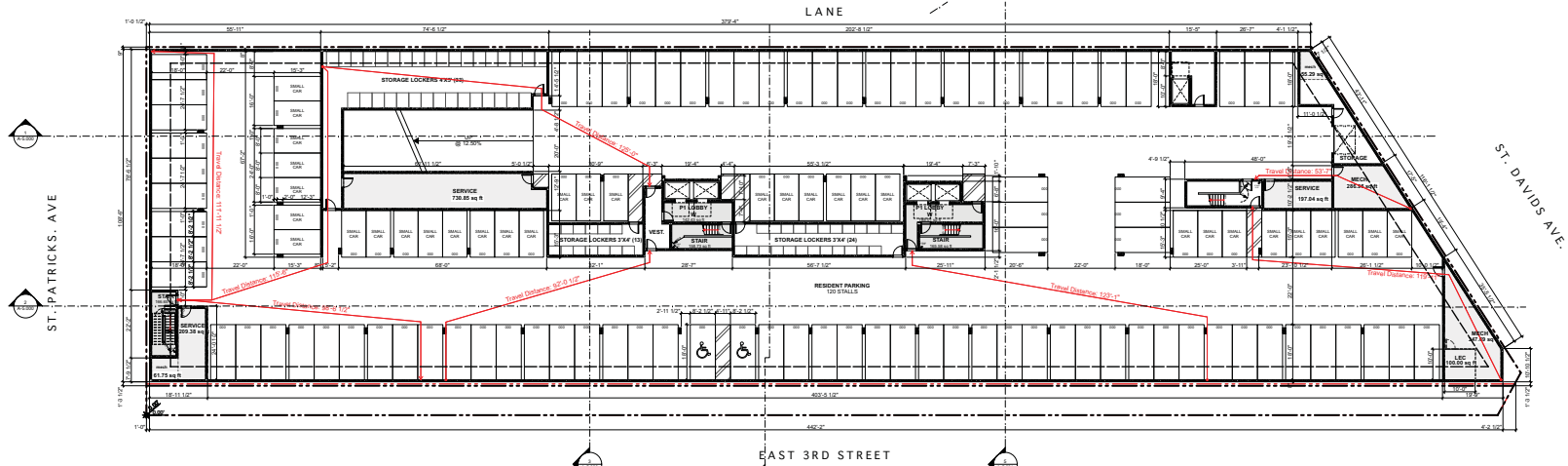
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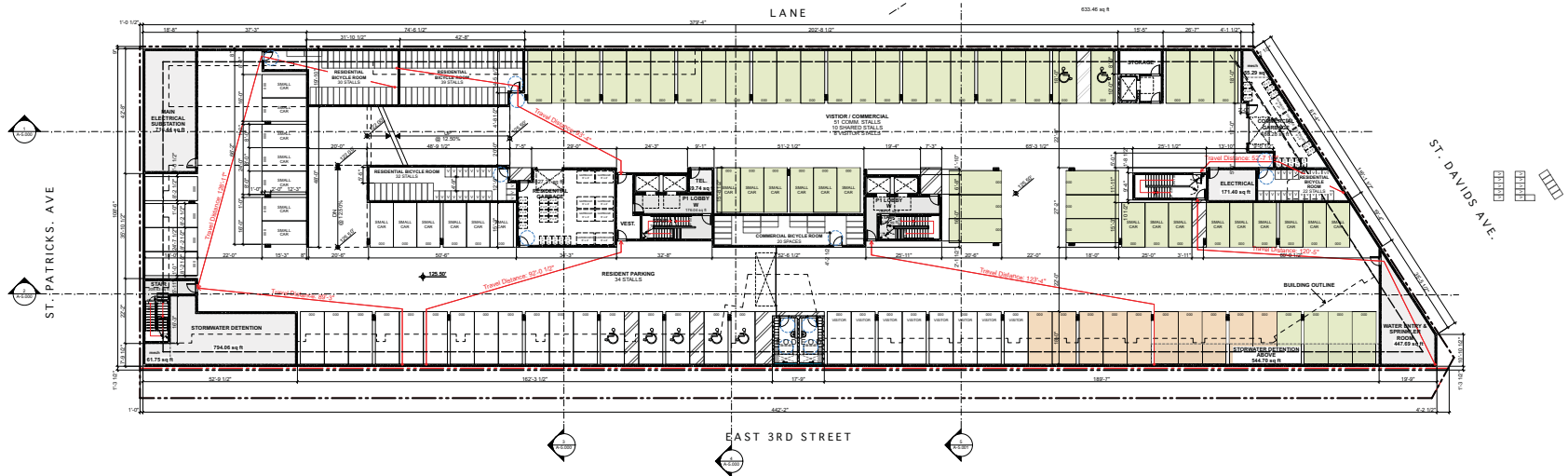


(PROJECT TEAM)



**P2 Parking Plan**

SCALE: 1/16" = 1'-0"



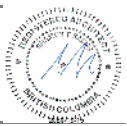
**P1 Parking Plan**

SCALE: 1/16" = 1'-0"



**LEGEND**

SCALE: 1/16" = 1'-0"



(COLLATE)

**Cascadia Green  
Development**

(PROJECT)

**402-438 E 3rd St &  
341-343 St Davids Ave**

North Vancouver, BC

(TITLE)

**P1 & P2 PARKING  
PLAN - OVERALL**

**471** (PROJECT)

**1/16" = 1'-0"** (SCALE)

**2028-10-15** (DATE)

**Issue 06 - RZ /DP Resubmission** (REVISION)

(DRAWING)

**A-2.000**



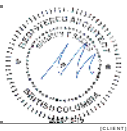
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(PROJECT TEAM)

GFA		
LEVEL	BLDG	AREA
Ground Floor		
Level 1	WEST	33,755.83
	EAST	15,380.44
	NORTH	6,025.03
Level 2	WEST	17,135.29
	EAST	17,387.90
	NORTH	6,625.14
Level 3	WEST	18,284.51
	EAST	17,321.75
	NORTH	4,985.44
Level 4	WEST	18,048.22
	EAST	16,982.60
	NORTH	4,162.75
Level 5	WEST	15,991.47
	EAST	15,766.52
	NORTH	164.25
		456.87
		208,468.11 sq ft



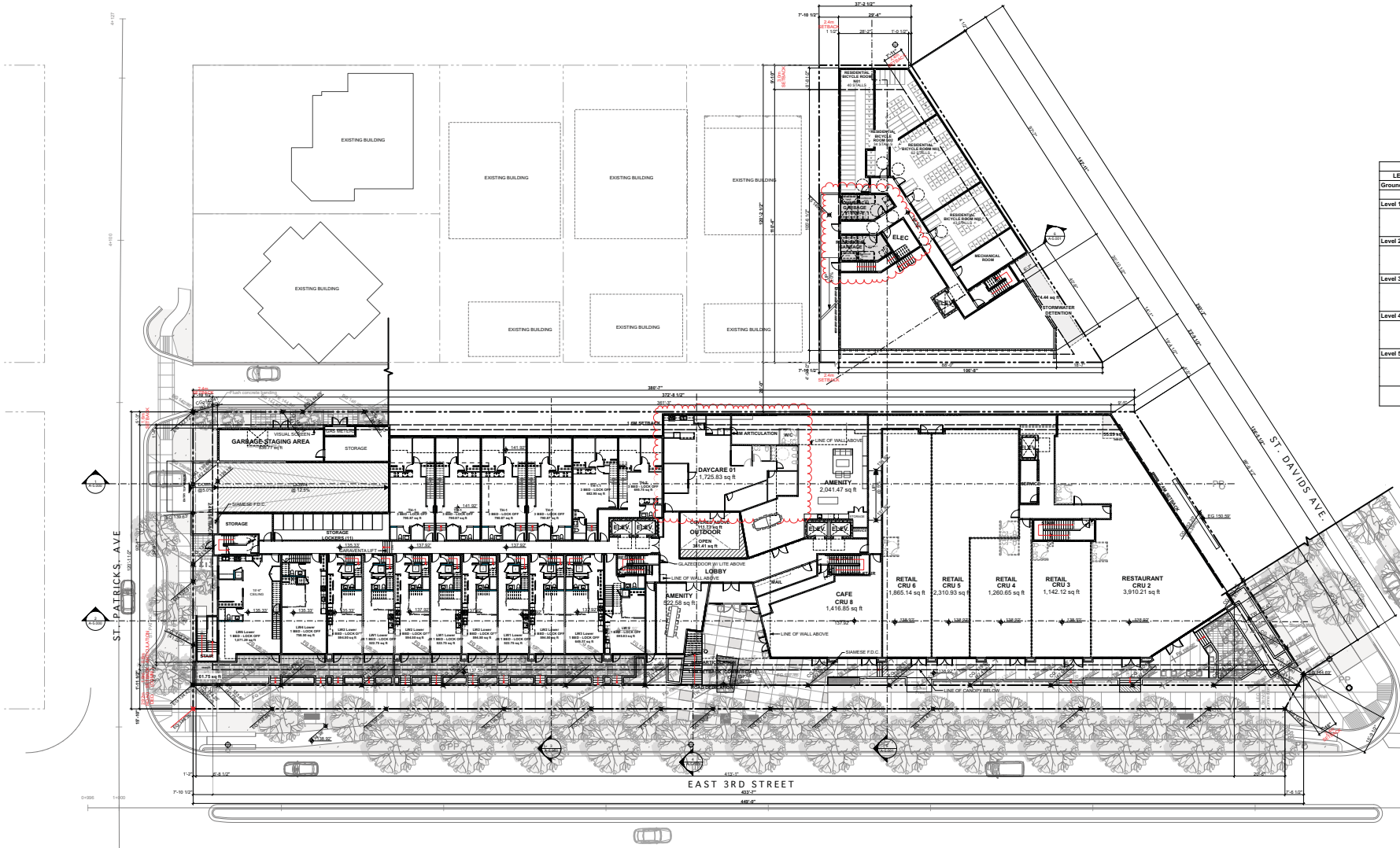
Cascadia Green  
Development

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

**GROUND FLOOR  
PLAN - OVERALL**

471 (PROJECT)  
1/16" = 1'-0" (SCALE)  
2020-10-15 (DATE)  
Issue 06 - RZ /DP Resubmission (REVISION)  
(DRAWING)

**A-2.010**



Ground Floor Plan - Overall  
SCALE: 1/16" = 1'-0"





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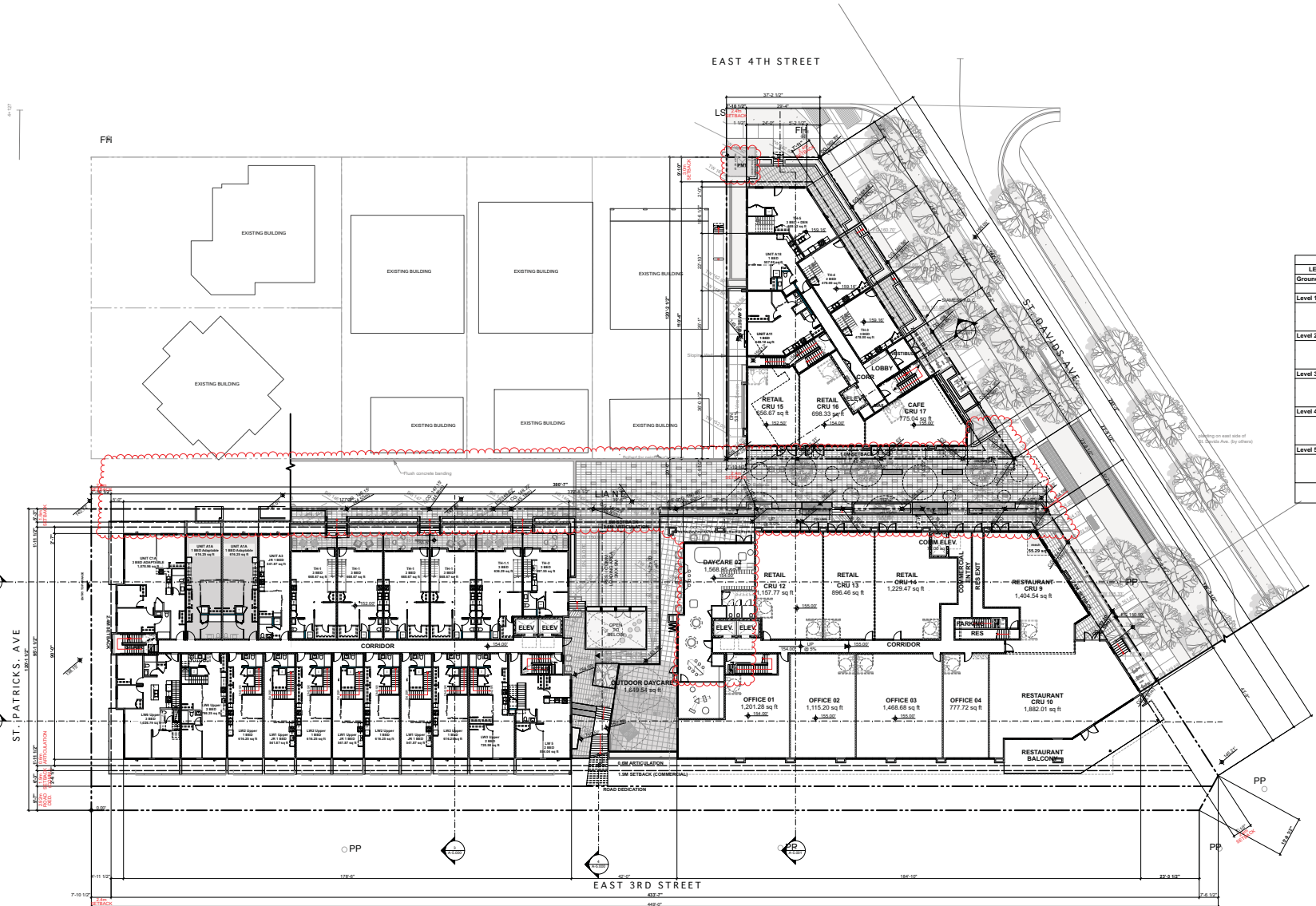
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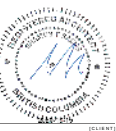
(PROJECT TEAM)

GFA		
LEVEL	BLDG	AREA
Ground Floor		
	WEST	33,755.83
Level 1		
	EAST	15,380.44
	NORTH	6,025.93
	WEST	17,138.29
Level 2		
	EAST	17,387.90
	NORTH	6,625.14
	WEST	18,284.51
Level 3		
	EAST	17,321.75
	NORTH	4,985.44
	WEST	18,048.22
Level 4		
	EAST	16,982.60
	NORTH	4,162.75
	WEST	15,991.47
Level 5		
	EAST	15,768.52
	WEST	164.25
	WEST	486.87
		208,468.11 sq ft



Level 1 Plan - Overall

SCALE: 1/16" = 1'-0"



Cascadia Green Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

LEVEL 1 PLAN -  
OVERALL

471 (PROJECT)

1/16" = 1'-0" (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-2.015**



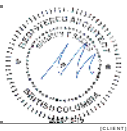
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(PROJECT TEAM)

GFA		
LEVEL	BLDG	AREA
Ground Floor		
	WEST	33,755.83
Level 1		
	EAST	15,380.44
	NORTH	6,025.03
	WEST	17,138.29
Level 2		
	EAST	17,387.90
	NORTH	6,625.14
	WEST	18,284.51
Level 3		
	EAST	17,321.75
	NORTH	4,985.44
	WEST	18,048.22
Level 4		
	EAST	16,982.60
	NORTH	4,162.75
	WEST	15,991.47
Level 5		
	EAST	15,766.52
	WEST	164.25
	WEST	456.87
		208,468.11 sq ft



Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

(TITLE)

**LEVEL 2 PLAN -  
OVERALL**

471 (PROJECT)

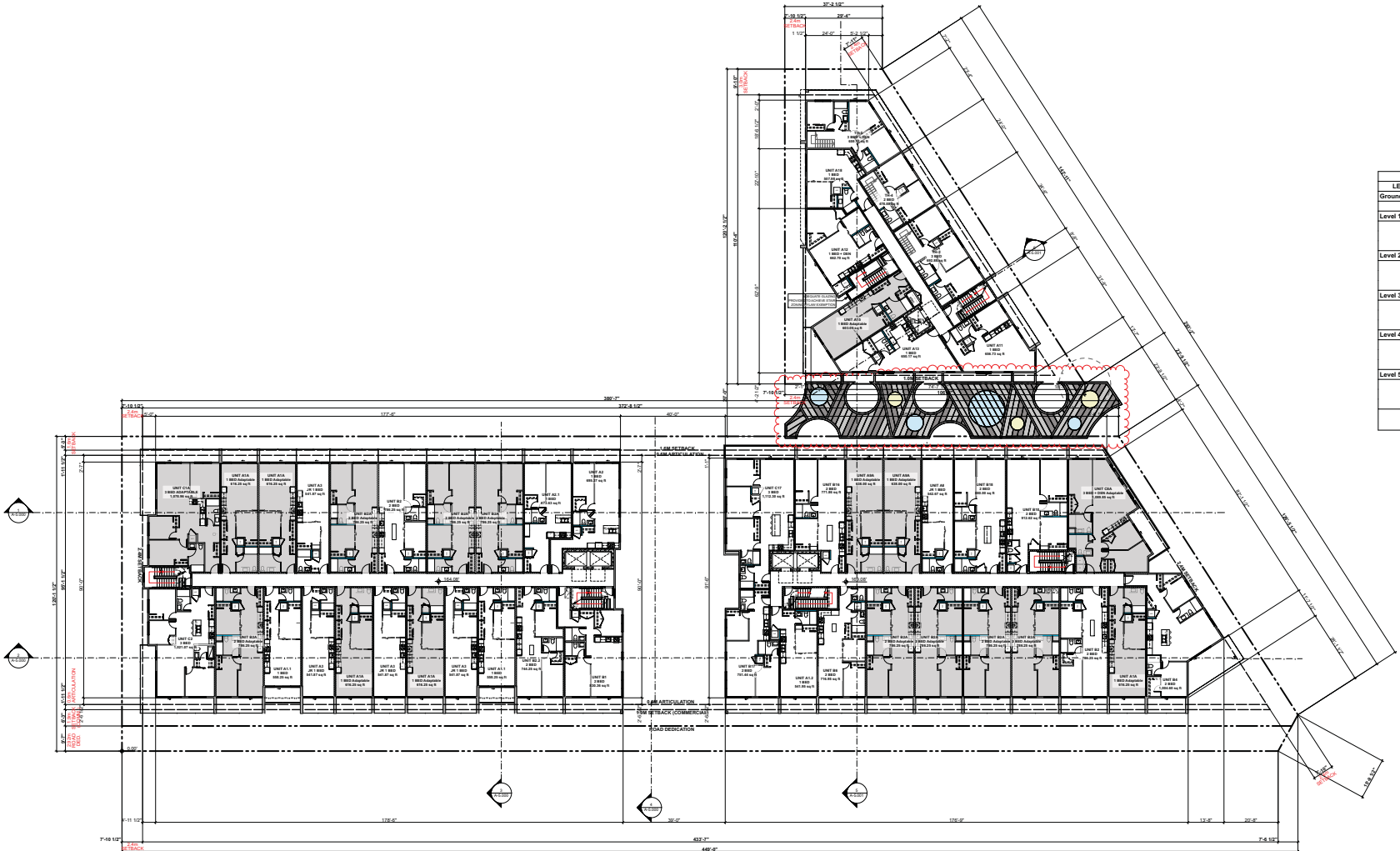
1/16" = 1'-0" (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-2.020**



Level 2 Plan - Overall  
SCALE: 1/16" = 1'-0"





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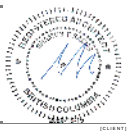
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(PROJECT TEAM)

GFA		
LEVEL	BLDG	AREA
Ground Floor		
	WEST	33,755.83
Level 1		
	EAST	15,580.44
	NORTH	6,025.03
	WEST	17,135.29
Level 2		
	EAST	17,587.90
	NORTH	6,625.14
	WEST	18,284.51
Level 3		
	EAST	17,521.75
	NORTH	4,985.44
	WEST	18,048.22
Level 4		
	EAST	16,982.60
	NORTH	4,162.75
	WEST	15,991.47
Level 5		
	EAST	15,766.52
	WEST	164.25
	WEST	456.87
		208,468.11 sq ft



(COLLECT)

Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

LEVEL 3 PLAN -

OVERALL

(PROJECT)

471

1/16" = 1'-0"

2022-10-15

Issue 06 - RZ /DP Resubmission

(DRAWING)

A-2.030

Level 3 Plan - Overall

SCALE: 1/16" = 1'-0"



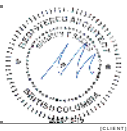
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(PROJECT TEAM)

GFA		
LEVEL	BLDG	AREA
Ground Floor		
	WEST	33,755.83
Level 1		
	EAST	15,380.44
	NORTH	6,025.03
	WEST	17,138.29
Level 2		
	EAST	17,387.90
	NORTH	6,628.14
	WEST	18,284.51
Level 3		
	EAST	17,321.75
	NORTH	4,985.44
	WEST	18,048.22
Level 4		
	EAST	16,982.60
	NORTH	4,162.75
	WEST	15,991.47
Level 5		
	EAST	15,766.52
	WEST	164.25
	WEST	456.87
		208,468.11 sq ft



Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

(TITLE)

**LEVEL 4 PLAN - OVERALL**

471 (PROJECT)

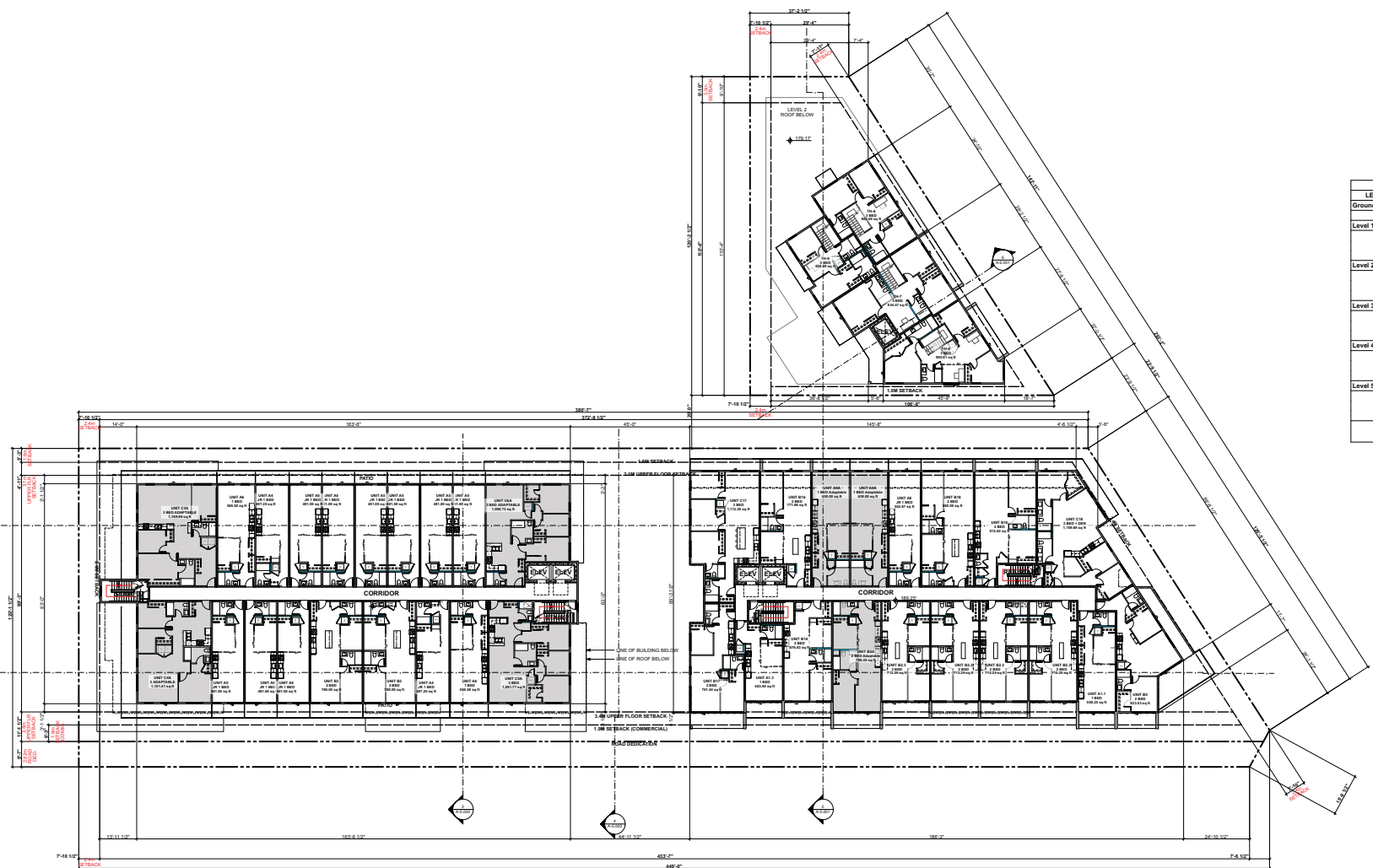
1/16" = 1'-0" (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-2.040**



Level 4 Plan - Overall

SCALE: 1/16" = 1'-0"





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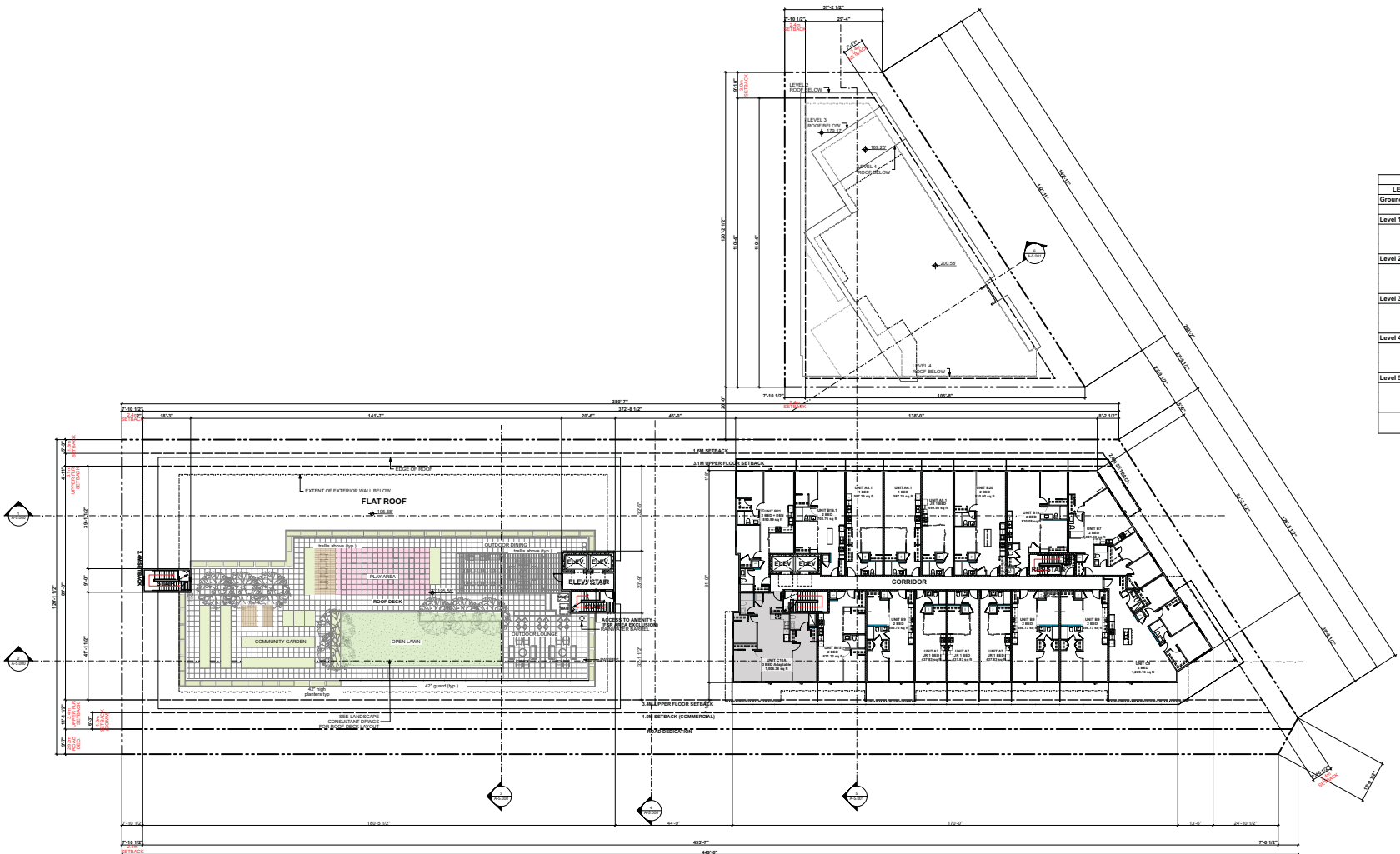
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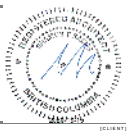
(PROJECT TEAM)

GFA		
LEVEL	BLDG	AREA
Ground Floor		
	WEST	33,755.83
Level 1		
	EAST	15,580.44
	NORTH	6,025.03
	WEST	17,138.29
Level 2		
	EAST	17,387.90
	NORTH	6,628.14
	WEST	18,284.51
Level 3		
	EAST	17,321.75
	NORTH	4,985.44
	WEST	18,048.22
Level 4		
	EAST	16,982.60
	NORTH	4,162.75
	WEST	15,991.47
Level 5		
	EAST	15,766.52
	WEST	164.25
	WEST	456.87
		208,468.11 sq ft



Level 5 Plan - Overall

SCALE: 1/16" = 1'-0"



Cascadia Green Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

## LEVEL 5 PLAN - OVERALL

471 (PROJECT)

1/16" = 1'-0" (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

A-2.050 (DRAWING)

A-2.050



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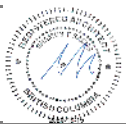
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(PROJECT TEAM)



(PROJECT TEAM)



(CLIENT)

**Cascadia Green Development**

(PROJECT)

**402-438 E 3rd St & 341-343 St Davids Ave**

North Vancouver, BC

(TITLE)

**ROOF PLAN - OVERALL**

(SCALE)

**1/16" = 1'-0"**

(DATE)

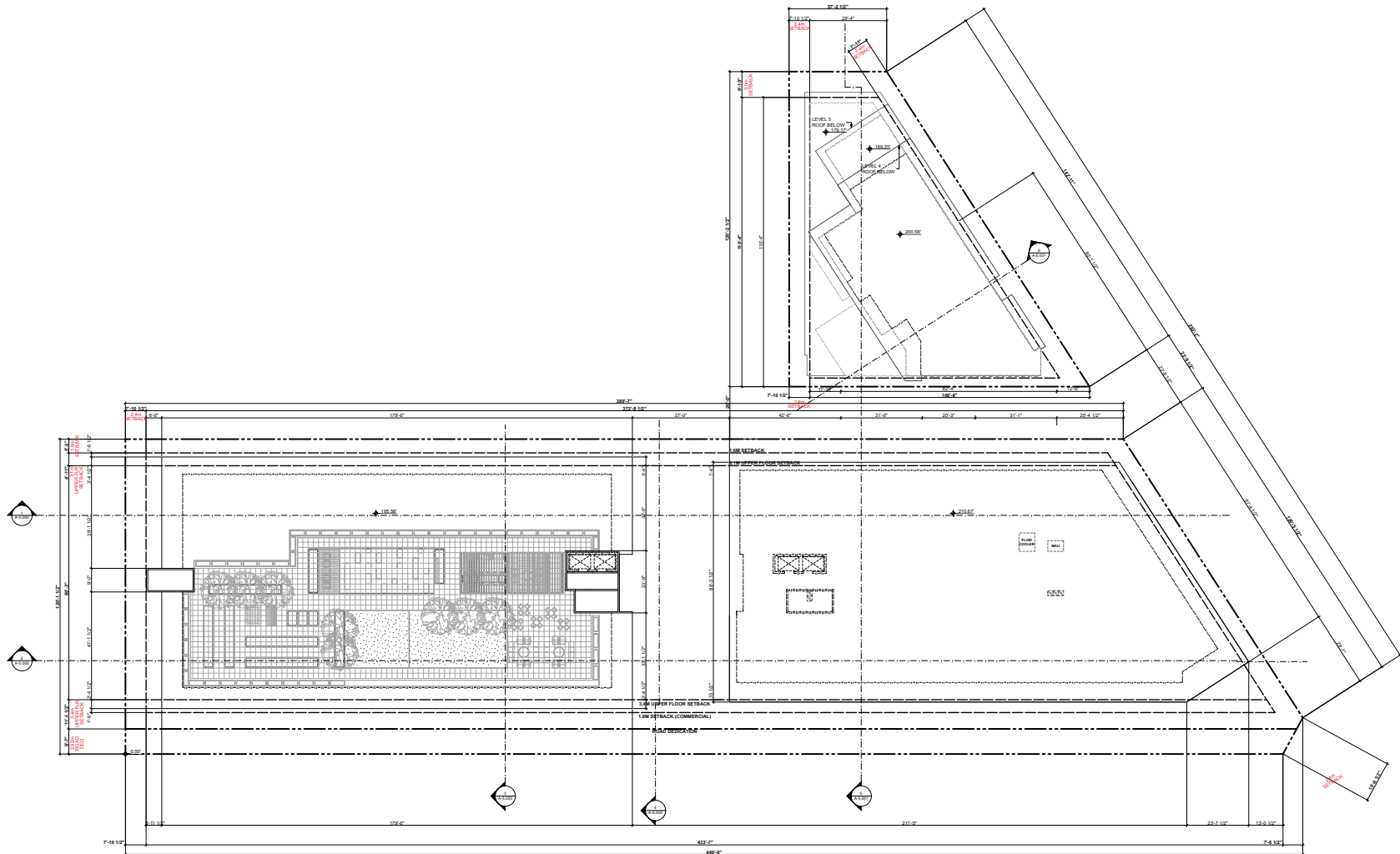
**2020-10-15**

(ISSUE)

**Issue 06 - RZ /DP Resubmission**

(DRAWING)

**A-2.060**



Roof Plan - Overall

SCALE: 1/16" = 1'-0"

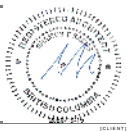
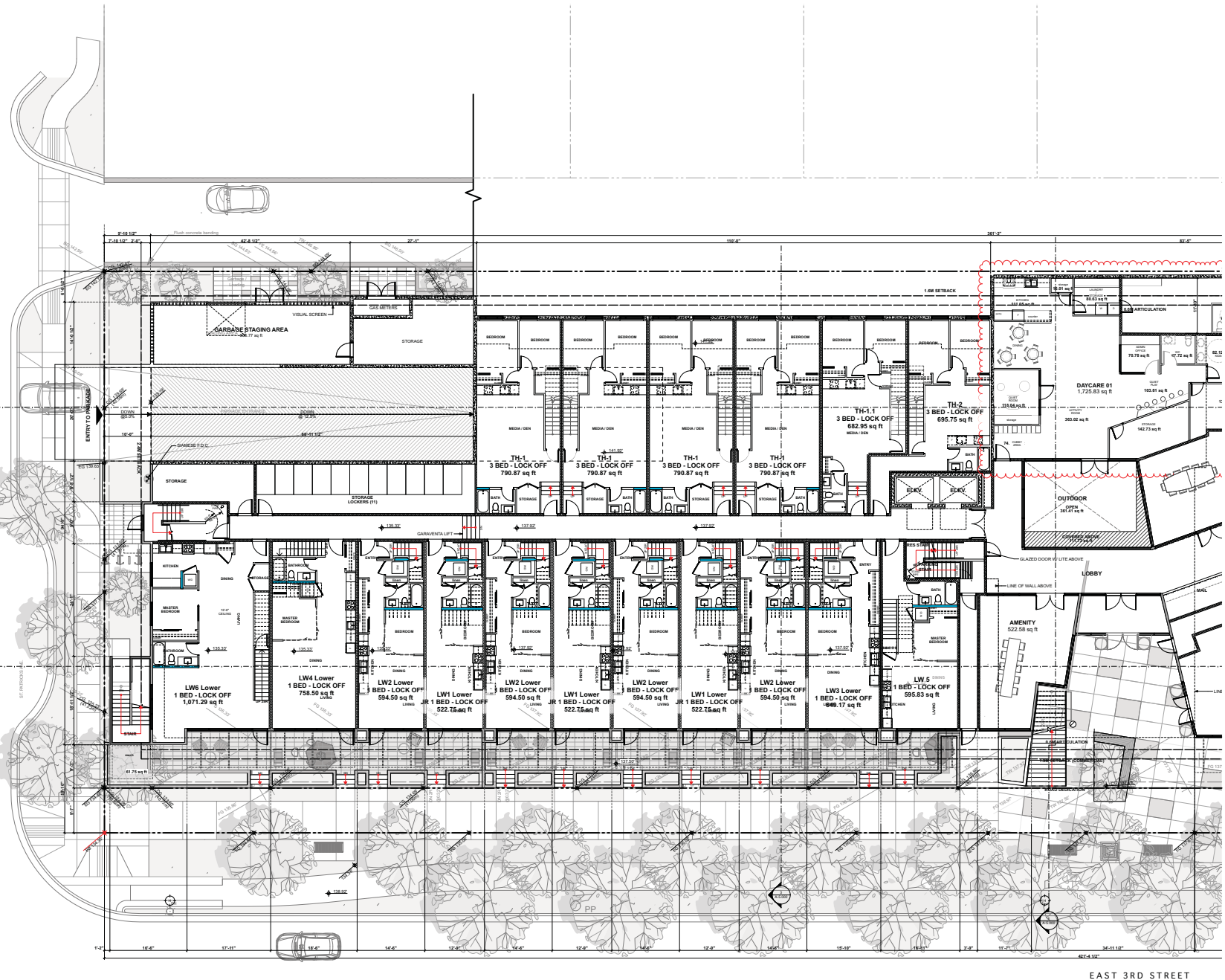




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(PROJECT TEAM)



Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
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North Vancouver, BC

(SITE)

**WEST BUILDING -  
GROUND FLOOR  
PLAN**

471 (PROJECT)

1/8" = 1'-0" (SCALE)

2022-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-2.100**



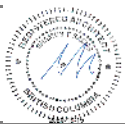
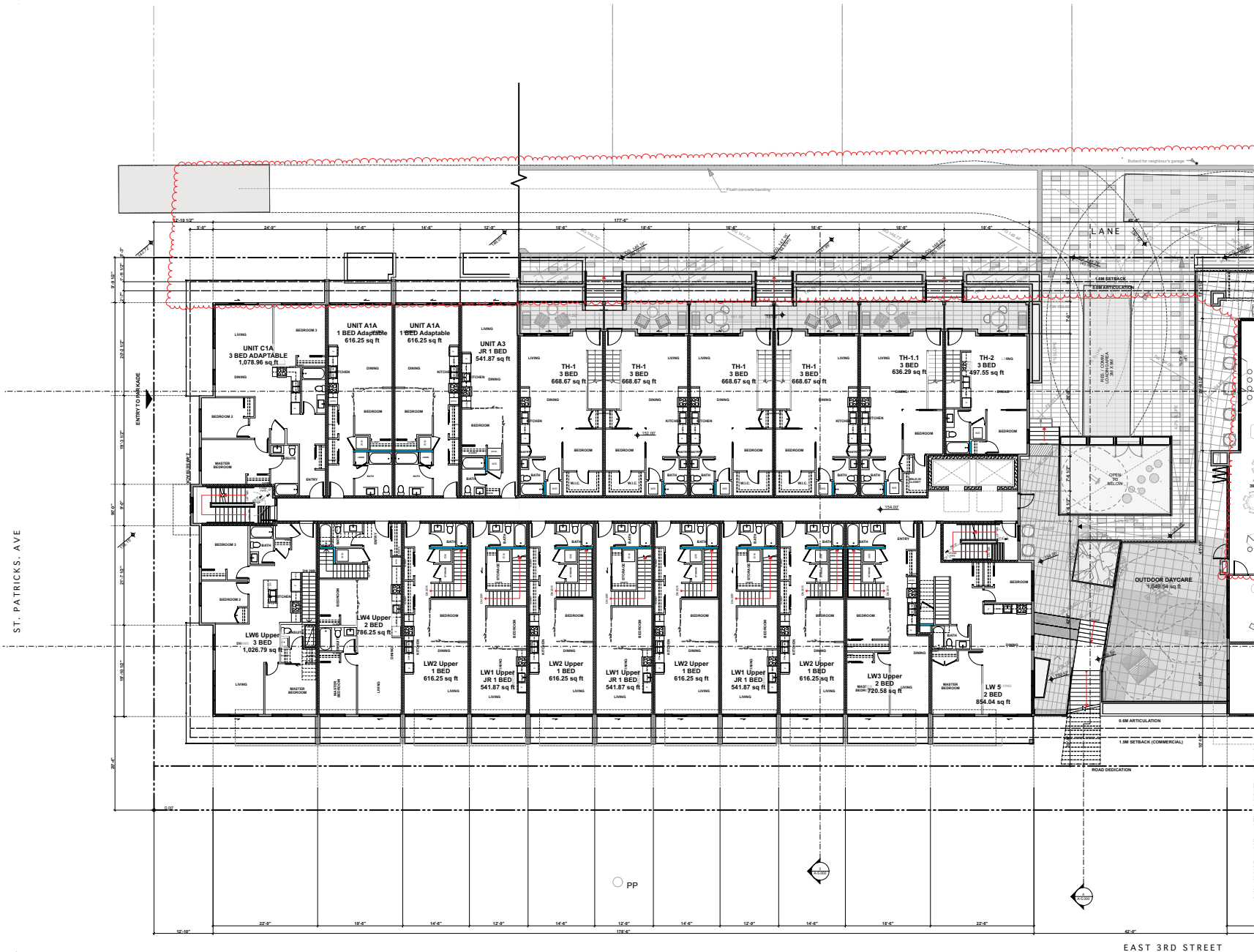
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(PROJECT TEAM)



(CLIENT)

Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

**WEST BUILDING -  
LEVEL 1 PLAN**

471

(PROJECT)

1/8" = 1'-0"

(SCALE)

2020-10-15

(DATE)

Issue 06 - RZ /DP Resubmission

(DRAWING)

**A-2.110**





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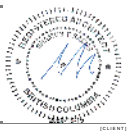
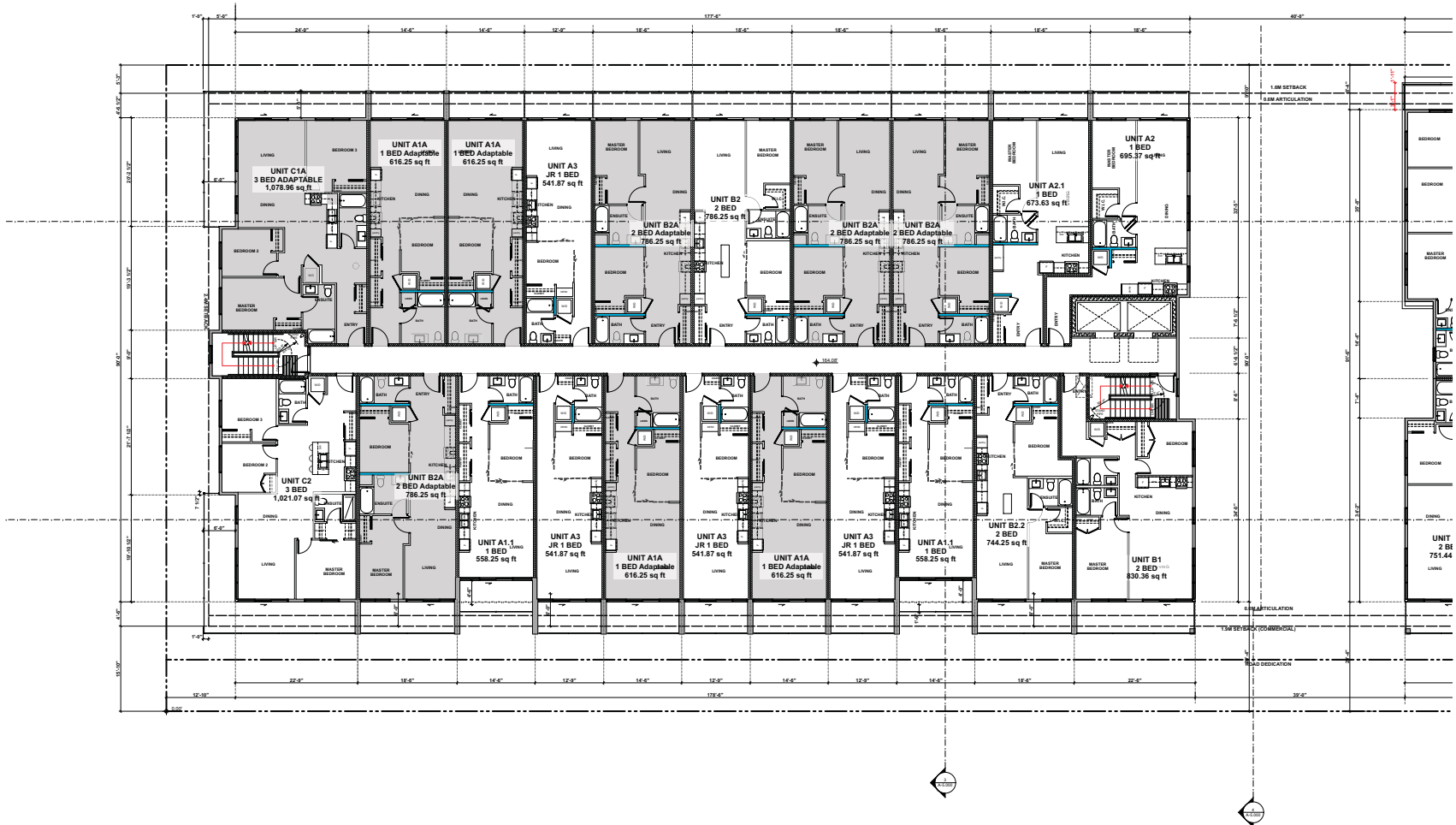
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Cascadia Green Development

(PROJECT)

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North Vancouver, BC

(TITLE)

**WEST BUILDING -  
LEVEL 2 PLAN**

471 (PROJECT)

1/8" = 1'-0" (SCALE)

2028-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-2.120**



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[DRAWING]

## A-2.150

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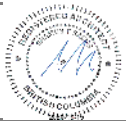
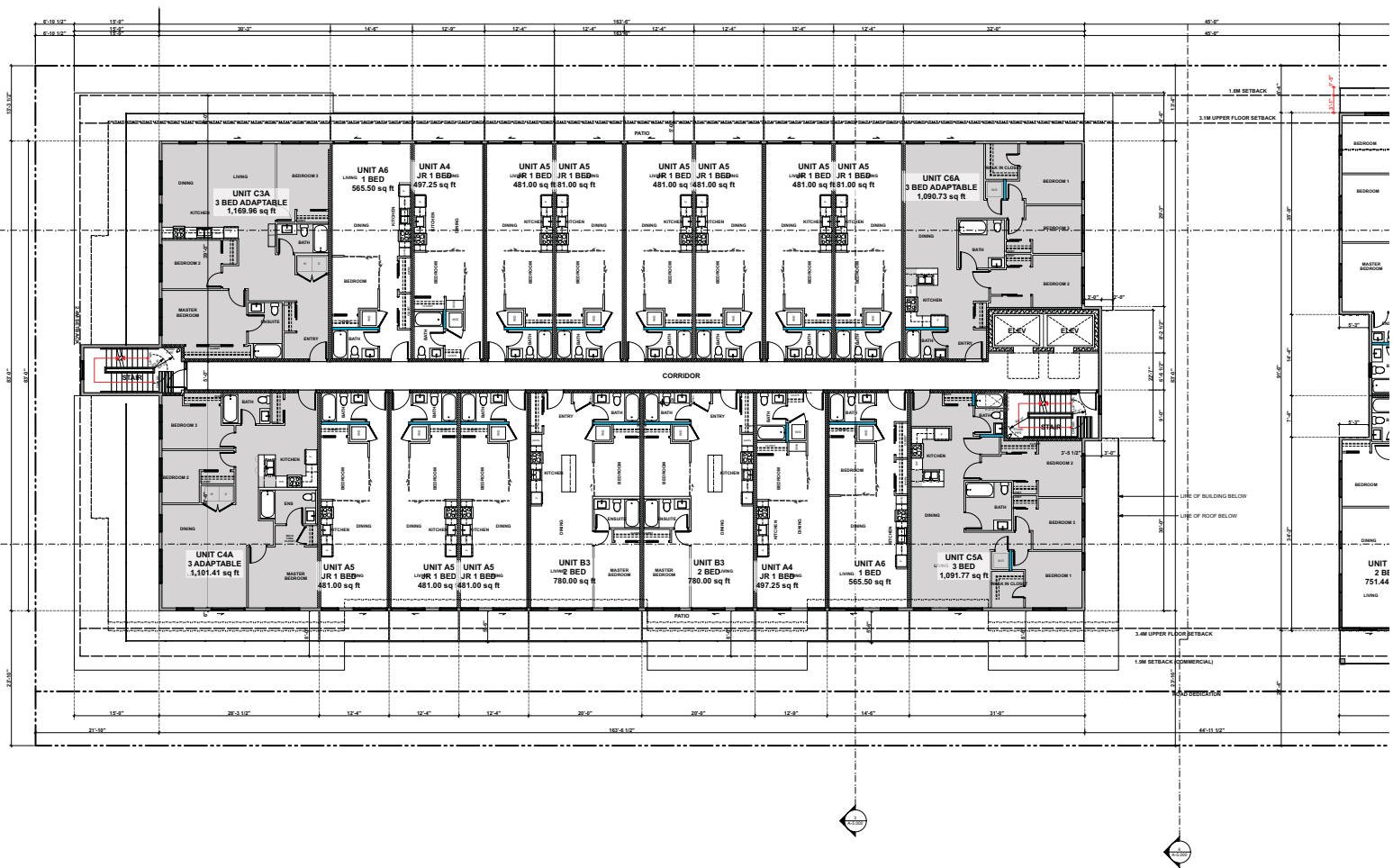
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Development

(PROJECT)

402-438 E 3rd St &  
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North Vancouver, BC

(TITLE)

**WEST BUILDING -  
LEVEL 4 PLAN**

471 (PROJECT)

1/8" = 1'-0" (SCALE)

2028-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-2.140**



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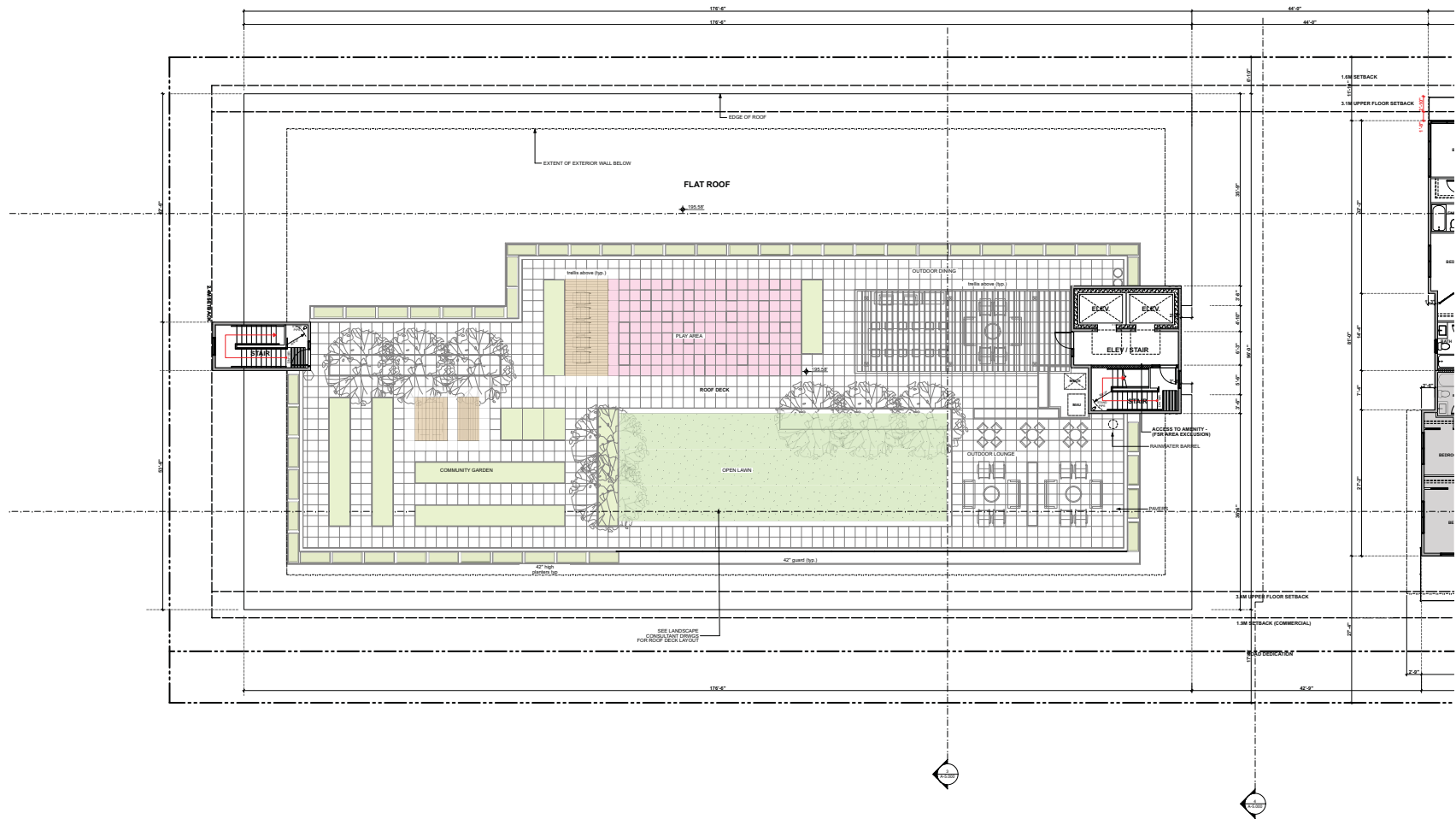
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Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

(PROJECT)

**WEST BUILDING -  
LEVEL 5 ROOF  
PLAN**

(PROJECT)

471

1/8" = 1'-0"

2022-10-15

Issue 06 - RZ /DP Resubmission

(DRAWING)

**A-2.150**





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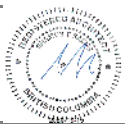
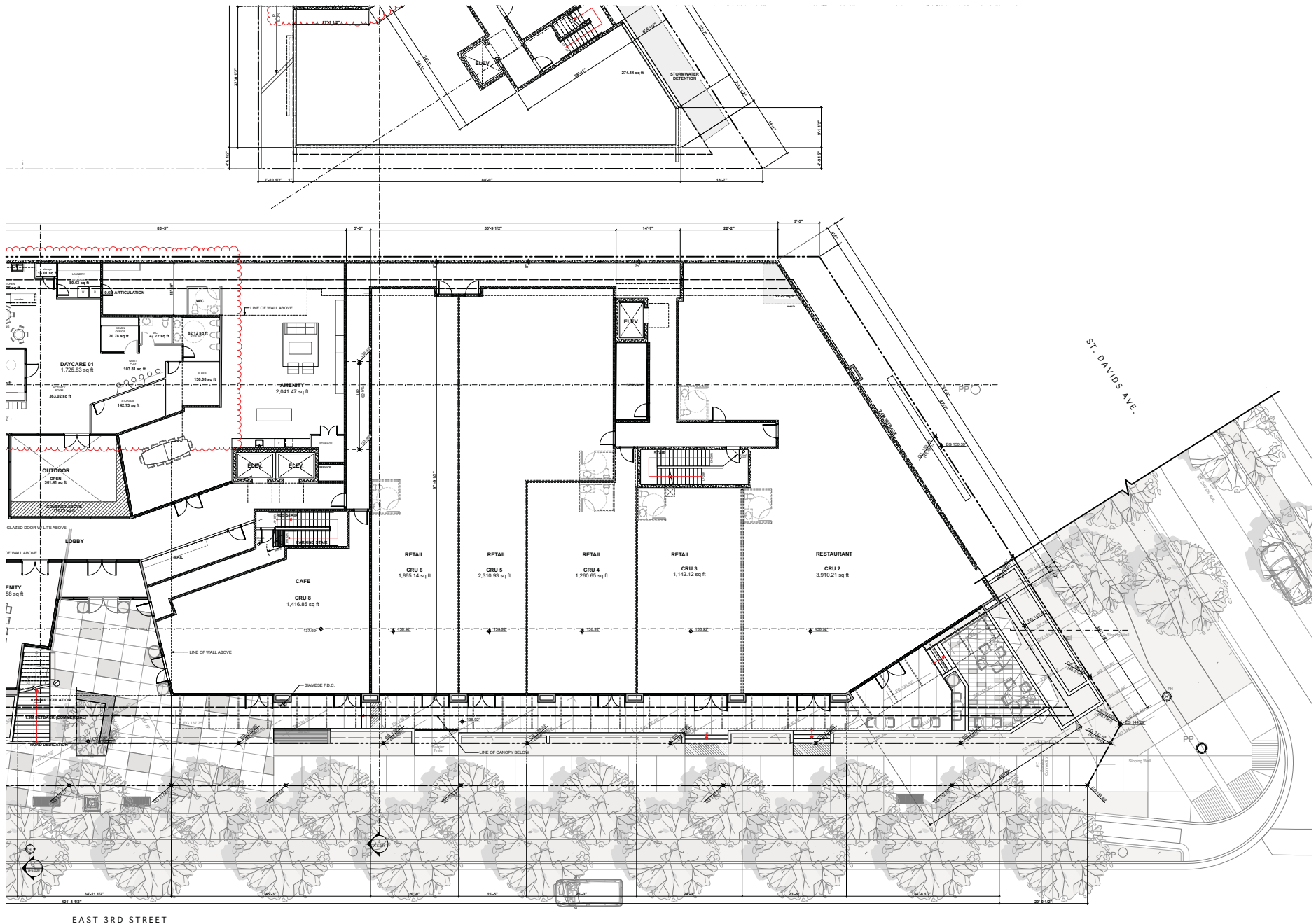
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Development

(PROJECT)

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**EAST BUILDING -  
GROUND FLOOR  
PLAN**

471 (PROJECT)

1/8" = 1'-0" (SCALE)

2020-10-15 (DATE)

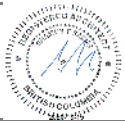
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(DRAWING)

**A-2.200**



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Development**

[PROJECT]

**402-438 E 3rd St &  
341-343 St Davids Ave**  
North Vancouver, BC

[ TOTAL ]

**EAST BUILDING -  
LEVEL 1 PLAN**

474 [PROJECT]

1/8" = 1'-0" [ SCALE ]

2020-10-15 [DATE]  
Issue 06 - RZ /DP Resubmission [ISSUE]

[DRAWING]

**A-2 210**

A-2.210





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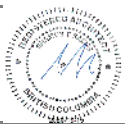
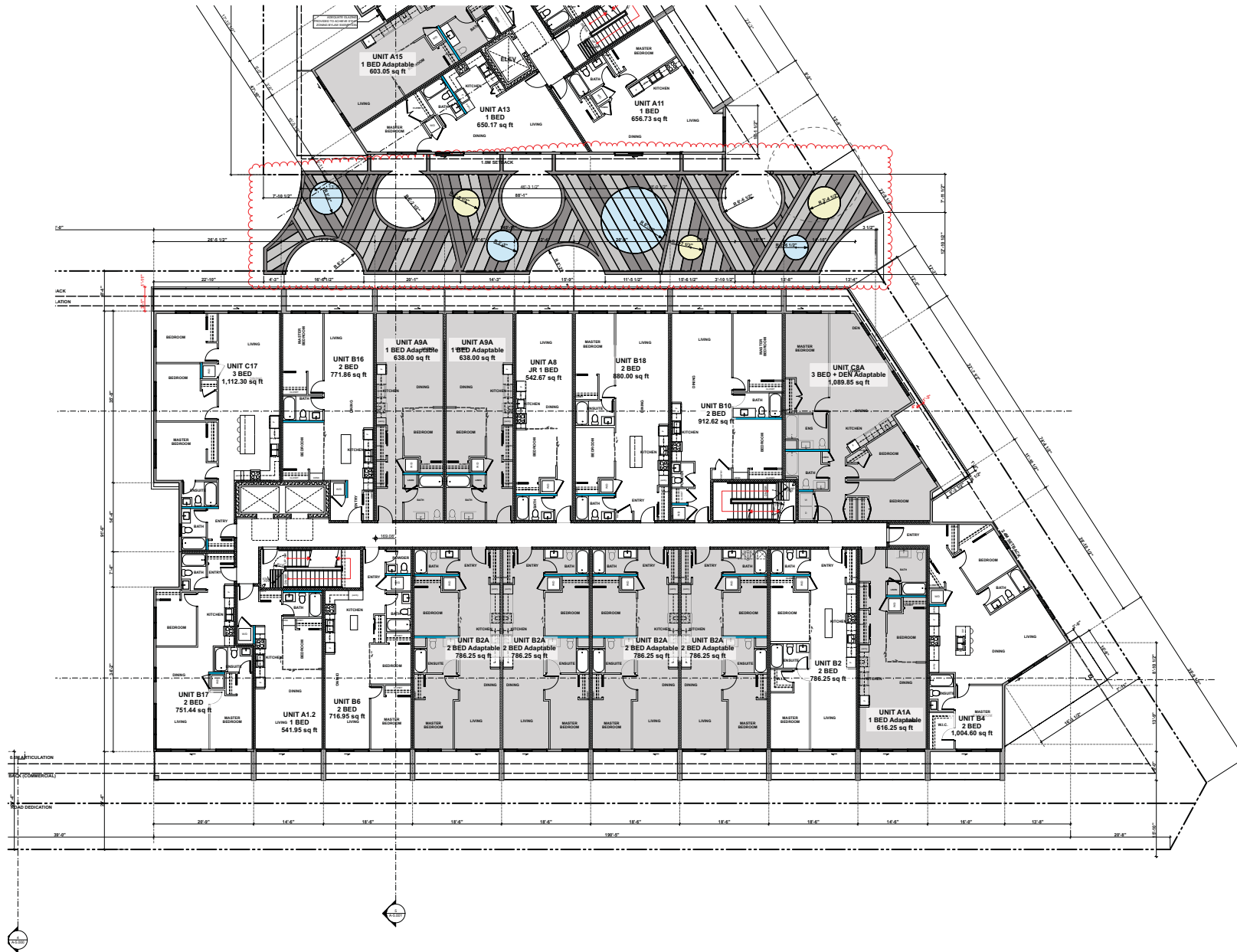
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Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

**EAST BUILDING -  
LEVEL 2 PLAN**

471 (PROJECT)

1/8" = 1'-0" (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

A-2.220 (DRAWING)

**A-2.220**



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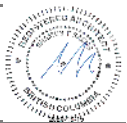
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(CLIENT)

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Development

(PROJECT)

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North Vancouver, BC

(TITLE)

**EAST BUILDING -  
LEVEL 3 PLAN**

471 (PROJECT)

1/8" = 1'-0" (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-2.230**





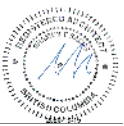
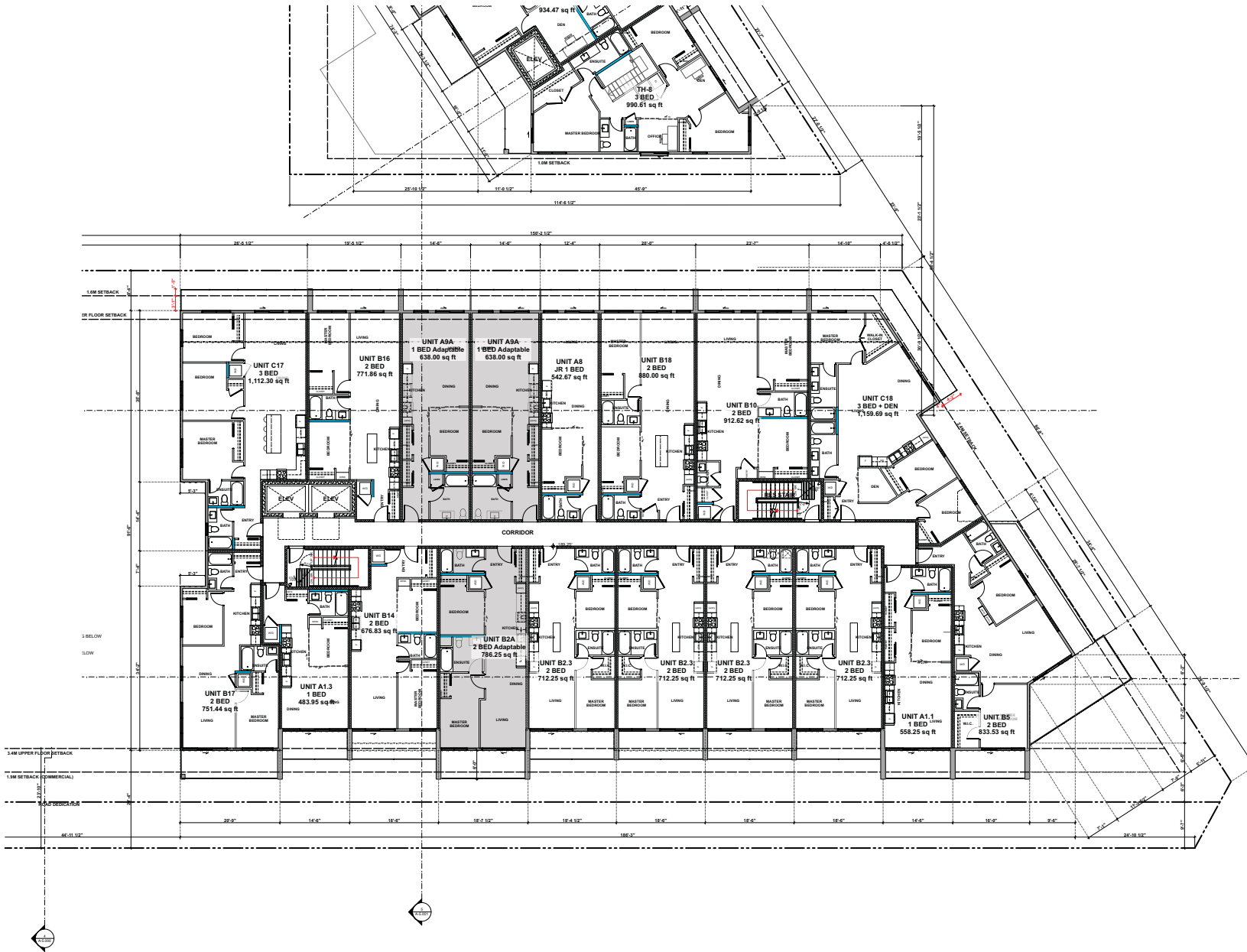
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Development

(PROJECT)

402-438 E 3rd St &  
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North Vancouver, BC

(TITLE)

**EAST BUILDING -  
LEVEL 4 PLAN**

471 (PROJECT)

Not To Scale (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-2.240**



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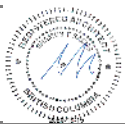
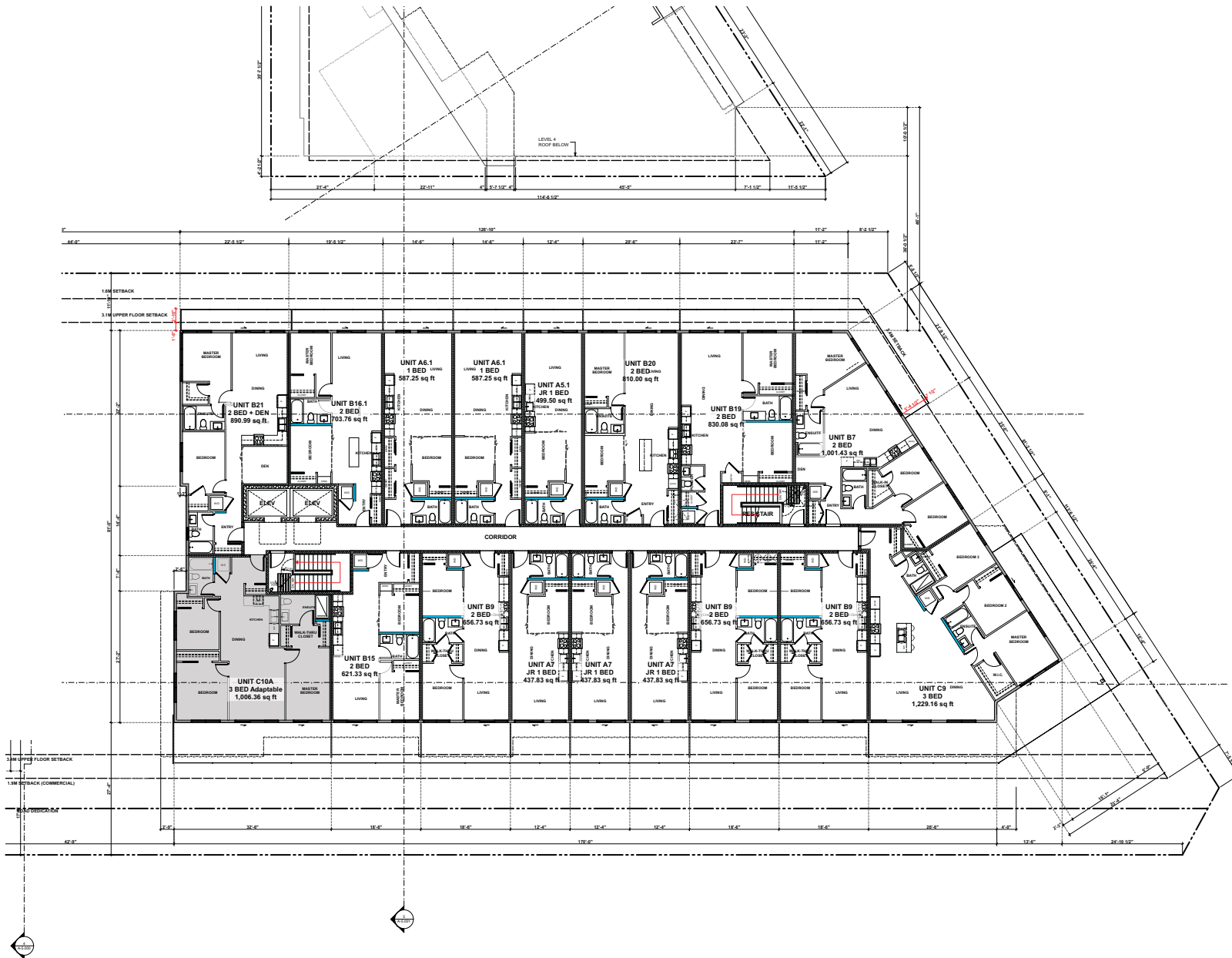
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North Vancouver, BC

(TITLE)

**EAST BUILDING -  
LEVEL 5 PLAN**

471 (PROJECT)

1/8" = 1'-0" (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (ISSUE)

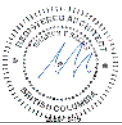
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**A-2.250**





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**EAST BUILDING -  
LEVEL 6 ROOF  
PLAN**

2020-10-15 [DATE]

**A-2.260**



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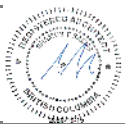
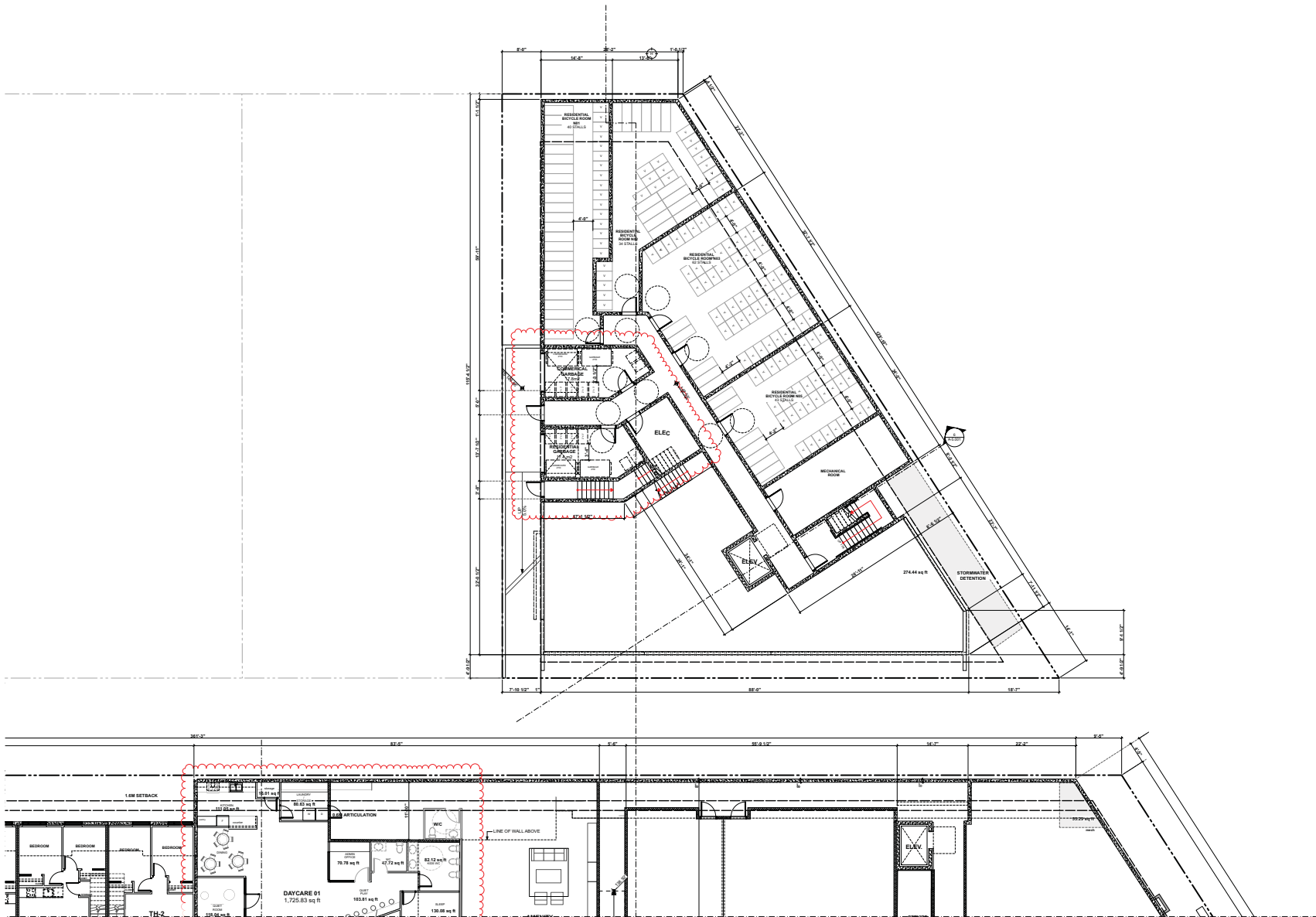
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PROJECT TEAM



(PROJECT TEAM)



(COLLANT)

**Cascadia Green Development**

(PROJECT)

**402-438 E 3rd St & 341-343 St Davids Ave**

North Vancouver, BC

(TITLE)

**NORTH BUILDING - GROUND FLOOR PLAN**

(SCALE)

**471**

(DATE)

**2028-10-15**

(DRAWING)

**COORDINATION**

(DRAWING)

**A-2.300**





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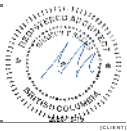
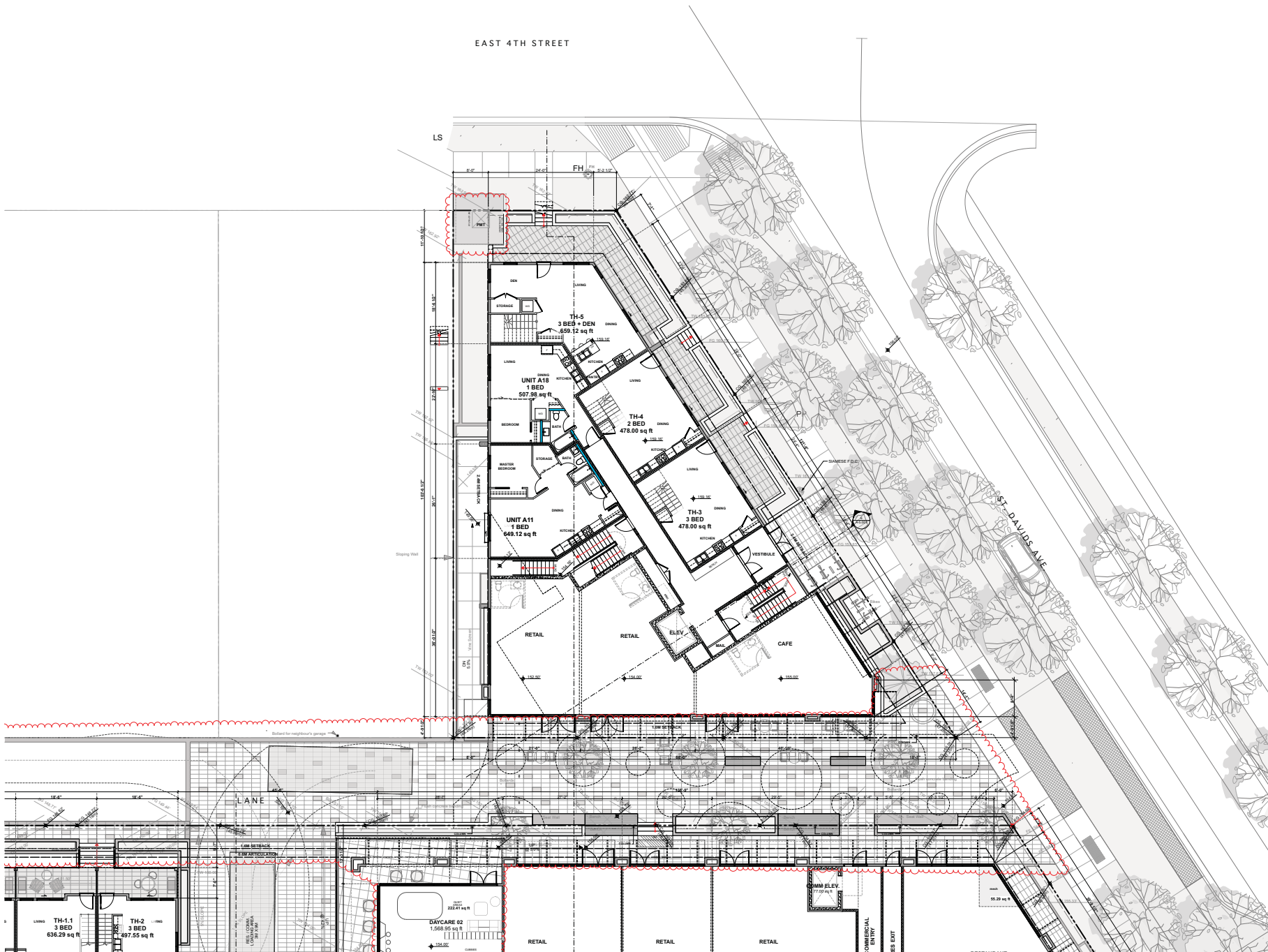
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PROJECT TEAM



CO-ORDINATOR

Cascadia Green Development

PROJECT

402-438 E 3rd St & 341-343 St Davids Ave

North Vancouver, BC

TITLE

NORTH BUILDING - LEVEL 1 PLAN

PROJECT

471

1/8" = 1'-0"

2028-10-15

COORDINATION

DRAWING

A-2.310



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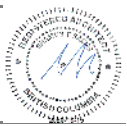
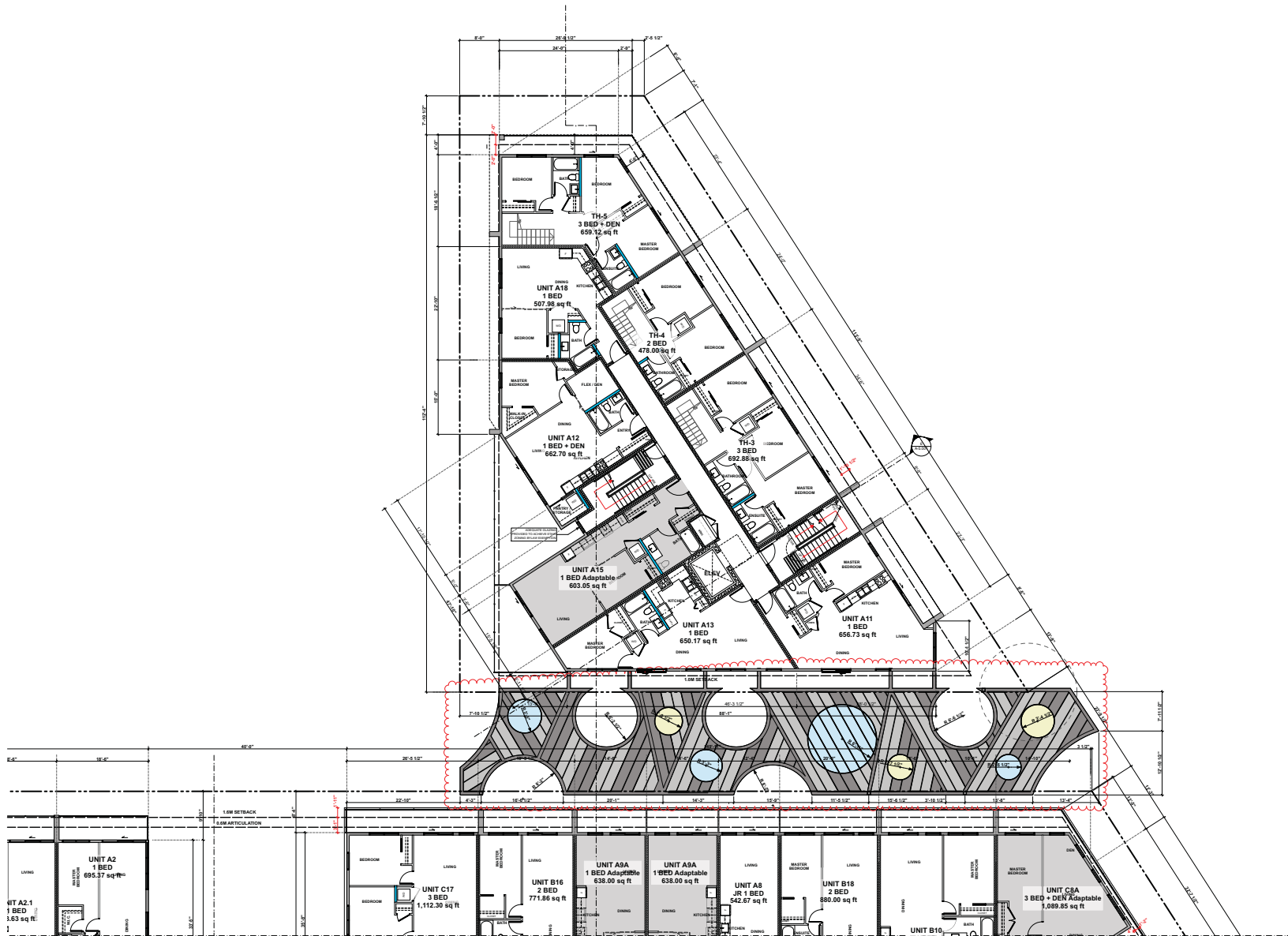
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(COLLATOR)

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(PROJECT)

**402-438 E 3rd St &  
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North Vancouver, BC

(TITLE)

**NORTH BUILDING  
- LEVEL 2 PLAN**

(PROJECT)

**471**

1/8" = 1'-0"

2020-10-15

Issue 06 - RZ /DP Resubmission

(DRAWING)

(DRAWING)

**A-2.320**





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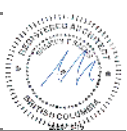
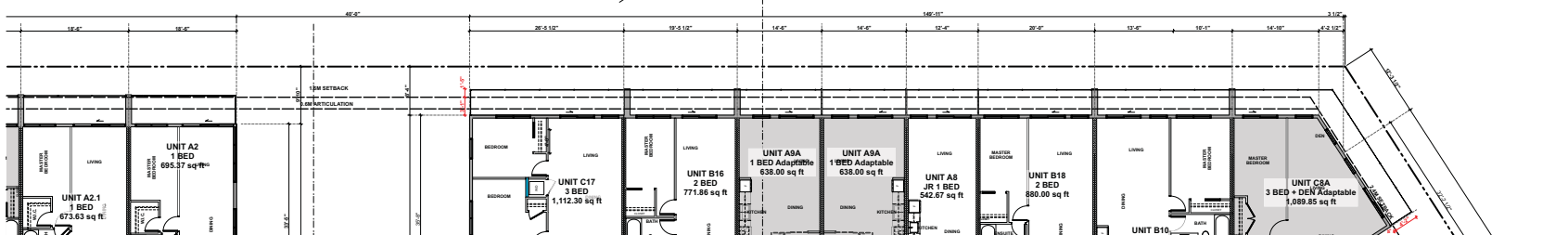
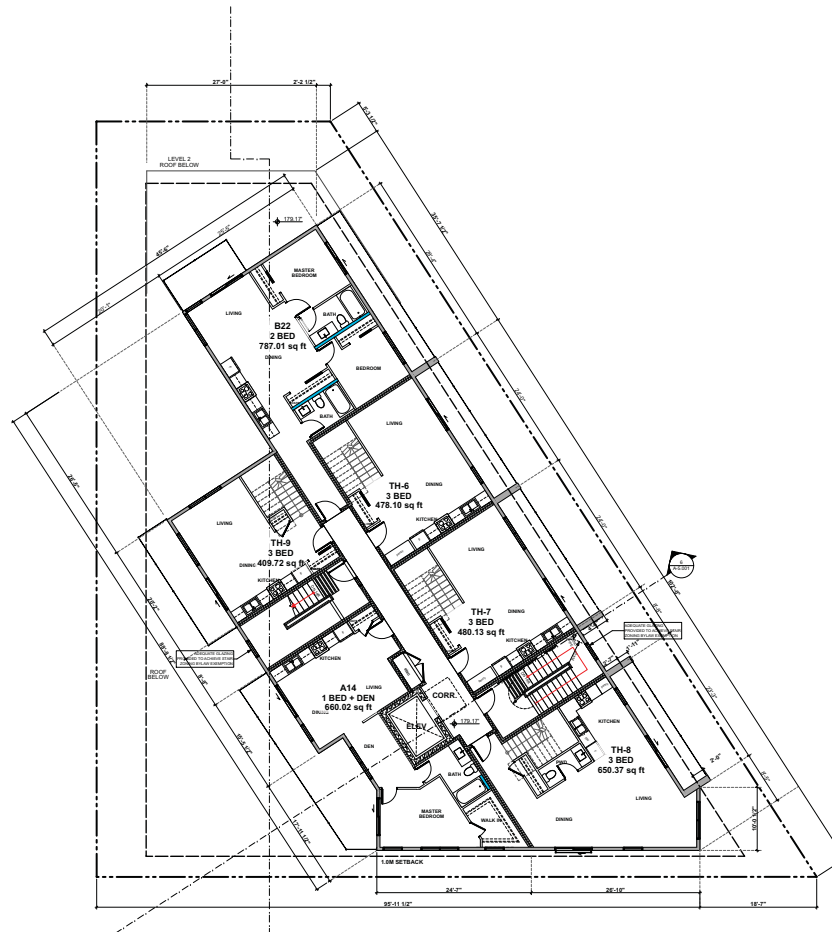
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(COLLANT)

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(PROJECT)

**402-438 E 3rd St & 341-343 St Davids Ave**

(PROJECT)

North Vancouver, BC

(PROJECT)

**NORTH BUILDING - LEVEL 3 PLAN**

(PROJECT)

**471**

(PROJECT)

**1/8" = 1'-0"**

(SCALE)

**2020-10-15**

(DATE)

**Issue 06 - RZ /OP Resubmission**

(SUBMIT)

(DRAWING)

**A-2.330**



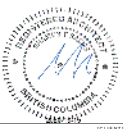
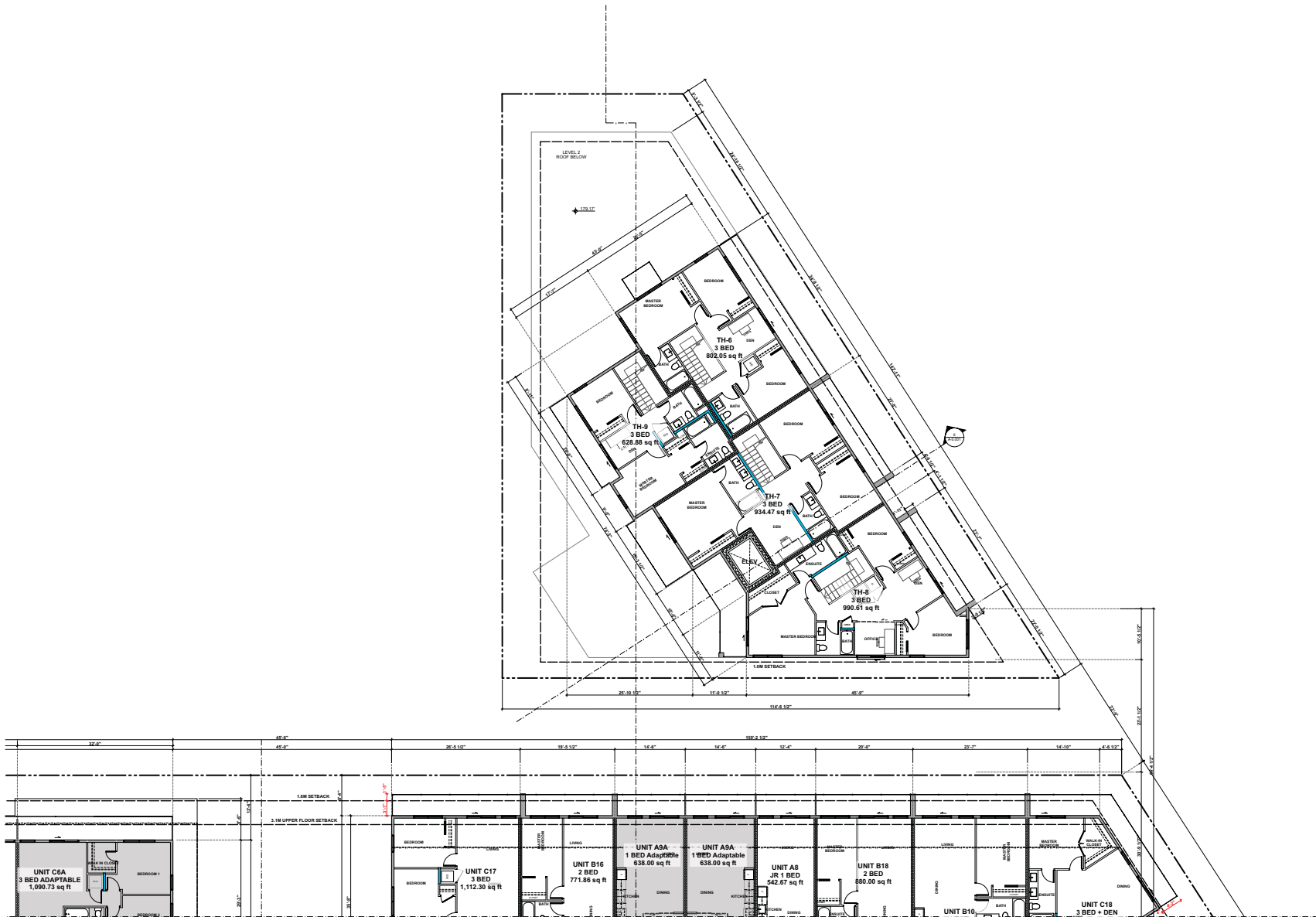
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Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

**NORTH BUILDING  
- LEVEL 4 PLAN**

471 (PROJECT)

Not To Scale (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /OP Resubmission (REVISION)

(DRAWING)

**A-2.340**





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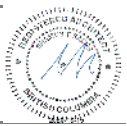
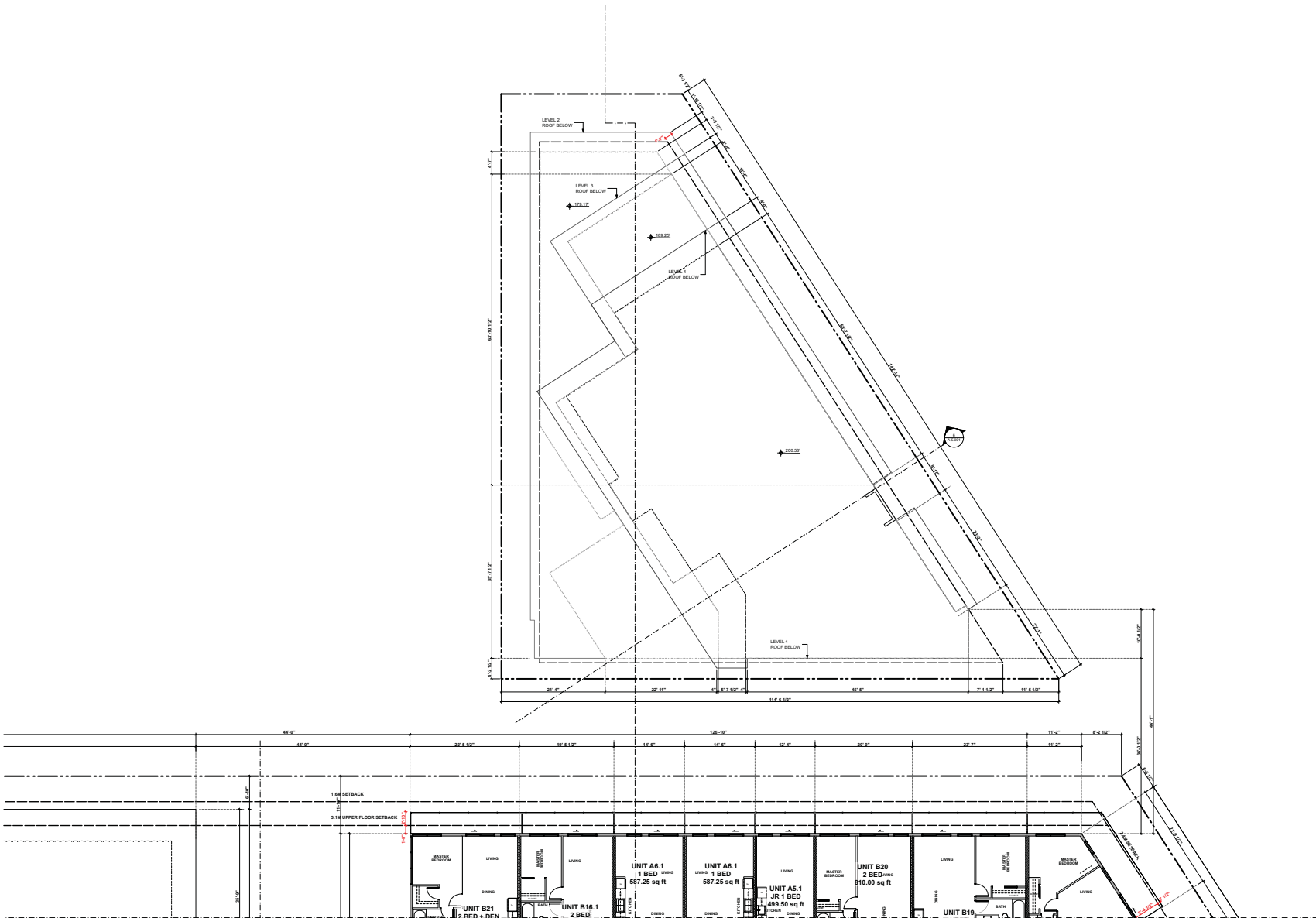
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PROJECT TEAM



(PROJECT TEAM)



(DRAWING)

**Cascadia Green Development**

(PROJECT)

**402-438 E 3rd St & 341-343 St Davids Ave**

(TITLE)

North Vancouver, BC

(PROJECT TEAM)

**NORTH BUILDING - LEVEL 5 PLAN**

(PROJECT)

**471**

(SCALE)

**1/8" = 1'-0"**

(DATE)

**2028-10-15**

(REVISION)

**Issue 06 - RZ /DP Resubmission**

(DRAWING)

**A-2.350**



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### ADAPTABLE DESIGN GUIDELINES

#### DESIGN ELEMENTS

City of North Vancouver Zoning Bylaw, 1995, No. 6700 Amendment Bylaw No. 2005, No. 7721 - Figure 5 - 1

	LEVEL ONE	LEVEL TWO	LEVEL THREE
<b>BUILDING ACCESS</b>	Outside stairs - maximum degree of colour contrast on nosing of each step.	Outside stairs - maximum degree of colour contrast on nosing of each step.	Outside stairs - maximum degree of colour contrast on nosing of each step.
<b>BUILDING ACCESS</b>	Curt cutouts have tactile and visual cues.	Curt cutouts have tactile and visual cues.	Curt cutouts have tactile and visual cues.
<b>BUILDING ACCESS</b>	Unobstructed access to main building entrances from streetside/sidewalks.	Unobstructed access to main building entrances from streetside/sidewalks.	Unobstructed access to main building entrances from streetside/sidewalks.
<b>BUILDING ACCESS</b>	Unobstructed internal access: <ul style="list-style-type: none"><li>from parking levels containing accessible parking (5' or 1520mm corridors, 2' or 610mm clear walk space adjacent to door lobbies)</li><li>garbage and recycling receptacles and storage lockers</li><li>no stairs within building circulation including corridors on residential levels</li><li>accessible storage lockers for each unit.</li></ul>	Unobstructed internal access: <ul style="list-style-type: none"><li>from parking levels containing accessible parking (5' or 1520mm corridors, 2' or 610mm clear walk space adjacent to door lobbies)</li><li>garbage and recycling receptacles and storage lockers</li><li>no stairs within building circulation including corridors on residential levels</li><li>accessible storage lockers for each Level 3 unit.</li></ul>	Unobstructed internal access: <ul style="list-style-type: none"><li>from parking levels containing accessible parking (5' or 1520mm corridors, 2' or 610mm clear walk space adjacent to door lobbies)</li><li>garbage and recycling receptacles and storage lockers</li><li>no stairs within building circulation including corridors on residential levels</li><li>accessible storage lockers for each Level 3 unit.</li></ul>
<b>BUILDING ACCESS</b>	Canopy over main building entrances (3' or 915mm) and entrance.	Canopy over main building entrances (3' or 915mm) and entrance.	Canopy over main building entrances (3' or 915mm) and entrance.
<b>BUILDING ACCESS</b>	Provide automatic door opener for at least one building entry door at ground level as well as doors leading into the building on each underground parking level where disability parking is provided.	Provide automatic door opener for at least one building entry door at ground level as well as doors leading into the building on each underground parking level where disability parking is provided.	Provide automatic door opener for at least one building entry door at ground level as well as doors leading into the building on each underground parking level where disability parking is provided.
<b>BUILDING ACCESS</b>	Disability Parking provided in accordance with Zoning Bylaw Figure 9-4 as attached.	Disability Parking provided in accordance with Zoning Bylaw Figure 9-4 as attached.	Disability Parking provided in accordance with Zoning Bylaw Figure 9-4 as attached.
<b>BUILDING ACCESS</b>	Flush thresholds throughout the building maximum 12" or 31mm height.	Flush thresholds throughout the building maximum 12" or 31mm height.	Flush thresholds throughout the building maximum 12" or 31mm height.
<b>BUILDING ACCESS</b>	Accessible building entrance, call buttons and, where provided, suite door bells.	Accessible building entrance, call buttons and, where provided, suite door bells.	Accessible building entrance, call buttons and, where provided, suite door bells.

\* Illustrations available  
\*\* Options considered

- 1 of 3 -

Design Elements  
July 2005

### ADAPTABLE DESIGN GUIDELINES

#### FIXTURES AND FINISHES

	LEVEL ONE	LEVEL TWO	LEVEL THREE
<b>BASIC</b>	Easy to read building address numbers (min. 4" or 100mm high in contrasting colours).	Easy to read building address numbers (min. 4" or 100mm high in contrasting colours).	Easy to read building address numbers (min. 4" or 100mm high in contrasting colours).
<b>BASIC</b>	Lighting levels to a minimum of 100 lux outside and inside main building entries and suite entries.	Lighting levels to a minimum of 100 lux outside and inside main building entries and suite entries.	Lighting levels to a minimum of 100 lux outside and inside main building entries and suite entries.
<b>BASIC</b>	No polished finish on building entry flooring (provide flooring samples).	No polished finish on building entry flooring (provide flooring samples).	No polished finish on building entry flooring (provide flooring samples).
<b>BASIC</b>	Except for pocket doors, sliding doors, or doors equipped with operators, lever door handles are required on all doors (provide notation on door schedule).	Except for pocket doors, sliding doors, or doors equipped with operators, lever door handles are required on all doors (provide notation on door schedule).	Except for pocket doors, sliding doors, or doors equipped with operators, lever door handles are required on all doors (provide notation on door schedule).
<b>BASIC</b>	Storage throughout common areas has well contrasted colours.	Storage throughout common areas has well contrasted colours.	Storage throughout common areas has well contrasted colours.
<b>BASIC</b>	Elevators have well contrasted control buttons.	Elevators have well contrasted control buttons.	Elevators have well contrasted control buttons.
<b>CIRCULATION</b>	Lockers have well contrasted control buttons.	Lockers have well contrasted control buttons.	Lockers have well contrasted control buttons.
<b>BUILDING MEETING / MEETING ROOMS</b>	Provide carpet and drapes to absorb sound and decrease echoes.	Provide carpet and drapes to absorb sound and decrease echoes.	Provide carpet and drapes to absorb sound and decrease echoes.
<b>UNIT ENTRIES</b>	Adjustable door closers to reduce force to open door to maximum 22N or 5 lbs.	Adjustable door closers to reduce force to open door to maximum 22N or 5 lbs.	Adjustable door closers to reduce force to open door to maximum 22N or 5 lbs.
<b>UNIT ENTRIES</b>	Door handles at 48" or 1200mm above the floor, with deadbolts placed immediately above or below.	Door handles at 48" or 1200mm above the floor, with deadbolts placed immediately above or below.	Door handles at 48" or 1200mm above the floor, with deadbolts placed immediately above or below.
<b>UNIT ENTRIES</b>	Two door views: 35° or 1050mm and 5° or 120mm.	Two door views: 35° or 1050mm and 5° or 120mm.	Two door views: 35° or 1050mm and 5° or 120mm.
<b>UNIT FLOORING</b>	Non-slip flooring in kitchen and minimum one bathroom (provide flooring samples).	Non-slip flooring in kitchen and minimum one bathroom (provide flooring samples).	Non-slip flooring in kitchen and minimum one bathroom (provide flooring samples).
<b>UNIT FLOORING</b>	High density, low level loop carpet and underlay (maximum 12" or 31mm height).	High density, low level loop carpet and underlay (maximum 12" or 31mm height).	High density, low level loop carpet and underlay (maximum 12" or 31mm height).
<b>PATIOS AND BALCONIES</b>	Outdoor light fixture provided.	Outdoor light fixture provided.	Outdoor light fixture provided.
<b>PATIOS AND BALCONIES</b>	Electrical outlet provided.	Electrical outlet provided.	Electrical outlet provided.

\* Illustrations available

- 1 of 3 -

Fixtures & Finishes  
July 2005

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DESIGN ELEMENTS

FIXTURES & FINISHES

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DESIGN ELEMENTS

FIXTURES & FINISHES

	LEVEL ONE	LEVEL TWO	LEVEL THREE
<b>COMMON AREAS</b>	Accessible mailboxes for all AD Level 2 units, and 5' or 1520mm turning radius in front *	Accessible mailboxes for all AD Level 3 units, and 5' or 1520mm turning radius in front *	Accessible mailboxes for all AD Level 3 units, and 5' or 1520mm turning radius in front *
<b>CIRCULATION</b>	Corridors minimum 4' or 1220mm wide (except for service access areas) *	Corridors minimum 4' or 1220mm wide (except for service access areas) *	Corridors minimum 4' or 1220mm wide (except for service access areas) *
<b>CIRCULATION</b>	Provide 5' or 1520mm turning radius inside and outside the entry corridor of each dwelling unit *	Provide 5' or 1520mm turning radius inside and outside the entry corridor of each dwelling unit *	Provide 5' or 1520mm turning radius inside and outside the entry corridor of each dwelling unit *
<b>SUITE CIRCULATION</b>	Provide wiring for an automatic door opener for the suite entry door.	Provide wiring for an automatic door opener for the suite entry door.	Provide wiring for an automatic door opener for the suite entry door.
<b>SUITE CIRCULATION</b>	Provide 2' or 610mm clear walk space adjacent to door lobbies where door swings toward user (pocket doors acceptable for bathrooms and bedrooms) *	Provide 2' or 610mm clear walk space adjacent to door lobbies where door swings toward user (pocket doors acceptable for bathrooms and bedrooms) *	Provide 2' or 610mm clear walk space adjacent to door lobbies where door swings toward user (pocket doors acceptable for bathrooms and bedrooms) *
<b>DOORS</b>	Minimum one bathroom, minimum one bedroom and storage room doors 2'-10" or 860mm clear opening.	Minimum one bathroom, minimum one bedroom and storage room doors 2'-10" or 860mm clear opening.	Minimum one bathroom, minimum one bedroom and storage room doors 2'-10" or 860mm clear opening.
<b>PATIOS &amp; BALCONIES</b>	Minimum one patio or balcony door/sill with minimum 12" or 31mm height.	Minimum one patio or balcony door/sill with minimum 12" or 31mm height.	Minimum one patio or balcony door/sill with minimum 12" or 31mm height.
<b>PATIOS &amp; BALCONIES</b>	Minimum 5' or 1520mm turning radius on patio / balcony.	Minimum 5' or 1520mm turning radius on patio / balcony.	Minimum 5' or 1520mm turning radius on patio / balcony.
<b>WINDOWS</b>	Opening mechanism maximum 48" or 1180mm above floor (provide notation on window schedule).	Opening mechanism maximum 48" or 1180mm above floor (provide notation on window schedule).	Opening mechanism maximum 48" or 1180mm above floor (provide notation on window schedule).
<b>WINDOWS</b>	Provide clear minimum 6' or 1830mm horizontal windows in living room, dining room and minimum one bedroom where sill are not more than 2'-6" or 760mm above the floor.	Provide clear minimum 6' or 1830mm horizontal windows in living room, dining room and minimum one bedroom where sill are not more than 2'-6" or 760mm above the floor.	Provide clear minimum 6' or 1830mm horizontal windows in living room, dining room and minimum one bedroom where sill are not more than 2'-6" or 760mm above the floor.
<b>KITCHENS</b>	Continuous counter between sink and stove.	Continuous counter between sink and stove.	Continuous counter between sink and stove.
<b>KITCHENS</b>	Sink cabinet minimum 24" or 610mm wide.	Sink cabinet minimum 24" or 610mm wide.	Sink cabinet minimum 24" or 610mm wide.
<b>KITCHENS</b>	Provide sufficient space for future installation of cooking and mail room.	Provide sufficient space for future installation of cooking and mail room.	Provide sufficient space for future installation of cooking and mail room.
<b>KITCHENS</b>	Provide for pot/sink 2' or 610mm wide undercabinet appliance.	Provide for pot/sink 2' or 610mm wide undercabinet appliance.	Provide for pot/sink 2' or 610mm wide undercabinet appliance.
<b>KITCHENS</b>	Lower edge of upper cupboards 4' or 1200mm above floor.	Lower edge of upper cupboards 4' or 1200mm above floor.	Lower edge of upper cupboards 4' or 1200mm above floor.

\* Illustrations available  
\*\* Options considered

- 2 of 3 -

Design Elements  
July 2005

4 of 11

8 of 11

DESIGN ELEMENTS

FIXTURES & FINISHES

	LEVEL ONE	LEVEL TWO	LEVEL THREE
<b>KITCHEN</b>			
<b>MIN. ONE BATHROOM</b>	toilet located adjacent to wall (min 3' or 915mm)	toilet located adjacent to wall (min 3' or 915mm)	toilet located adjacent to wall (min 3' or 915mm)
<b>MIN. ONE BATHROOM</b>	Toilet turning radius within bathroom (may result in additional clearance along full length of tub.)	Toilet turning radius within bathroom (may result in additional clearance along full length of tub.)	Toilet turning radius within bathroom (may result in additional clearance along full length of tub.)
<b>MIN. ONE BATHROOM</b>	Tub control valve placed at outer edge of tub, with tub space remaining in central position *	Tub control valve placed at outer edge of tub, with tub space remaining in central position *	Tub control valve placed at outer edge of tub, with tub space remaining in central position *
<b>MIN. ONE BATHROOM</b>	Accessible storage.	Accessible storage.	Accessible storage.
<b>MIN. ONE BATHROOM</b>	Provide for the possible future installation of an accessible shower stall, sized at least 3'-0" x 6'-0" or 910mm x 1800mm, refer to the 1991 ICC Building Access Handbook for details.	Provide for the possible future installation of an accessible shower stall, sized at least 3'-0" x 6'-0" or 910mm x 1800mm, refer to the 1991 ICC Building Access Handbook for details.	Provide for the possible future installation of an accessible shower stall, sized at least 3'-0" x 6'-0" or 910mm x 1800mm, refer to the 1991 ICC Building Access Handbook for details.
<b>MIN. ONE BEDROOM</b>	Sufficient maneuvering room between closet and window bay *	Sufficient maneuvering room between closet and window bay *	Sufficient maneuvering room between closet and window bay *
<b>MIN. ONE BEDROOM</b>	Provide 2' or 915mm access to window bay *	Provide 2' or 915mm access to window bay *	Provide 2' or 915mm access to window bay *
<b>LAUNDRY FACILITIES</b>	Provide front loading side-by-side washer / dryer in-suite or in common area.	Provide front loading side-by-side washer / dryer in-suite or in common area.	Provide front loading side-by-side washer / dryer in-suite or in common area.
<b>LAUNDRY FACILITIES</b>	4' or 1220mm maneuvering space in front of washer / dryer.	4' or 1220mm maneuvering space in front of washer / dryer.	4' or 1220mm maneuvering space in front of washer / dryer.

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\* Illustrations available  
\*\* Options considered

- 3 of 3 -

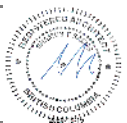
Design Elements  
July 2005

### LEVEL 1 ALL UNITS

LEVEL 2 ADAPTABLE UNITS: A1A, A16A (1 BEDROOM), B2A, B7A, B12A, (2 BEDROOM) C1A, C5A, C6A, C7A, C8A, C10A (3 BEDROOM).

LEVEL 3 ADAPTABLE UNITS: C3A, C4A (3 BEDROOM)

(PROJECT TYPE)



Cascadia Green Development

(PROJECT)

402-438 E 3rd St & 341-343 St Davids Ave

North Vancouver, BC

### ADAPTABLE UNITS DESIGN GUIDELINES

471 (PROJECT)

As Noted (SCALE)

2026-10-15 (DATE)

Issue 06 - RZ /OP Resubmission (VERSION)

(DRAWING)

A-3.000

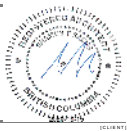
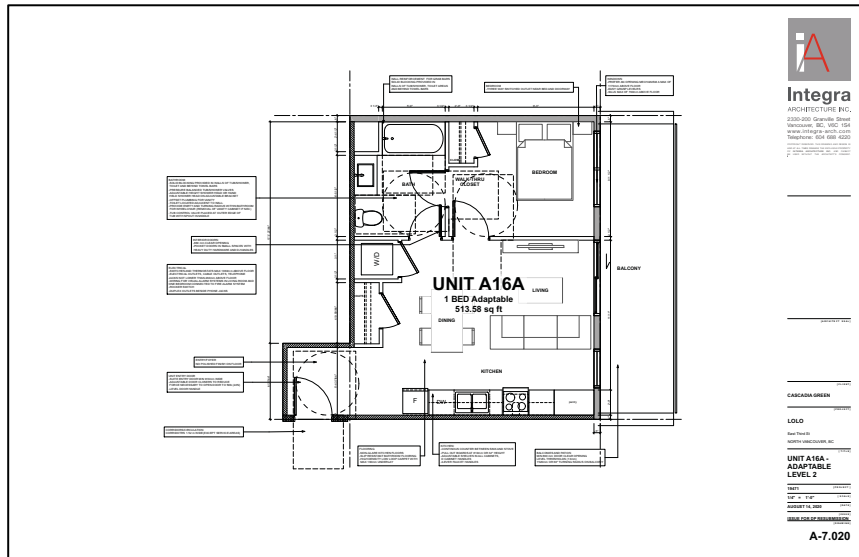
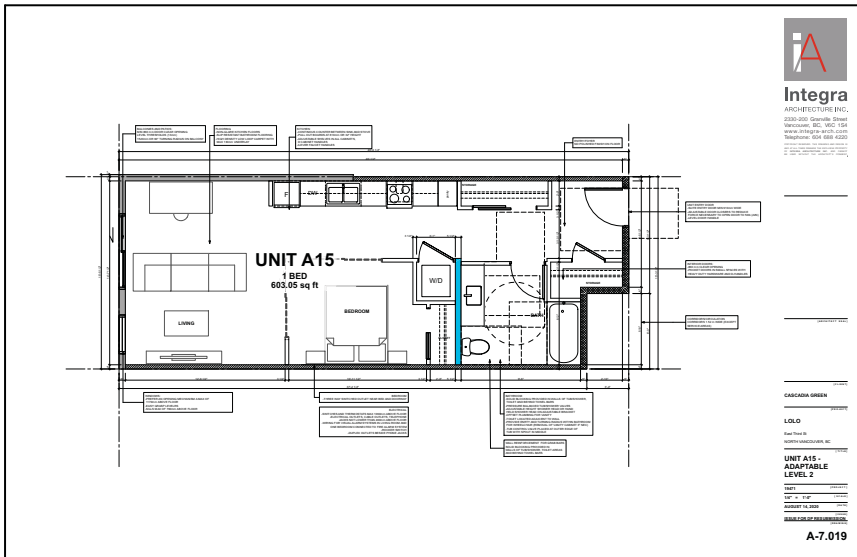
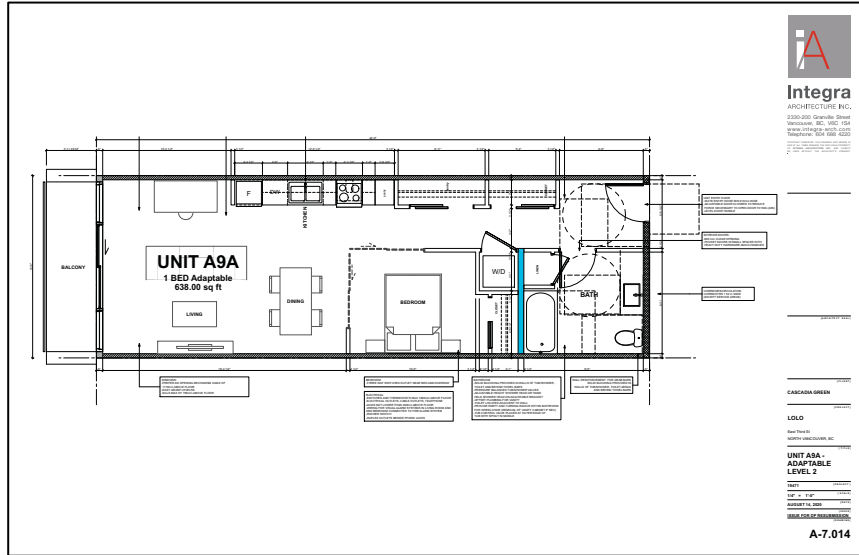
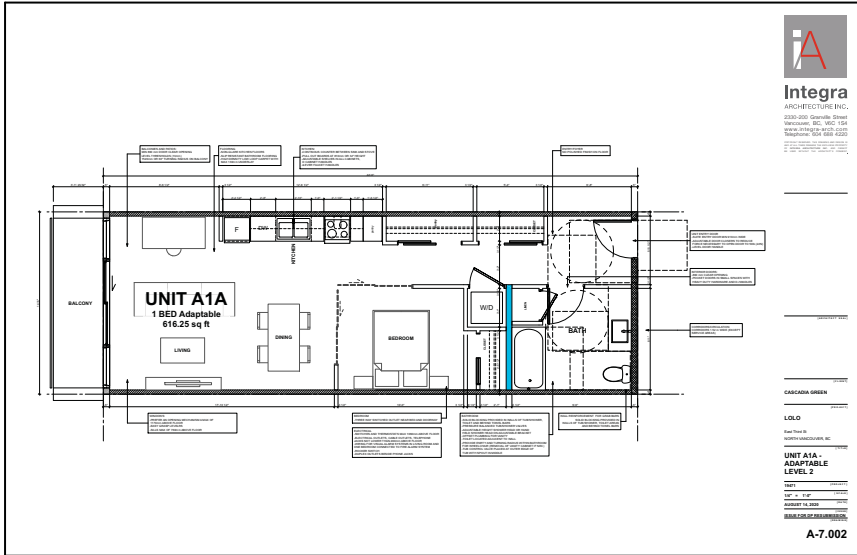




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(PROJECT TEAM)



Cascadia Green Development

(PROJECT)

402-438 E 3rd St & 341-343 St Davids Ave

North Vancouver, BC

(TITLE)

ADAPTABLE UNIT PLANS

(PROJECT)

471

As Noted

2020-10-15

(DATE)

Issue 06 - RZ /DP Resubmission

(REVISION)

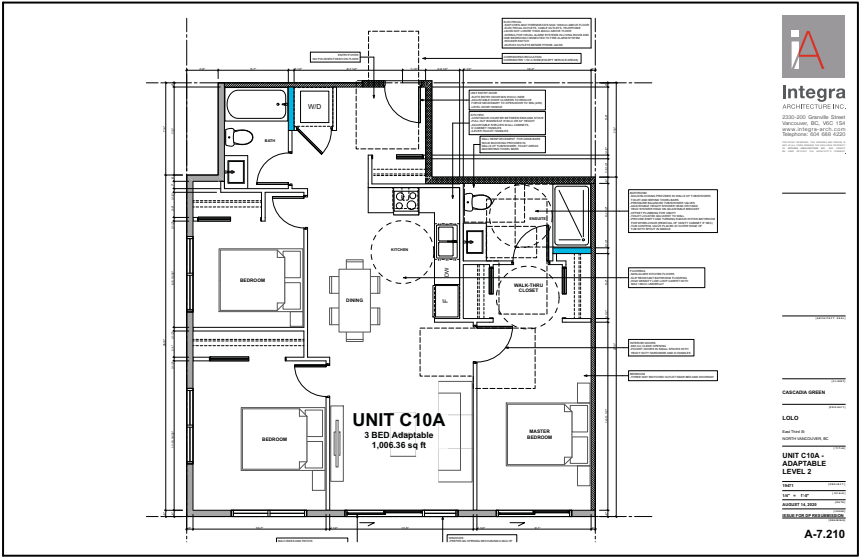
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A-3.001





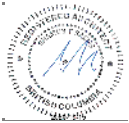
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North Vancouver, BC

**ADAPTABLE UNIT PLANS**

**471**

**As Noted**

**2020-10-15**

**Issue 06 - RZ /DP Resubmission**

**A-3.004**





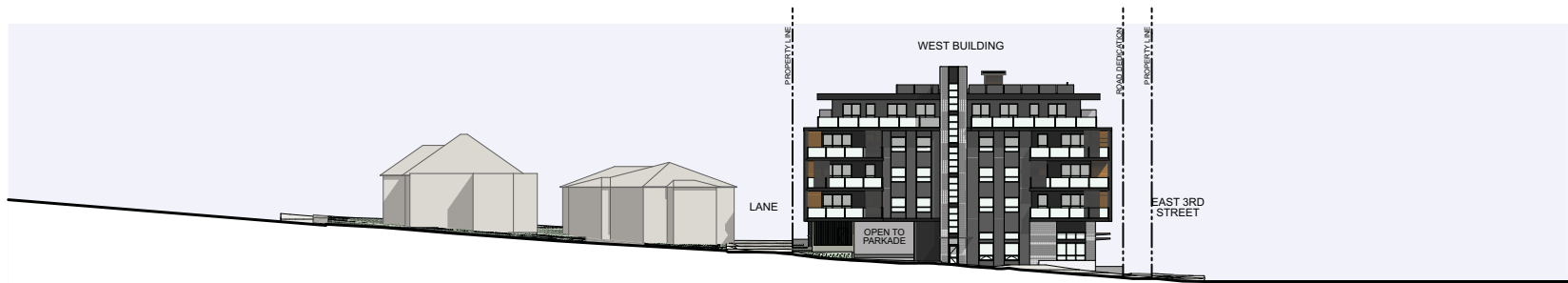
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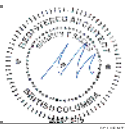
① WEST & EAST BUILDING - SOUTH ELEVATION (EAST 3RD STREET)  
SCALE: 1/16" = 1'-0"



② WEST BUILDING - WEST ELEVATION (ST. PATRICKS AVE)  
SCALE: 1/16" = 1'-0"



③ EAST & WEST BUILDING - NORTH ELEVATION (LANE)  
SCALE: 1/16" = 1'-0"



Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

(TITLE)

#### SITE ELEVATIONS

471 (PROJECT)

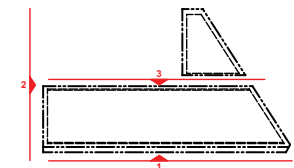
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2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-4.000**





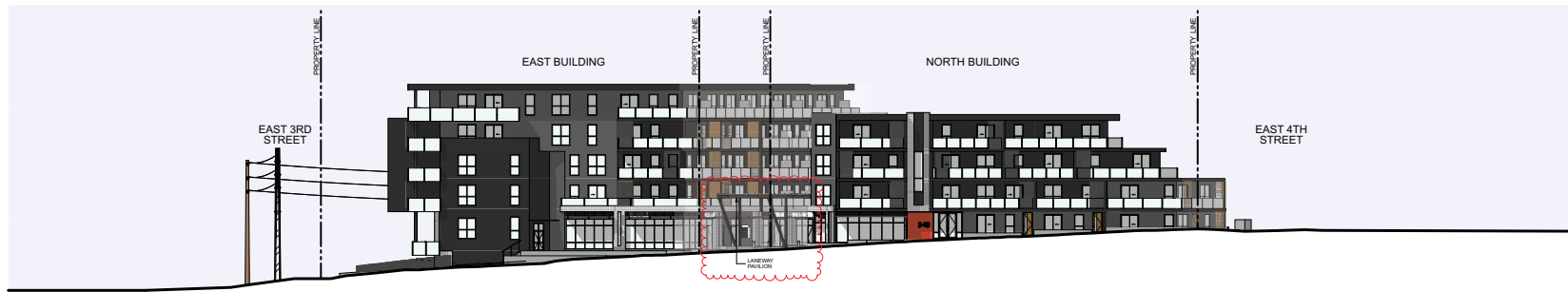
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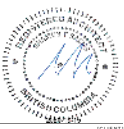
④ EAST & NORTH BUILDING - EAST ELEVATION (ST. DAVIDS AVE)  
SCALE: 1/16" = 1'-0"



⑤ NORTH BUILDING - SOUTH ELEVATION (LANE)  
SCALE: 1/16" = 1'-0"



⑥ NORTH & EAST BUILDING - WEST ELEVATION (COURTYARD)  
SCALE: 1/16" = 1'-0"



Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
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(TITLE)

## SITE ELEVATIONS

471 (PROJECT)

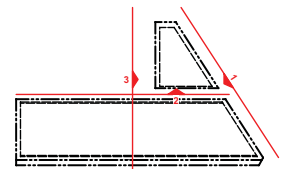
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2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

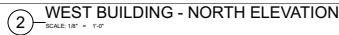
**A-4.001**







## PROJECT TEAM



Material and Colour Legend				
Material		Finish		CLADDING
Code	Description	Material	Finish	
1	White	Brick	White	Exterior Walls (Glass Block)
1.1	Grey	Flint Cement Paint	BM - Deep Silver 2124-26	Exterior Walls
1.3	Charcoal	Flint Cement Paint	BM - Grey 2121-15	Exterior Walls
2	Charcoal	Flint Cement Paint (Wood Finish)	Summer Walnut	Exterior Walls
2.1	Charcoal	Flint Cement Paints (Wood Finish)	Summer Walnut	Understore of balconies with roof
2.2	Charcoal	Flint Cement Paints (Wood Finish)	Summer Walnut	Understore of upper apartment roof
3	Light Cherry	Charcoal	Light Cherry	Understore of bridge over walk with integral balustrade
3.1	Charcoal	Combined Face Paint / Flaking	BM - Grey 2121-15	Roofs / Overhangs / Flat Roofs
3.1.1	Charcoal	Combined Face Paint / Flaking	BM - Deep Silver 2124-26	Roofs / Overhangs / Flat Roofs
4	Grey	2 Ply GSS or 3 plys	TBC	Flat Roofs / Roofs over bridge balconies
4.1	Light Grey	2 Ply GSS or 3 plys	TBC	2 Plys GSS roofing membrane on flat roofs
5	Charcoal	Vertical Windows	Charcoal	WINDOWS / GLAZING
5.1	Charcoal	Slanted	Charcoal	Aluminium slanted windows
5.2	Charcoal	Slanted	Aluminium	Aluminium slanted windows
5.3	Clear	Ridgeline	Clear	Clear Glazing w/ aluminium edge & fins
6	Charcoal	Doors	TBD	Low Work Entry Doors
6.1	Black	Wood Work with Lids	TBD	Till Entry Doors
7	Light Cherry	Patio Screen	TBD	SCREENS/CANOPY/STAIRS
7.1	Charcoal	Slanted	TBD	Face wood / Charcoal BM screens
7.2	Charcoal	Live work & Commercial Canopies	BM Porangene AF - 255	Canopies
7.3	Charcoal	Exterior Waller Stairs	BM Porangene AF - 255	Faded Metal stair w/ perforated metal guard
7.4	Charcoal	Mail Screen	Painted to match 1 - 3	Mail Screen on Landing Bay
8.1	Concrete	Architectural Concrete	Finished Concrete	PAVE
8.2	Grey	Plaster	TBD	Patio walls / In-gate pillars
				Roof Deck Slabs



[PROJECT]

**402-438 E 3rd St &  
341-343 St Davids Ave**  
North Vancouver, BC

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## WEST BUILDING ELEVATIONS

471 [PROJECT]

1/8" = 1'-0" [SCALE]

2020-10-15 [DATE]

[18308]

**Issue 06 - RZ /DP Resubmission**

(DRAWING)

**A-4.100**

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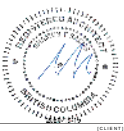


① WEST BUILDING - WEST ELEVATION  
SCALE: 1/8" = 1'-0"



② WEST BUILDING - EAST ELEVATION  
SCALE: 1/8" = 1'-0"

Material and Colour Legend			
Code	Description	Material/Colour	Notes
CLADDING			
1.1	White	Black	Exterior Walls (Dark Bond)
1.2	Gray	File Cement Panel	BM - Deep Silver 2124-30
1.3	Charcoal	File Cement Panel	BM - Gray 2121-10
1.4	Light Cherry	File Cement Board (Wood Grains)	Summer Wheat
SOFFIT			
2.1	Charcoal	File Cement Board (Wood Grains)	Summer Wheat
2.2	Charcoal	File Cement Board (Wood Grains)	Summer Wheat
2.3	Light Cherry	File Cement Board (Wood Grains)	Light Cherry
TIMBER FRAMING			
3.1	Charcoal	Combined Face Wood / Flanking	BM - Gray 2121-10
3.2	Gray	Combined Face Wood / Flanking	BM - Deep Silver 2124-30
ROOF DECKS			
4.1	Gray	2 Ply SBS w/ joists	TBD
4.2	Light Gray	2 Ply SBS	TBD
WINDOWS / GLAZING			
5.1	Charcoal	W/ Wood Frames	Charcoal
5.2	Charcoal	W/ Wood Frames	Charcoal
5.3	Clear	W/ Wood Frames	Clear
DOORS			
6.1	Charcoal	Doors	TBD
6.2	Black	Wood Doors with Lin	TBD
SCREENS/CANOPIES/STAIRS			
7.1	Light Cherry	Patio Screen	TBD
7.2	Charcoal	Live work & Commercial Canopies	BM Pergamote AP - 205
7.3	Charcoal	Exterior Metal Stairs	BM Pergamote AP - 205
7.4	Charcoal	Metal Screen	Painted to match 1.1
SITE WORK			
8.1	Concrete	Architectural Concrete	Fresh Concrete
8.2	Gray	Plaster	TBD



Cascadia Green  
Development

402-438 E 3rd St &  
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**WEST BUILDING  
ELEVATIONS**

471

1/8" = 1'-0"

2028-10-15

Issue 06 - RZ /DP Resubmission

A-4.110





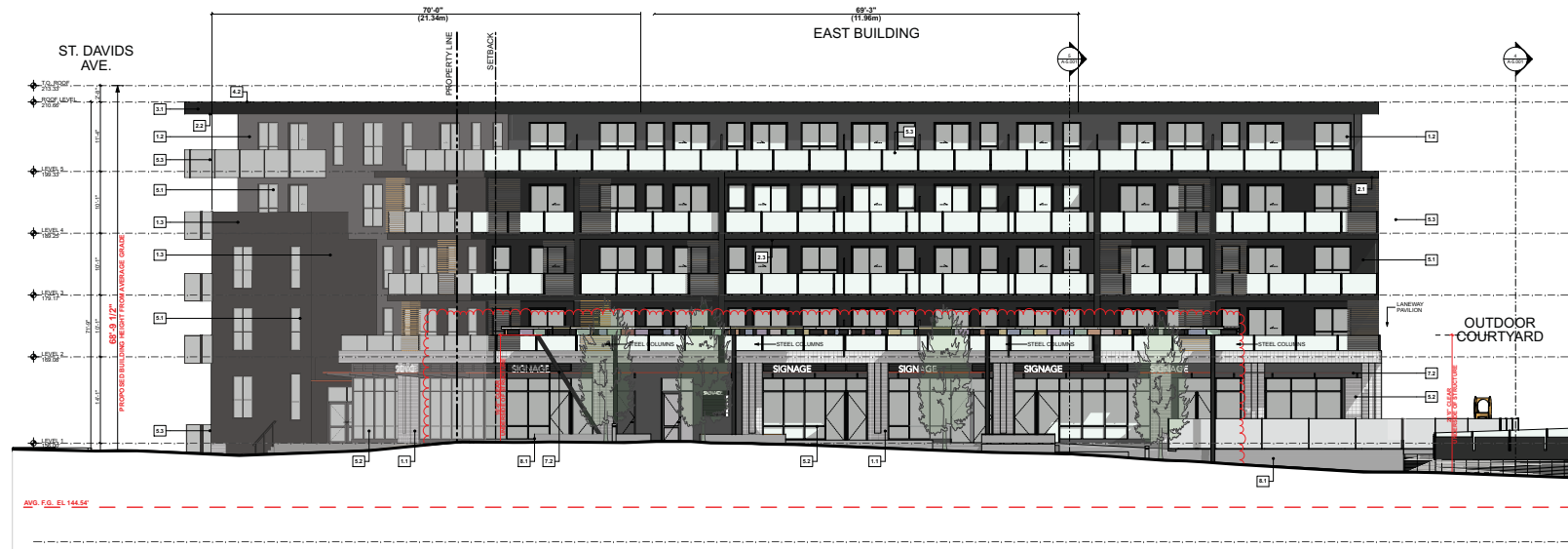
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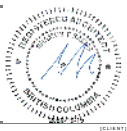


① EAST BUILDING - SOUTH ELEVATION  
SCALE: 1/8" = 1'-0"



② EAST BUILDING - NORTH ELEVATION  
SCALE: 1/8" = 1'-0"

Material and Colour Legend									
Color	Finish/Texture	Material	Finish/Texture	Material	Finish/Texture	Material	Finish/Texture	Material	Finish/Texture
CLADDING									
1.1	White	Black	White	Exterior Walls (Black Bond)	1.2	Gray	Flare Cement Panel	BM - Deep Silver 2134-30	Exterior Walls
1.3	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Exterior Walls	1.4	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Exterior Walls
1.5	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Exterior Walls	1.6	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Exterior Walls
1.7	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Exterior Walls	1.8	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Exterior Walls
SOFFIT									
2.1	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Underside of balcony walls	2.2	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Underside of upper level walls
2.3	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Underside of bridge over area with integral walls	2.4	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Underside of bridge over area with integral walls
FRONT FLASHINGS									
3.1	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Roofs / Canopies / Flashings	3.2	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Roofs / Canopies / Flashings
3.3	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Roofs / Canopies / Flashings	3.4	Charcoal	Flare Cement Panel	BM - Gray 2121-10	Roofs / Canopies / Flashings
ROOFS / DECKS									
4.1	Gray	2 Ply GBS w/ Joints	TBC	Flat Roofs / Decking / Balconies	4.2	Gray	2 Ply GBS w/ Joints	TBC	Flat Roofs / Decking / Balconies
4.3	Gray	2 Ply GBS w/ Joints	TBC	Flat Roofs / Decking / Balconies	4.4	Gray	2 Ply GBS w/ Joints	TBC	Flat Roofs / Decking / Balconies
WINDOWS / GLAZING									
5.1	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	5.2	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
5.3	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	5.4	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
5.5	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	5.6	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
DOORS									
6.1	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.2	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.3	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.4	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.5	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.6	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.7	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.8	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.9	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.10	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.11	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.12	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.13	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.14	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.15	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.16	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.17	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.18	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.19	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.20	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.21	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.22	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.23	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.24	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.25	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.26	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.27	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.28	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.29	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.30	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.31	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.32	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.33	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.34	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.35	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.36	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
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6.39	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.40	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.41	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.42	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.43	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.44	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.45	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.46	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
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6.97	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.98	Charcoal	Very Widened	Charcoal	Predefined vinyl windows
6.99	Charcoal	Very Widened	Charcoal	Predefined vinyl windows	6.100	Charcoal	Very Widened	Charcoal	Predefined vinyl windows



Cascadia Green  
Development  
402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

**EAST BUILDING ELEVATIONS**

471  
1/8" = 1'-0"  
2028-10-15  
Issue 06 - RZ /OP Resubmission

**A-4.200**



[PROJECT TEAM]



North Vancouver, BC

## EAST BUILDING ELEVATIONS

471	[PROJECT]
1/8" = 1'-0"	[SCALE]
2020-10-15	[DATE]
	[ISSUE]
Issue 06 - RZ /DP Resubmission	
	[DRAWING]

**A-4.210**



① NORTH BUILDING - SOUTH ELEVATION  
SCALE: 1/8" = 1'-0"

Material and Colour Legend					
Code	Material	Finish/Color	Notes		
CLADDING					
1.1	White	Black	White	Exterior Walls (Black Bond)	
1.2	Gray	Flint Cement Panel	BM - Deep Silver 2124-30	Exterior Walls	
1.3	Charcoal	Flint Cement Panel	BM - Gray 2121-10	Exterior Walls	
1.4	Center	Flint Cement Boards (Wood Finish)	Summer Wheat	Exterior Walls	
SOFFIT					
2.1	Center	Flint Cement Boards (Wood Finish)	Summer Wheat	Underside of balcony soffits	
2.2	Center	Flint Cement Boards (Wood Finish)	Summer Wheat	Underside of upper eyeshot roof	
2.3	Light Cherry	Meat (Wood Grain)	Light Cherry	Underside of bridge over ramp with integral balustrade	
TIMBER FRAMING					
3.1	Charcoal	Combined Face Wood / Flanking	BM - Gray 2121-10	Rails / Overhangs / Flanking	
3.2	Gray	Combined Face Wood / Flanking	BM - Deep Silver 2124-30	Rails / Overhangs / Flanking	
ROOF / DECKS					
4.1	Gray	2 Ply SBS w/ joists	TBD	Flat Roofs / Roofs over ramp spaces	
4.2	Light Gray	2 Ply SBS	TBD	2 Ply SBS roofing membrane at flat roofs	
WINDOWS / GLAZING					
5.1	Charcoal	Wip Windows	Charcoal	Finished wip windows	
5.2	Charcoal	Slatfront	Charcoal	Aluminum-slatfronted & Doors	
5.3	Clear	Railings	-	Clear Glazing w/ woodwork edge bars	
DOORS					
6.1	Center	Doors	TBD	Live Work Entry Doors	
6.2	Black	Wood Doors with Live	TBD	Tri Entry Doors	
SCREENS / CANOPIES / STAIRS					
7.1	Light Cherry	Patio Screen	TBD	Frame wood / Charcoal Metal screens	
7.2	Charcoal	Live work & Commercial Canopies	BM Pergamende AF - 205	Canopies	
7.3	Red	Exterior Metal Stairs	BM Pergamende AF - 205	Frosted Metal stair w/ perforated metal guard	
7.4	Charcoal	Metal Screen	Painted to match 1.2	Metal Screen at Loading Bay	
SITE WORK					
8.1	Concrete	Architectural Concrete	Fresh Concrete	Patio walls / All grade planters	
8.2	Gray	Plankers	TBD	Roof Deck Plankers	



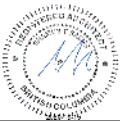
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ARCHITECTURE INC.  
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(PROJECT TEAM)



② NORTH BUILDING - NORTH ELEVATION  
SCALE: 1/8" = 1'-0"



Cascadia Green  
Development

(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

**NORTH BUILDING  
ELEVATIONS**

471 (PROJECT)

1/8" = 1'-0" (SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-4.300**

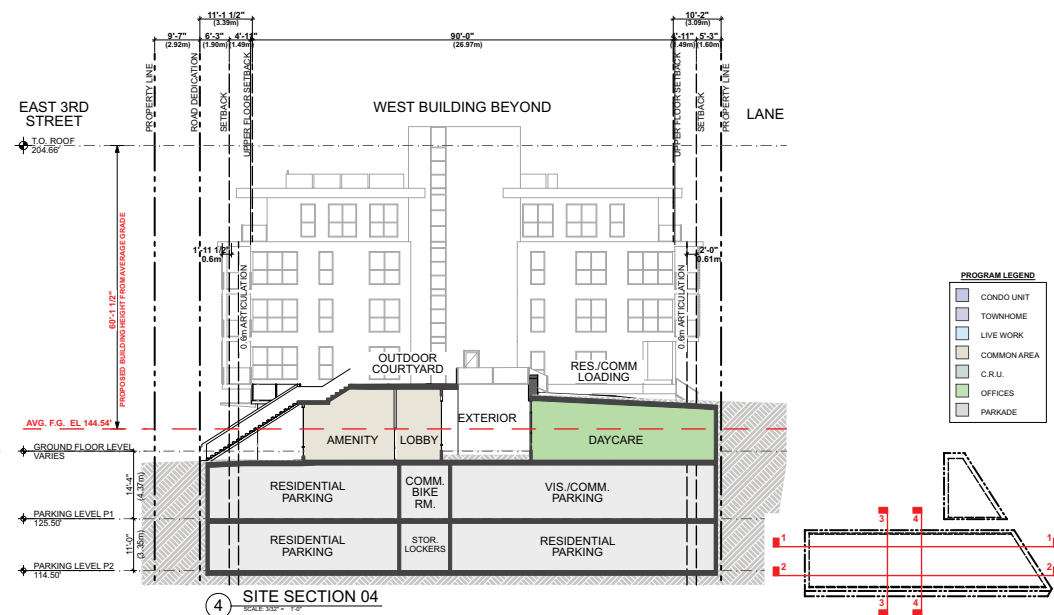
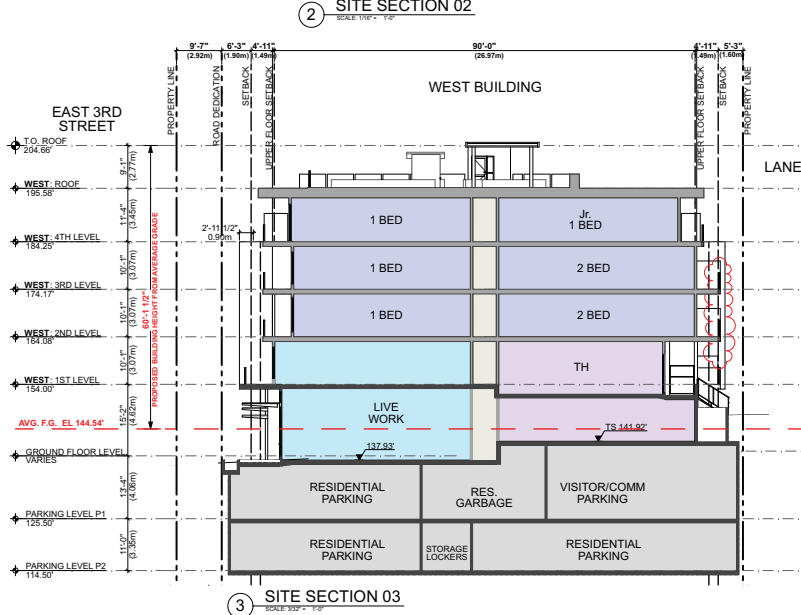
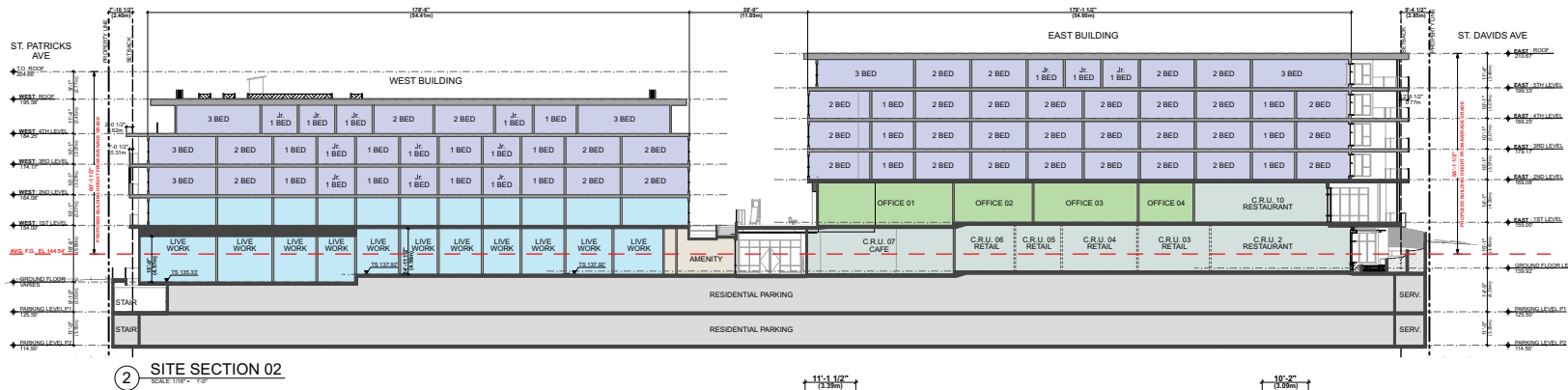
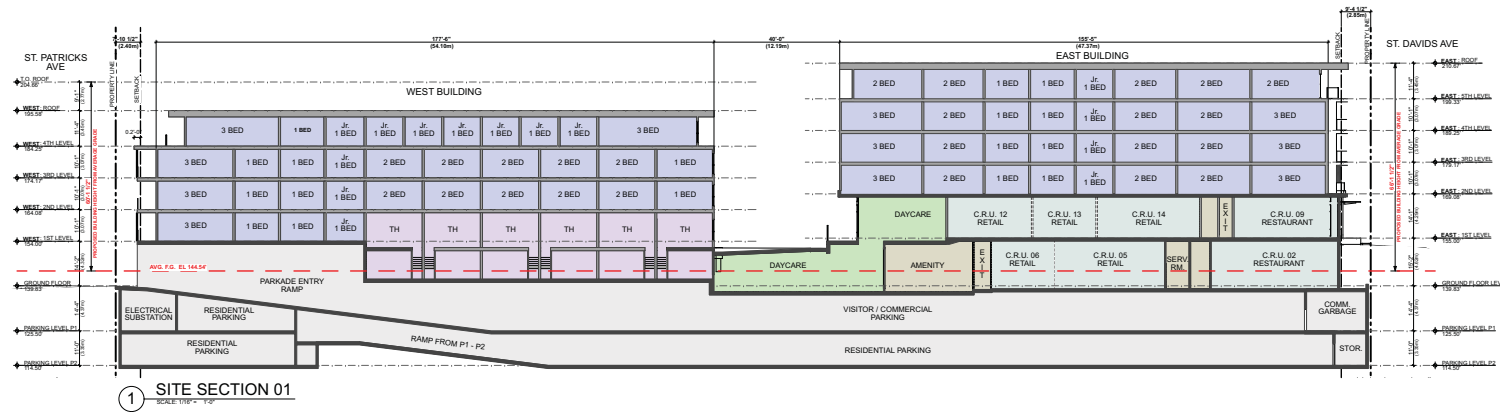




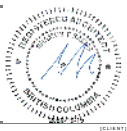
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Vancouver, BC, V6C 1S4  
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(PROJECT TEAM)



- PROGRAM LEGEND**
- CONDO UNIT
  - TOWNHOME
  - LIVE WORK
  - COMMON AREA
  - C.R.U.
  - OFFICES
  - PARKADE



**Cascadia Green Development**  
402-438 E 3rd St & 341-343 St Davids Ave  
North Vancouver, BC  
(TITLE)

**SITE SECTIONS**

471 (PROJECT)  
AS NOTED (DATE)  
2026-10-15 (DATE)  
Issue 06 - RZ /OP Resubmission (DATE)

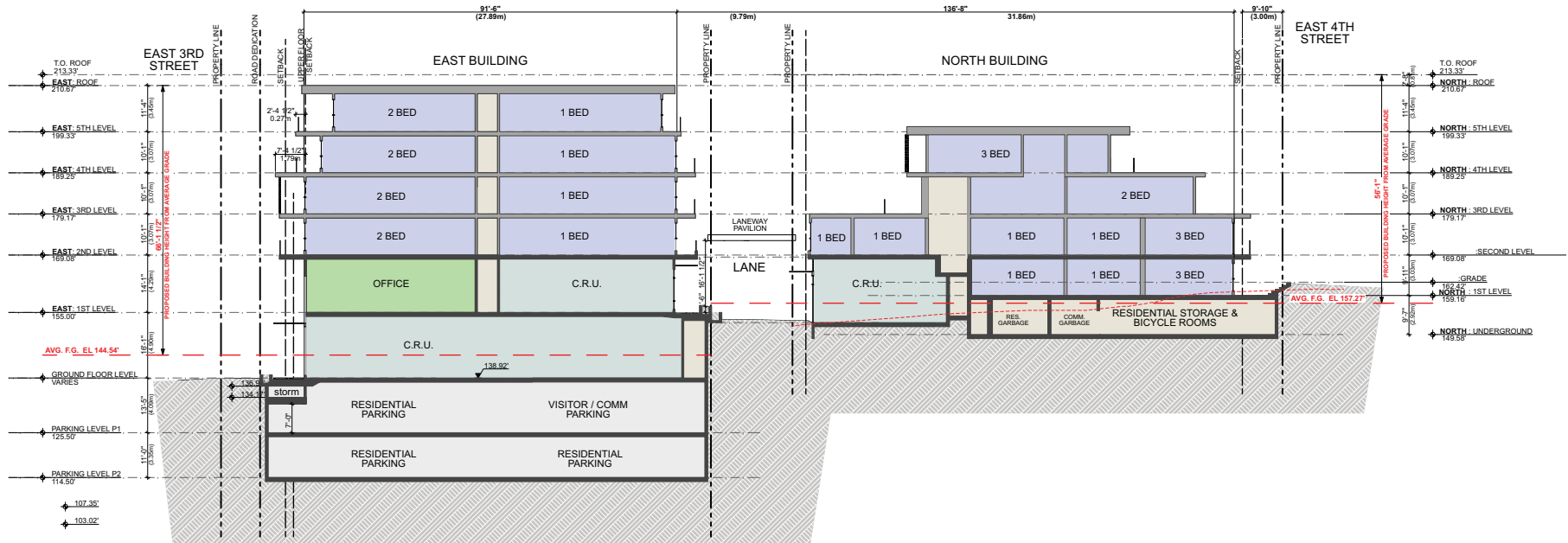
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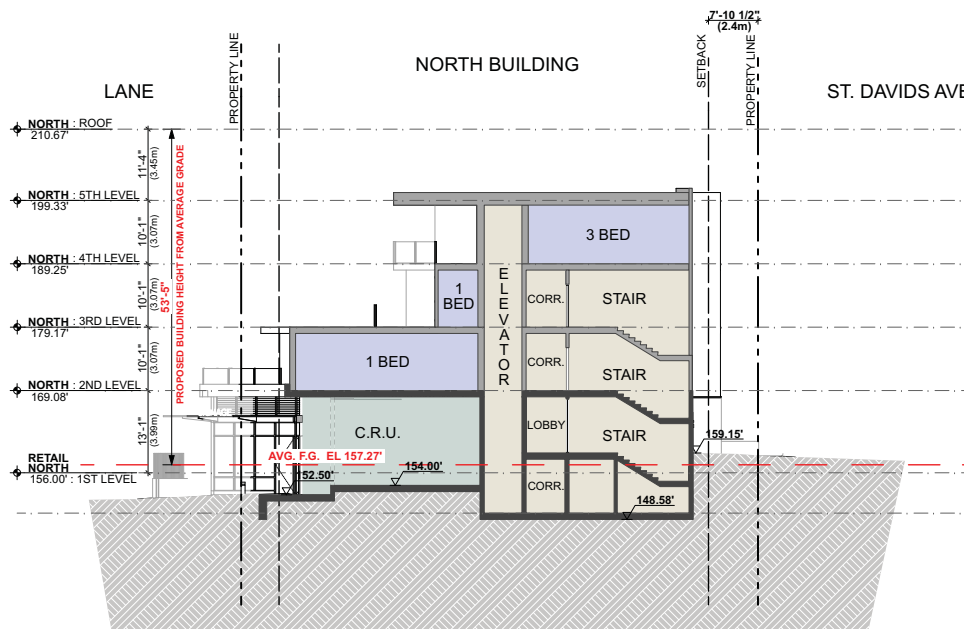
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(PROJECT TITLE)

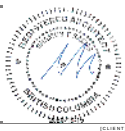
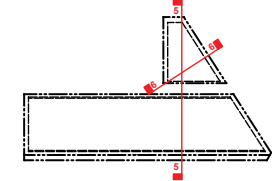


5 SITE SECTION 05  
SCALE: 3/8" = 1'-0"



6 SITE SECTION 06  
SCALE: 1/8" = 1'-0"

PROGRAM LEGEND	
[Blue Box]	CONDO UNIT
[Light Blue Box]	TOWNHOME
[Light Green Box]	LIVE WORK
[Light Yellow Box]	COMMON AREA
[Light Green Box]	C.R.U.
[Light Green Box]	OFFICES
[Light Green Box]	PARKADE



Cascadia Green  
Development

(PROJECT TITLE)

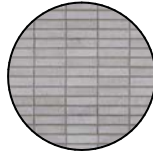
402-438 E 3rd St &  
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North Vancouver, BC

(PROJECT TITLE)

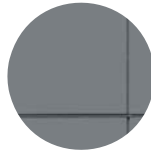
**SITE SECTIONS**

471 (PROJECT TITLE)  
AS NOTED (DATE)  
2022-10-15 (DATE)  
Issue 06 - RZ /DP Resubmission (DRAWING)

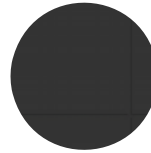
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1.1 | Stack Bond Brick - White Smooth



1.2 | Grey Fibre Cement Panel w/ Reveal



1.3 | Charcoal Fibre Cement Panel



1.7 | Fibre Cement Boards - Summer Wheat

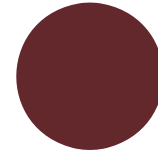
2.1

2.2



2.3 | Metal Panels - Light Cherry

7.1



7.2 | Steel - Deep Red

7.3



**Integra**

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1.3

2.1

1.2

2.1

1.7

1.1

7.2

7.1

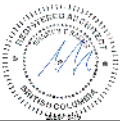
1.3

1.1

7.2

**Material and Colour Legend**

Color	Product (Finish)	Product (to match)	Location
<b>1.0 CLADDING</b>			
1.1	White Brick	White	Exterior Walls (Stack Bond)
1.2	Grey Fibre Cement Panel	BM - Deep Silver 2124-30	Exterior Walls
1.3	Charcoal Fibre Cement Panel	BM - Gray 2121-10	Exterior Walls
1.7	Cedar Fibre Cement Boards (Wood finish)	Summer Wheat	Exterior Walls
<b>2.0 SOFFIT</b>			
2.1	Cedar Fibre Cement Boards (Wood finish)	Summer Wheat	Underside of balcony soffit
2.2	Cedar Fibre Cement Boards (Wood finish)	Summer Wheat	Underside of upper eyebrow roof
2.3	Light Cherry Metal (Wood finish)	Light Cherry	Underside of bridge over lane with integral trellis
<b>3.0 TRIMS / FLASHINGS</b>			
3.1	Charcoal Combed Face Wood / Flashing	BM - Gray 2121-10	Roofs / Overhangs / Flashings
3.1	Grey Combed Face Wood / Flashing	BM - Deep Silver 2124-30	Roofs / Overhangs / Flashings
<b>4.0 ROOFS / DECKS</b>			
4.1	Grey 2 Ply SBS w/ pavers	TBC	Flat Roofs / Decks over living spaces
4.2	Light Grey 2 Ply SBS	TBC	2 Ply SBS roofing membrane at flat roofs
<b>5.0 WINDOWS / GLAZING</b>			
5.1	Charcoal Vinyl Windows	Charcoal	Prefinished vinyl windows
5.2	Charcoal Storefront	Charcoal	Aluminum storefront & Doors
5.3	Clear Railings	-	Clear Glazing w/ anodized edge trim
<b>6.0 DOORS</b>			
6.1	Cedar Doors	TBD	Live Work Entry Doors
6.2	Black Wood Doors with Lite	TBD	TH Entry Doors
<b>7.0 SCREENS / CANOPIES / STAIRS</b>			
7.1	Light Cherry / Charcoal Patio Screen	TBD	Faux wood / Charcoal Metal screens
7.2	Red / Charcoal Live work & Commercial Canopies	BM Pomegranate AF -295	Canopies
7.3	Red / Charcoal Exterior Metal Stairs	BM Pomegranate AF -295	Folded Metal stair w/ Perforated metal guard
7.4	Charcoal Metal Screen	Painted to match 1.3	Metal Screen at Loading Bay



**Cascadia Green Development**

402-438 E 3rd St & 341-343 St Davids Ave

North Vancouver, BC

Issue 06 - RZ /DP Resubmission

Issue 06 - RZ /DP Resubmission

Issue 06 - RZ /DP Resubmission

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Issue 06 - RZ /DP Resubmission

Issue 06 - RZ /DP Resubmission

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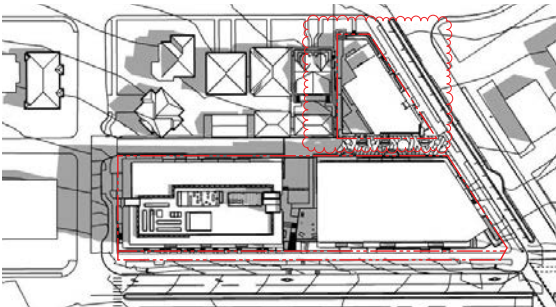
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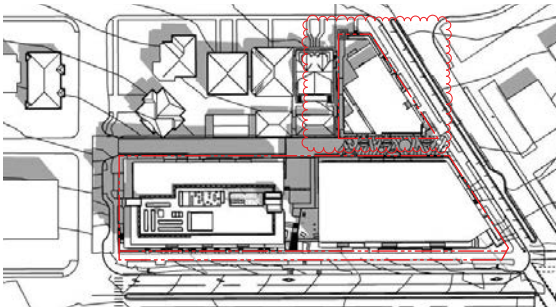
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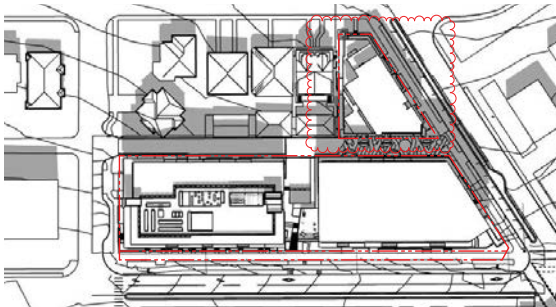
SPRING EQUINOX  
MARCH 20



10 AM

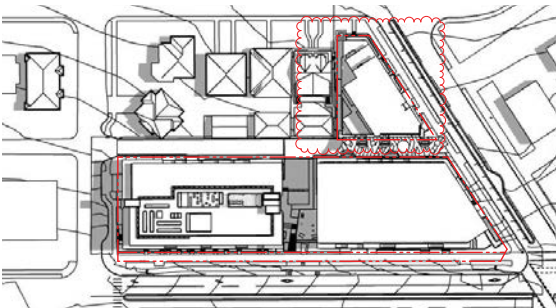


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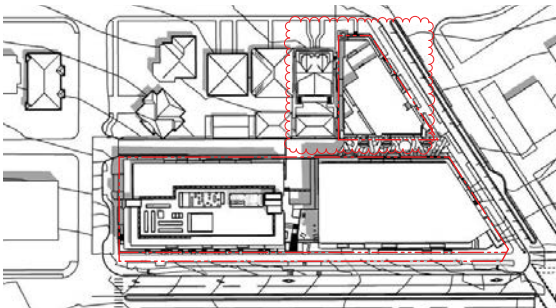


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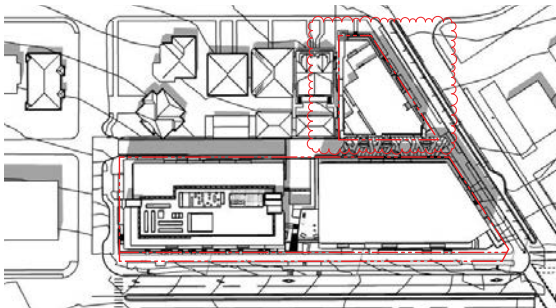
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JUNE 21



10 AM

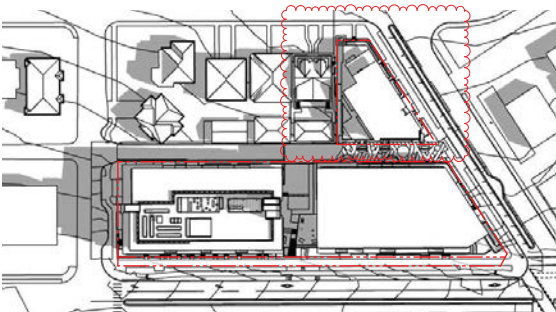


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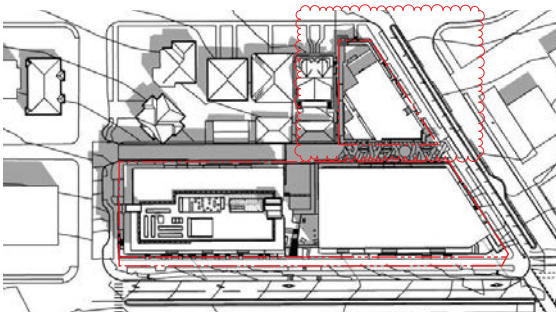


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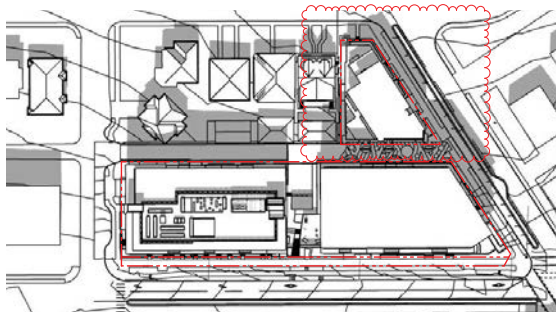
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SEPTEMBER 23



10 AM

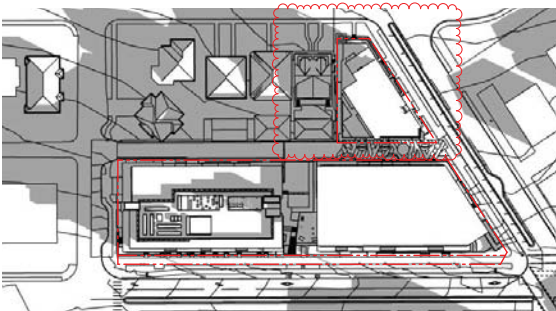


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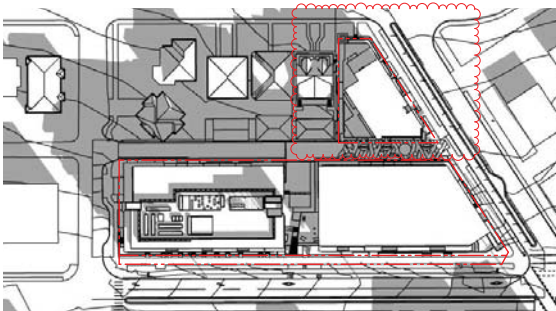


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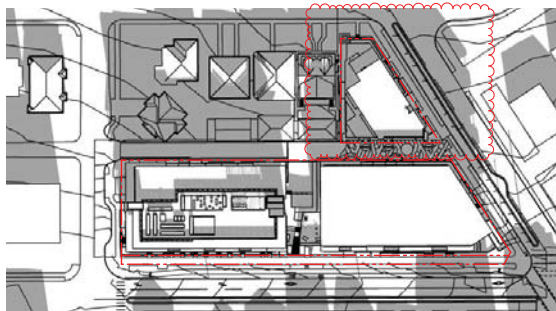
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DECEMBER 21



10 AM



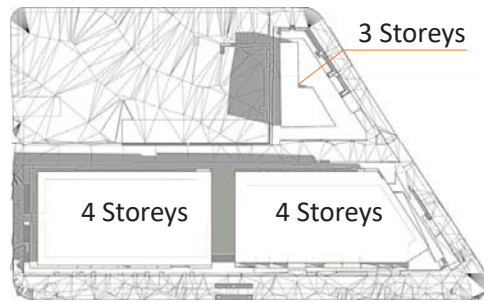
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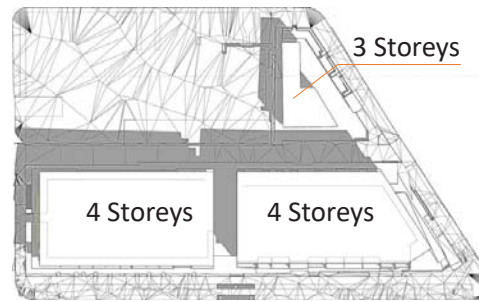
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# SHADOW STUDY

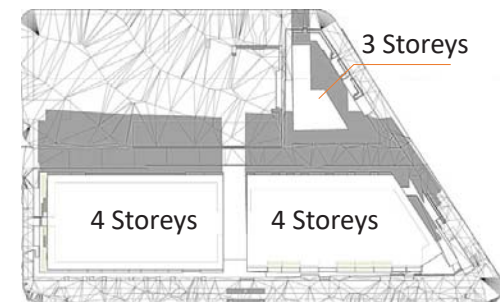
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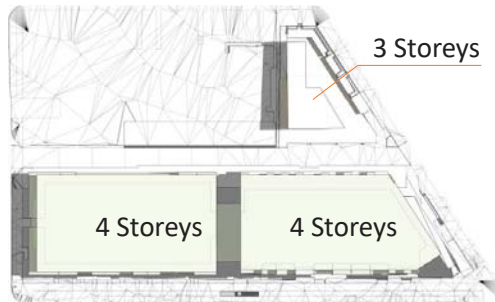
March 20<sup>th</sup> - 10 am



March 20<sup>th</sup> - 12 pm



March 20<sup>th</sup> - 2 pm



June 21<sup>st</sup> - 10 am



June 21<sup>st</sup> - 12 pm



June 21<sup>st</sup> - 2 pm



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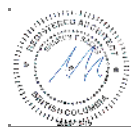
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Vancouver, BC, V6C 1S4  
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Cascadia Green  
Development

(CLIENT)

402-438 E 3rd St &  
341-343 St Davids Ave

North Vancouver, BC

(TITLE)

**OCP MASS  
SHADOW STUDY**

471 (PROJECT)

(SCALE)

2020-10-15 (DATE)

Issue 06 - RZ /DP Resubmission (REVISION)

(DRAWING)

**A-8.052**



# SHADOW STUDY

O C P M A S S



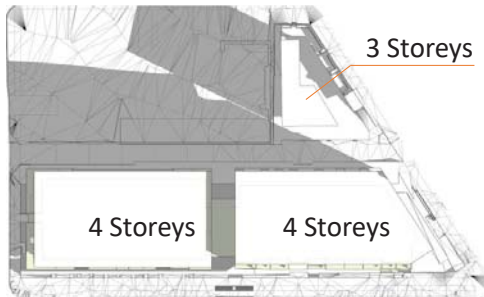
September 23<sup>rd</sup> - 10 am



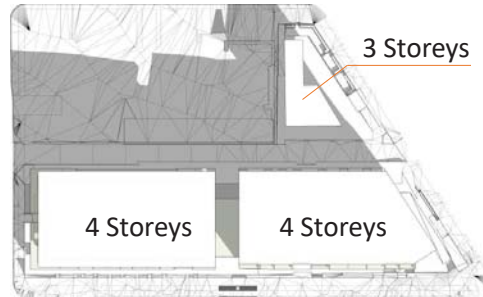
September 23<sup>rd</sup> - 12 pm



September 23<sup>rd</sup> - 2 pm



December 21<sup>st</sup> - 10 am



December 21<sup>st</sup> - 12 pm



December 21<sup>st</sup> - 2 pm



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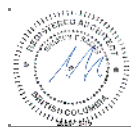
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(PROJECT TEAM)



Cascadia Green  
Development

(CLIENT)

402-438 E 3rd St &  
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North Vancouver, BC

(TITLE)

**OCP MASS  
SHADOW STUDY**

471 (PROJECT)

(SCALE)

2020-10-15 (DATE)

(ISSUE)

Issue 06 - RZ /DP Resubmission

(DRAWING)

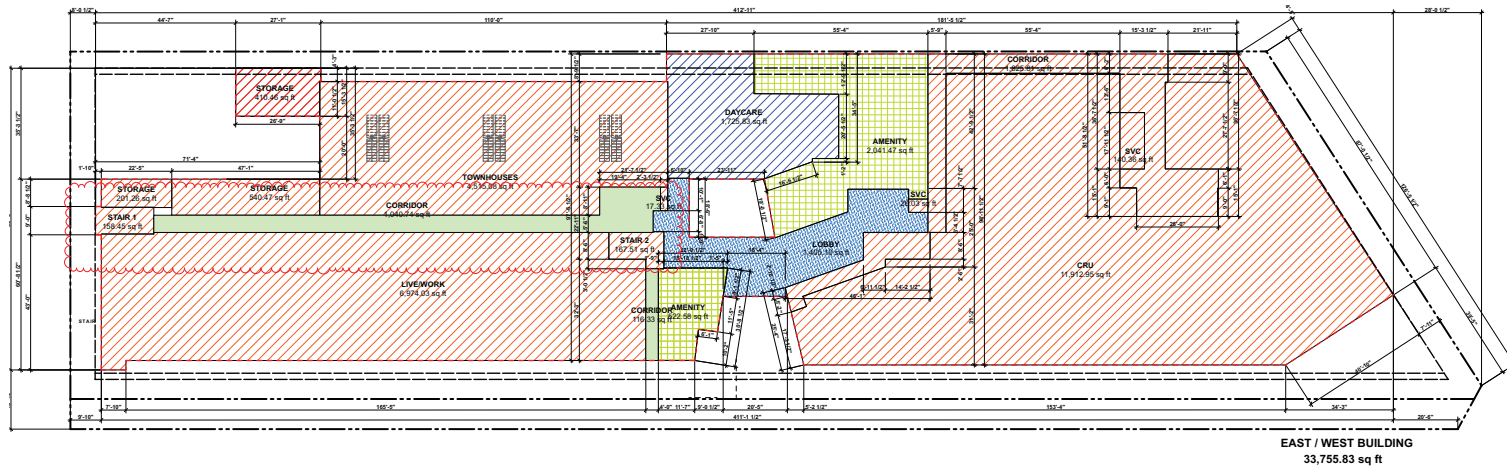
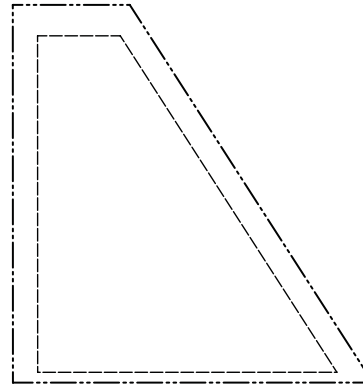
**A-8.053**

GFA EXCLUSIONS - STAIRS			
LEVEL	BLDG	Zone Name	AREA
Ground Floor			
	WEST	STAIR 1	158.45
	WEST	STAIR 2	167.51
Level 1			
	NORTH	STAIR 1	171.70
	NORTH	STAIR 2	231.25
	WEST	STAIR 1	161.13
	WEST	STAIR 2	144.83
Level 2			
	NORTH	STAIR 1	171.71
	NORTH	STAIR 2	172.08
	WEST	STAIR 1	160.94
	WEST	STAIR 2	144.83
Level 3			
	NORTH	STAIR 1	171.74
	NORTH	STAIR 2	174.78
	WEST	STAIR 1	161.12
	WEST	STAIR 2	144.83
Level 4			
	WEST	STAIR 1	160.65
	WEST	STAIR 2	145.53
Level 5			
	WEST	STAIR 1	164.26
	WEST	STAIR 2	150.94

NOTE: 105% FLOOR TRANSPARENT GLAZING PROVIDED TO ACHIEVE STAIR ZONING BYLAW EXEMPTION

GFA EXCLUSIONS - BALCONIES			
LEVEL	BLDG	Zone Name	AREA
Level 1			
	EAST	BALCONIES	862.85
	WEST	BALCONIES	485.46
	WEST	BALCONIES	1,228.13
Level 2			
	EAST	BALCONIES	100.11
	EAST	BALCONIES	227.34
	EAST	BALCONIES	651.99
	EAST	BALCONIES	1,054.50
	NORTH	BALCONIES	97.07
	NORTH	BALCONIES	415.85
	NORTH	BALCONIES	471.18
	WEST	BALCONIES	1,039.19
	WEST	BALCONIES	1,223.24
Level 3			
	EAST	BALCONIES	80.44
	EAST	BALCONIES	101.68
	EAST	BALCONIES	119.43
	EAST	BALCONIES	177.79
	EAST	BALCONIES	227.99
	EAST	BALCONIES	271.50
	EAST	BALCONIES	1,184.16
	NORTH	BALCONIES	73.50
	NORTH	BALCONIES	96.36
	NORTH	BALCONIES	103.48
	NORTH	BALCONIES	104.16
	NORTH	BALCONIES	107.87
	NORTH	BALCONIES	125.33
	NORTH	BALCONIES	225.26
	WEST	BALCONIES	1,034.49
	WEST	BALCONIES	1,223.24
Level 4			
	EAST	BALCONIES	80.44
	EAST	BALCONIES	101.68
	EAST	BALCONIES	119.43
	EAST	BALCONIES	177.79
	EAST	BALCONIES	227.50
	EAST	BALCONIES	387.74
	EAST	BALCONIES	1,060.50
	NORTH	BALCONIES	35.40
	NORTH	BALCONIES	89.50
	NORTH	BALCONIES	97.13
	NORTH	BALCONIES	100.42
	NORTH	BALCONIES	104.25
	NORTH	BALCONIES	130.15
	NORTH	BALCONIES	154.48
	WEST	BALCONIES	1,063.00
	WEST	BALCONIES	1,160.48
Level 5			
	EAST	BALCONIES	755.02
	EAST	BALCONIES	1,862.81

GFA EXCLUSIONS			
LEVEL	BLDG	Zone Name	AREA
Ground Floor			
	EAST / WEST	AMENITY	522.58
	EAST / WEST	AMENITY	2,941.47
	EAST / WEST	CORRIDOR	1,825.81
	EAST / WEST	CRU	11,912.85
	EAST / WEST	DAYCARE	1,725.83
	EAST / WEST	LIVWORK	8,514.03
	EAST / WEST	LOBBY	1,405.10
	EAST / WEST	STORAGE	201.26
	EAST / WEST	STORAGE	410.46
	EAST / WEST	STORAGE	640.47
	EAST / WEST	SVC	17.53
	EAST / WEST	SVC	26.03
	EAST / WEST	SVC	140.36
	EAST / WEST	TOWNHOUSES	4,515.08
	WEST	STAIR 1	158.45
	WEST	STAIR 2	167.51

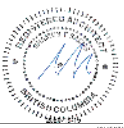


EAST / WEST BUILDING  
33,755.83 sq ft

Ground Floor Overlay  
SCALE: 1/16" = 1'-0"



GFA		
LEVEL	BLDG	AREA
Ground Floor		
	WEST	33,755.83
Level 1		
	EAST	15,380.44
	NORTH	6,025.03
	WEST	17,139.29
Level 2		
	EAST	17,387.60
	NORTH	6,625.14
	WEST	18,284.51
Level 3		
	EAST	17,321.75
	NORTH	4,985.44
	WEST	18,048.22
Level 4		
	EAST	16,982.60
	NORTH	4,162.75
	WEST	15,991.47
Level 5		
	EAST	15,766.52
	WEST	164.25
	WEST	486.87
		208,468.11 sq ft



Cascadia Green  
Development

402-438 E 3rd St &  
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North Vancouver, BC

**GROUND FLOOR  
AREA OVERLAY**

471  
1/16" = 1'-0"  
2020-10-15  
Issue 06 - RZ /DP Resubmission

**A-9.010**







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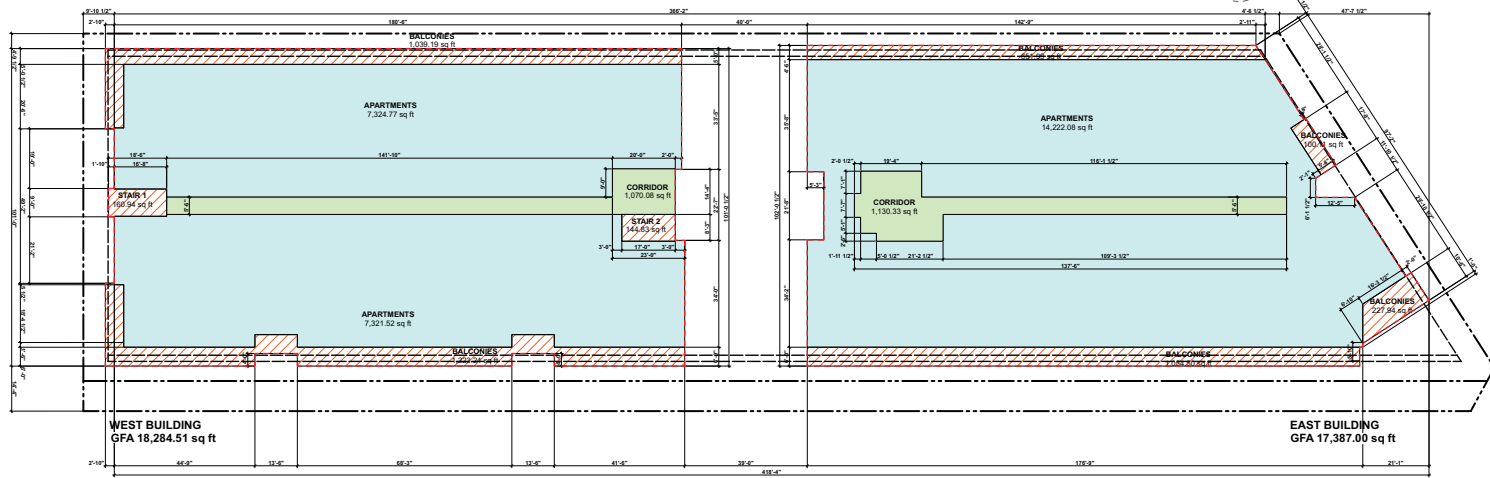
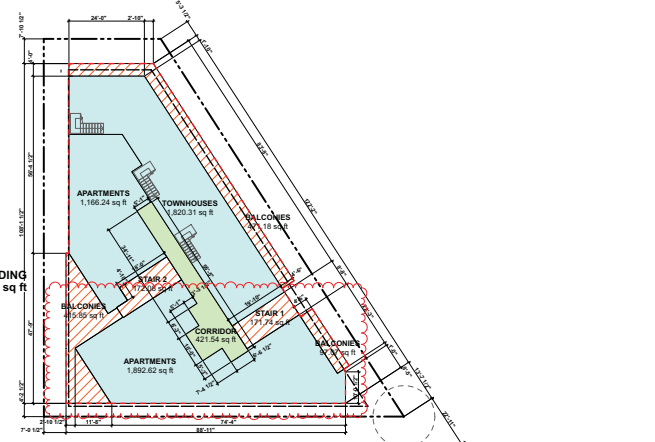
GFA		
LEVEL	BLDG	AREA
Ground Floor		
	WEST	33,755.83
Level 1		
	EAST	15,380.44
	NORTH	6,025.03
	WEST	17,135.29
Level 2		
	EAST	17,387.00
	NORTH	6,625.14
	WEST	18,284.51
Level 3		
	EAST	17,321.75
	NORTH	4,985.44
	WEST	18,048.22
Level 4		
	EAST	16,982.60
	NORTH	4,162.75
	WEST	15,991.47
Level 5		
	EAST	15,766.52
	WEST	164.25
	WEST	456.87
		208,468.11 sq ft

FSR EAST				
LEVEL	BLDG	Zone Category	Name	AREA
Level 1				
	EAST	Circulation	CORRIDOR	1,829.53
	EAST	Commercial	COMMERCIAL	3,258.50
	EAST	Commercial	COMMERCIAL	7,840.08
	EAST	Commercial	DAYCARE	1,869.20
Level 2				
	EAST	Circulation	CORRIDOR	1,130.33
	EAST	Residential	APARTMENTS	14,222.08
Level 3				
	EAST	Circulation	CORRIDOR	1,281.19
	EAST	Residential	APARTMENTS	13,877.53
Level 4				
	EAST	Circulation	CORRIDOR	1,234.63
	EAST	Residential	APARTMENTS	13,568.90
Level 5				
	EAST	Circulation	CORRIDOR	1,174.20
	EAST	Residential	APARTMENTS	11,873.33
				72,959.50 sq ft

FSR WEST				
LEVEL	BLDG	Zone Category	Name	AREA
Ground Floor				
	WEST	Circulation	CORRIDOR	116.53
	WEST	Circulation	CORRIDOR	1,040.74
Level 1				
	WEST	Circulation	CORRIDOR	1,868.31
	WEST	Residential	APARTMENTS	2,834.82
	WEST	Residential	LIVE/WORK	7,428.49
	WEST	Residential	TOWNHOUSES	3,788.27
Level 2				
	WEST	Circulation	CORRIDOR	1,070.08
	WEST	Residential	APARTMENTS	7,321.52
	WEST	Residential	APARTMENTS	7,324.77
Level 3				
	WEST	Circulation	CORRIDOR	1,069.96
	WEST	Residential	APARTMENTS	7,087.51
	WEST	Residential	APARTMENTS	7,324.72
Level 4				
	WEST	Circulation	CORRIDOR	1,072.82
	WEST	Residential	APARTMENTS	6,173.31
	WEST	Residential	APARTMENTS	6,214.49
Level 5				
	WEST	Circulation	CORRIDOR	308.30
				61,244.44 sq ft

FSR NORTH				
LEVEL	BLDG	Zone Category	Name	AREA
Level 1				
	NORTH	Circulation	CORRIDOR	224.59
	NORTH	Commercial	COMMERCIAL	2,156.59
	NORTH	Residential	APARTMENTS	1,152.70
	NORTH	Residential	TOWNHOUSES	1,610.41
Level 2				
	NORTH	Circulation	CORRIDOR	421.54
	NORTH	Residential	APARTMENTS	1,166.24
	NORTH	Residential	APARTMENTS	1,892.62
	NORTH	Residential	TOWNHOUSES	1,620.31
Level 3				
	NORTH	Circulation	CORRIDOR	338.18
	NORTH	Residential	APARTMENTS	650.27
	NORTH	Residential	APARTMENTS	786.79
	NORTH	Residential	TOWNHOUSES	408.19
	NORTH	Residential	TOWNHOUSES	649.39
	NORTH	Residential	TOWNHOUSES	500.95
Level 4				
	NORTH	Residential	TOWNHOUSES	3,355.96
				17,584.72 sq ft

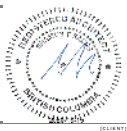
NORTH BUILDING  
GFA 6,628.14 sq ft



WEST BUILDING  
GFA 18,284.51 sq ft

EAST BUILDING  
GFA 17,387.00 sq ft

Level 2 Overlay  
SCALE: 1/16" = 1'-0"



Cascadia Green  
Development

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC

LEVEL 2 AREA  
OVERLAY

471 (PROJECT)  
1/16" = 1'-0" (SCALE)  
2028-10-15 (DATE)  
Issue 06 - RZ /DP Resubmission (REVISION)  
(DRAWING)

A-9.020





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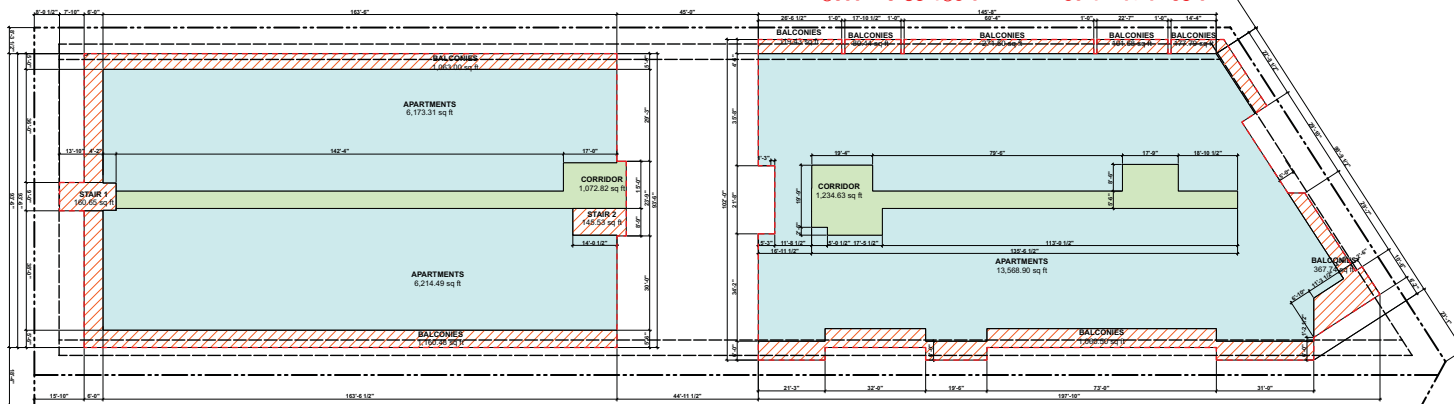
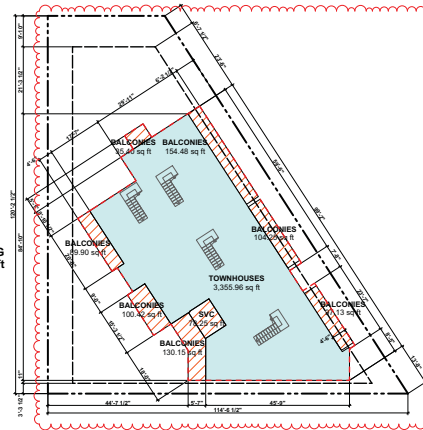


FSR EAST				
LEVEL	BLDG	Zone Category	Name	AREA
Level 1	EAST	Circulation	CORRIDOR	1,829.53
	EAST	Commercial	COMMERCIAL	3,258.50
	EAST	Commercial	COMMERCIAL	7,840.08
	EAST	Commercial	DAYCARE	1,869.20
Level 2	EAST	Circulation	CORRIDOR	1,130.33
	EAST	Residential	APARTMENTS	14,222.08
Level 3	EAST	Circulation	CORRIDOR	1,281.19
	EAST	Residential	APARTMENTS	13,877.53
Level 4	EAST	Circulation	CORRIDOR	1,234.63
	EAST	Residential	APARTMENTS	13,568.90
Level 5	EAST	Circulation	CORRIDOR	1,174.20
	EAST	Residential	APARTMENTS	11,893.33
				72,959.50 sq ft

FSR WEST				
LEVEL	BLDG	Zone Category	Name	AREA
Ground Floor	WEST	Circulation	CORRIDOR	116.33
	WEST	Circulation	CORRIDOR	1,040.74
Level 1	WEST	Circulation	CORRIDOR	1,868.31
	WEST	Residential	APARTMENTS	2,834.82
	WEST	Residential	LIVE/WORK	7,428.49
	WEST	Residential	TOWNHOUSES	3,788.27
Level 2	WEST	Circulation	CORRIDOR	1,070.08
	WEST	Residential	APARTMENTS	7,321.52
Level 3	WEST	Circulation	CORRIDOR	1,069.96
	WEST	Residential	APARTMENTS	7,087.51
Level 4	WEST	Circulation	CORRIDOR	1,072.82
	WEST	Residential	APARTMENTS	6,173.31
Level 5	WEST	Circulation	CORRIDOR	308.30
	WEST	Circulation	CORRIDOR	61,244.44 sq ft

FSR NORTH				
LEVEL	BLDG	Zone Category	Name	AREA
Level 1	NORTH	Circulation	CORRIDOR	224.59
	NORTH	Commercial	COMMERCIAL	2,156.59
	NORTH	Residential	APARTMENTS	1,152.70
	NORTH	Residential	TOWNHOUSES	1,810.41
Level 2	NORTH	Circulation	CORRIDOR	421.54
	NORTH	Residential	APARTMENTS	1,186.24
	NORTH	Residential	APARTMENTS	1,892.62
	NORTH	Residential	TOWNHOUSES	1,620.31
Level 3	NORTH	Circulation	CORRIDOR	338.18
	NORTH	Residential	APARTMENTS	650.27
	NORTH	Residential	APARTMENTS	786.79
	NORTH	Residential	TOWNHOUSES	408.19
Level 4	NORTH	Residential	APARTMENTS	649.39
	NORTH	Residential	TOWNHOUSES	500.95
				3,355.96
				17,584.72 sq ft

NORTH BUILDING  
GFA 4,162.75 sq ft

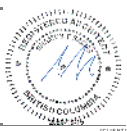


WEST BUILDING  
GFA 15,991.47 sq ft

EAST BUILDING  
GFA 16,982.60 sq ft

Level 4 Overlay  
SCALE: 1/16" = 1'-0"

GFA		
LEVEL	BLDG	AREA
Ground Floor		
	WEST	33,755.83
Level 1		
	EAST	15,580.44
	NORTH	6,025.03
Level 2		
	EAST	17,387.90
	NORTH	6,628.14
Level 3		
	EAST	17,321.75
	NORTH	4,885.44
Level 4		
	EAST	16,982.60
	NORTH	4,162.75
Level 5		
	EAST	15,786.52
	WEST	164.25
	WEST	486.87
		208,468.11 sq ft



Cascadia Green  
Development  
(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC  
(PROJECT)

LEVEL 4 AREA  
OVERLAY  
(PROJECT)

471  
1/16" = 1'-0"  
2020-10-15  
Issue 06 - RZ /DP Resubmission  
(SCALE)  
(DATE)  
(DATE)  
(DRAWING)

A-9.040





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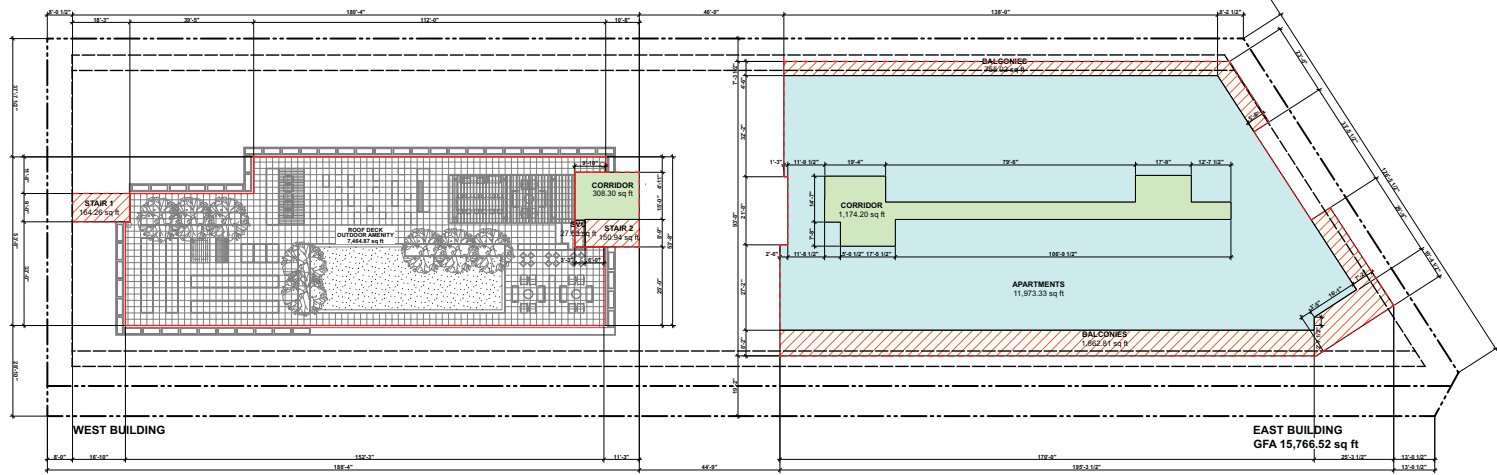
(PROJECT TEAM)

FSR EAST				
LEVEL	BLDG	Zone Category	Name	AREA
Level 1	EAST	Circulation	CORRIDOR	1,829.53
	EAST	Commercial	COMMERCIAL	3,258.59
	EAST	Commercial	COMMERCIAL	7,840.08
	EAST	Commercial	DAYCARE	1,869.29
Level 2	EAST	Circulation	CORRIDOR	1,130.33
	EAST	Residential	APARTMENTS	14,222.08
Level 3	EAST	Circulation	CORRIDOR	1,281.19
	EAST	Residential	APARTMENTS	13,877.53
Level 4	EAST	Circulation	CORRIDOR	1,234.63
	EAST	Residential	APARTMENTS	13,568.90
Level 5	EAST	Circulation	CORRIDOR	1,174.20
	EAST	Residential	APARTMENTS	11,973.33
				72,959.59 sq ft

FSR WEST				
LEVEL	BLDG	Zone Category	Name	AREA
Ground Floor	WEST	Circulation	CORRIDOR	116.33
	WEST	Circulation	CORRIDOR	1,040.74
Level 1	WEST	Circulation	CORRIDOR	1,968.31
	WEST	Residential	APARTMENTS	2,834.82
	WEST	Residential	LIVE/WORK	7,428.49
	WEST	Residential	TOWNHOUSES	3,788.27
Level 2	WEST	Circulation	CORRIDOR	1,070.08
	WEST	Residential	APARTMENTS	7,321.52
Level 3	WEST	Circulation	CORRIDOR	1,069.96
	WEST	Residential	APARTMENTS	7,087.51
Level 4	WEST	Circulation	CORRIDOR	1,072.82
	WEST	Residential	APARTMENTS	6,173.31
Level 5	WEST	Circulation	CORRIDOR	6,214.49
	WEST	Circulation	CORRIDOR	308.30
				77,444.44 sq ft

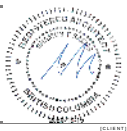
FSR NORTH				
LEVEL	BLDG	Zone Category	Name	AREA
Level 1	NORTH	Circulation	CORRIDOR	224.59
	NORTH	Commercial	COMMERCIAL	2,156.59
	NORTH	Residential	APARTMENTS	1,152.70
	NORTH	Residential	TOWNHOUSES	1,610.41
Level 2	NORTH	Circulation	CORRIDOR	421.54
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	NORTH	Residential	APARTMENTS	1,892.62
	NORTH	Residential	TOWNHOUSES	1,620.31
Level 3	NORTH	Circulation	CORRIDOR	338.18
	NORTH	Residential	APARTMENTS	650.27
	NORTH	Residential	APARTMENTS	786.79
	NORTH	Residential	TOWNHOUSES	408.19
	NORTH	Residential	TOWNHOUSES	649.39
	NORTH	Residential	TOWNHOUSES	500.95
Level 4	NORTH	Residential	TOWNHOUSES	3,355.96
	NORTH	Residential	TOWNHOUSES	17,584.72 sq ft

NORTH BUILDING



Level 5 Overlay  
SCALE: 1/16" = 1'-0"

GFA		
LEVEL	BLDG	AREA
Ground Floor		
	WEST	33,755.83
Level 1		
	EAST	15,580.44
	NORTH	6,025.93
Level 2		
	EAST	17,587.90
	NORTH	6,628.14
Level 3		
	EAST	17,521.75
	NORTH	4,985.44
Level 4		
	EAST	16,982.60
	NORTH	4,162.75
Level 5		
	EAST	15,766.52
	WEST	164.25
	WEST	486.87
		208,468.11 sq ft



Cascadia Green  
Development  
(PROJECT)

402-438 E 3rd St &  
341-343 St Davids Ave  
North Vancouver, BC  
(TITLE)

LEVEL 5 AREA  
OVERLAY

471 (PROJECT)  
1/16" = 1'-0" (SCALE)  
2028-10-15 (DATE)  
Issue 06 - RZ /DP Resubmission (REVISION)  
(DRAWING)

A-9.050



402-438 EAST 3<sup>RD</sup> STREET & 341-343 ST.  
DAVIDS AVENUE

Transportation Study (Final)

A handwritten signature in black ink, appearing to read 'Victor Ngo', is positioned above a horizontal line.

Author: Victor Ngo, RPP

Reviewer: Nathan Carswell, P.Eng

Prepared for: **Cascadia Green Development**

Our File: **2572.B01**

Date: **August 10, 2020**



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- Appendix B** Traffic Signal Warrant Analysis
- Appendix C** Trip Generation Internal Capture Estimation
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## 1.0 INTRODUCTION

### 1.1 Study Purpose

WATT Consulting Group was retained by Cascadia Green Development to undertake a Level 2 Transportation Study for a proposed mixed-use development application at 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue in North Vancouver, BC for the City of North Vancouver. The proposed development is planned to consist of three buildings with multi-family residential strata and live/work, retail, restaurant, office, and child care uses.

This report was prepared in accordance with the scope of work as defined by the City of North Vancouver in the study terms of reference (May 13, 2019). The report incorporates revisions in response to City staff comments (January 16, 2020; February 26, 2020; and June 30, 2020) and the City's Integrated Transportation Committee meeting (March 4, 2020). The information presented in this report is based on the proposed development program and drawings as of August 7, 2020, unless otherwise noted.

### 1.2 Study Objectives

The objectives of the Transportation Study are to:

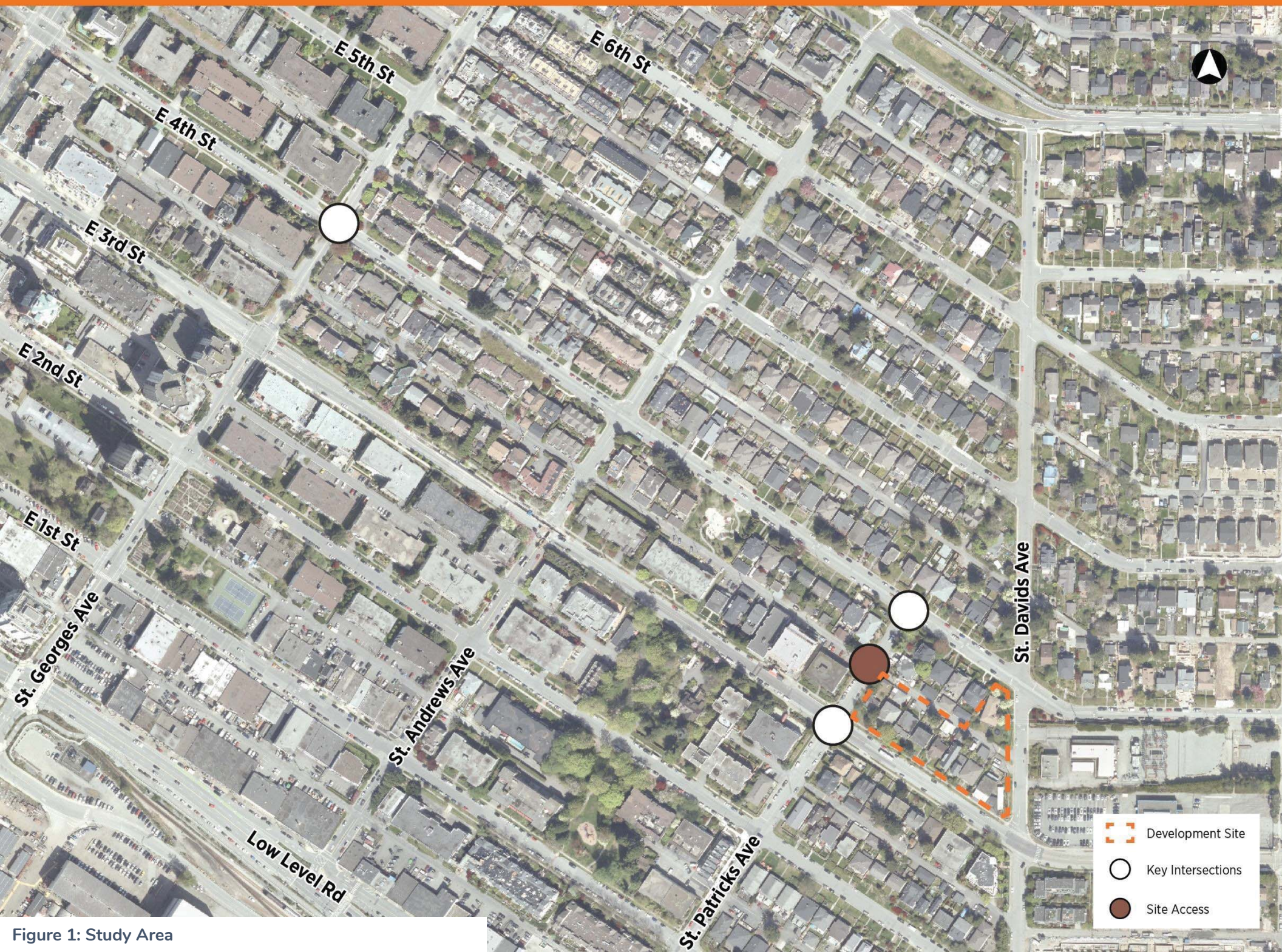
1. Estimate future site traffic generation, distribution, and assignment on the adjacent road network for the weekday morning (AM), weekday afternoon (PM), and Saturday peak periods.
2. Evaluate traffic operations of the adjacent road network and identify potential operational issues and transportation impacts due to the development.
3. Recommend mitigation measures to address off-site transportation impacts due to the development on the adjacent road network if required.
4. Evaluate the proposed site access and on-site circulation and design.
5. Review the off-street parking requirements and potential transportation demand management measures.



### 1.3 Study Area

The subject site is located at 402-438 East 3<sup>rd</sup> Street and 341-343 St Davids Avenue, North Vancouver in the Moodyville area. Site access is proposed to be located off of St. Patricks Avenue. The surrounding area is currently characterized by single- and multi-family residential with limited commercial and industrial land uses. The study area is bounded by East 4<sup>th</sup> Street to the north, St. Davids Avenue to the east, East 3<sup>rd</sup> Street to the south, and St. Georges Avenue to the west (see **Figure 1**).





- Development Site
- Key Intersections
- Site Access

Figure 1: Study Area





## 2.0 EXISTING CONDITIONS

### 2.1 Land Use

The subject site is currently located on 10 properties that are occupied by single and multi-family residential and commercial uses. The existing properties are zoned RM-2 (Medium Density Apartment Residential 2), CD-421 (Comprehensive Development 421), C-3 (Local Commercial) and RT-1 (Two-Unit Residential 1) under the City of North Vancouver's Zoning Bylaw (No. 6700).

### 2.2 Transportation Network

#### 2.2.1 Road Network

There are five roadways bordering the site and within the study area.

1. **East 3<sup>rd</sup> Street** is a two-lane minor arterial road and transit route that runs east-west. It provides a key route for commuters travelling east-west through the city. It is designated as a rapid bus transit route.
2. **East 4<sup>th</sup> Street** is a two-lane local road that runs east-west parallel to East 3<sup>rd</sup> Street.
3. **St. Patricks Avenue** is a two-lane local road that runs north-south and connects East 3<sup>rd</sup> Avenue to Low Level Road (via Esplanade Avenue), a major east-west arterial road.
4. **St. Davids Avenue** is a two-lane local road that runs north-south. It is designated as a future greenway that will connect the Green Necklace to the Spirit Trail together.
5. **St. Georges Avenue** is a two-lane minor arterial road that runs north-south and provides a connection to the Trans-Canada Highway/Highway 1.

The posted speed limit on all the roads in the study area is 50 km/h. On-street parking at the vicinity of the subject site is currently available on both sides of East 4<sup>th</sup> Street and St. David Avenue. Parking on East 3<sup>rd</sup> Street was removed with the introduction of the



RapidBus (R2 Marine Drive). Some parking on St. Davids Avenue will be removed in the future with the proposed St. Davids Greenway. On-street parking is available on some segments of St. Georges Avenue, although drivers associated with the site will unlikely park there as there are closer options available. All other characteristics of the study area are described in the *Moodyville Transportation Study (2016)*.

### 2.2.2 Study Intersections

There are three study intersections within the study area as defined by the City:

1. **St. Patricks Avenue/East 3<sup>rd</sup> Street** is an unsignalized four-leg intersection with free movement on East 3<sup>rd</sup> Street (east-west) and stop control on St. Patricks Avenue (north-south).
2. **St. Patricks Avenue/East 4<sup>th</sup> Street** is an unsignalized T-intersection with stop control on St. Patricks Avenue (north-south).
3. **St. Georges Avenue/East 4<sup>th</sup> Street** is an unsignalized four-leg intersection with free movement on St. Georges Avenue (north-south) and stop control on East 4<sup>th</sup> Street (east-west).

### 2.2.3 Existing Pedestrian and Cycling Facilities

There are a number of pedestrian and cycling facilities within proximity of the site.

- There are sidewalks present on both sides of East 3<sup>rd</sup> Street and St. Davids Avenue. There are currently no sidewalks on St. Patricks Avenue between East 4<sup>th</sup> Street and East 3<sup>rd</sup> Street. There is a marked pedestrian crossing on the west leg at the intersection of East 3<sup>rd</sup> Street/St. Patricks Avenue.
- The North Shore Spirit Trail is located within 200 metres of the site at East 2<sup>nd</sup> Street. The Spirit Trail is a 35-kilometre greenway connecting the City of North Vancouver to the rest of the North Shore in both directions.
- There is a Greenway Connector along St. Davids Avenue south of East 3<sup>rd</sup> Street that connects to the Spirit Trail.





- The Green Necklace Trail is located within close proximity to the site (within 600 metres) along East Keith Road. The Green Necklace Trail is a greenway that provides a loop around the city centre.
- There are also a number of designated neighbourhood bicycle routes in the area. These routes include East 4<sup>th</sup> Street and East 2<sup>nd</sup> Street (east of St. Davids Avenue) and St. Davids Avenue (north of East 2<sup>nd</sup> Street).

#### 2.2.4 Existing Transit Facilities

There are two transit routes in close proximity to the site.

- **R2 Marine Drive:** This frequent route runs along the North Shore and connects West Vancouver and North Vancouver. It is part of the Frequent Transit Network with 15-minute service or better until 9 p.m. every day of the week.
- **228 Lynn Valley / Lonsdale Quay:** This local route connects Lonsdale Quay to Lynn Valley and has a service frequency of 15 minutes during the peak hours, and 30 to 60 minutes during off-peak service hours.

The closest local bus stops are located at East 3<sup>rd</sup> Street/St. Patricks Avenue on the northwest corner (eastbound direction) and on the southwest corner (westbound direction). The closest frequent bus stop is located at East 3<sup>rd</sup> Street/Ridgeway Avenue.

#### 2.2.5 Transportation Policy Context

A review of existing planning documents and policy was conducted to inform the work of the Transportation Study for the proposed development.

**Official Community Plan (2008):** The Official Community Plan is a guiding document to achieving a “vibrant, diverse, and highly livable community” that is “resilient to climate or other changes, and sustainable in its ability to prosper” without negatively impacting future generations. The proposed development directly responds to the second goal of the OCP, “Integrate Land Use and Transportation Planning”. The mix of proposed uses will allow residents of Moodyville to access services and amenities within walking



distance. The is located along the future rapid transit corridor which will make active transportation and transit trips more attractive compared to vehicle trips.

**Long-Term Transportation Plan (2008):** The Long-Term Transportation Plan (LTTP) provides a road map to meeting long-term transportation goals and objectives outlined in the previous OCP. This document has a comprehensive analysis of all transportation modes, and provides a vision for each mode within the guiding principals of the OCP.

**Bicycle Master Plan (2012):** The Bicycle Master Plan (BMP) provides a guide to assist the City, in partnership with the District of North Vancouver, to develop a bicycle network that is able to “strengthen community connections, and supports a sustainable transportation system”.

**North Shore Area Transit Plan (2012):** The North Shore Area Transit Plan (NSATP) is a transit plan developed by TransLink to “align with the existing and future needs of the North Shore”. The NSATP is a document that was key in the establishment of the future North Shore Rapid Transit Corridor.

**Moodyville Area Transportation Study (2016):** The Moodyville Area Transportation Study is a document that provides recommendations for future transportation improvements that will support future development in the area. This document was used to determine and inform the following:

- The development buildout that would impact the trip generation for the study’s horizon years (2022 and 2027).
- The modal split for the area to adjust trip generation for the subject site and development traffic in the background.
- Potential road network improvements in the area to support the area.

## 2.3 Traffic Data Collection

To document the existing traffic conditions in the study area as of 2019, turning movement volumes were collected for motor vehicles, bicycle, and pedestrians for three time periods: weekday morning (AM), weekday afternoon (PM), and Saturday mid-day. The traffic counts were scheduled for the estimated peak hour based on a review of previous traffic count data. Weekday counts were conducted between 7:15 am to 8:15



am in the morning, and 4:30 pm to 5:30 pm in the afternoon. Saturday counts were conducted between 12:00 pm to 1:00 pm. The traffic counts were conducted on the following dates and (location):

- Saturday, June 15, 2019 (St. Georges Avenue/East 4<sup>th</sup> Street).
- Tuesday, June 18, 2019 (St. Patricks Avenue/East 3rd Street).
- Wednesday, June 19, 2019 (St. Georges Avenue/East 4<sup>th</sup> Street).
- Thursday, June 20, 2019 (St. Georges Avenue/East 4<sup>th</sup> Street).
- Saturday, June 22, 2019 (St. Patricks Avenue/East 4th Street).
- Saturday, June 29, 2019 (St. Patricks Avenue/East 3<sup>rd</sup> Street).

## 2.4 Traffic Model

Traffic analysis at the operational level was conducted using Synchro 9 following the Highway Capacity Manual (HCM) 2010 methodology. Four measures of effectiveness were used to characterize and evaluate the traffic operations of the study intersections:

- **Level of Service (LOS)** is a qualitative measure used to describe a roadway's operational condition based on factors such as speed, travel time, delay, and type of traffic control. It is a stratification based on six letter grades, ranging from the LOS A (excellent conditions with minimal or no delay) to LOS F (poor conditions with extensive delay). **Table 1** provides an overview of the LOS thresholds.
- **v/c ratio** is the ratio between the demand volume and the capacity of the roadway. A v/c ratio that exceeds 1.00 indicates that more vehicles are using the roadway than can be accommodated, resulting in a congested intersection with delays. A ratio of less than 0.90 is desirable in urban settings.
- **Total delay** (measured in seconds per vehicle) is the total additional travel time for a vehicle due to all delay components, including traffic control, queuing, etc.
- **95<sup>th</sup> percentile queue length** (measured in meters) is the queue length that has a 5.0% probability of being exceeded during the analysis time period.





**Table 1: Motor Vehicle Level of Service (LOS) Thresholds.**

Level of Service (LOS)	Average Vehicle Delay (seconds per vehicle)	
	Signalized	Unsignalized
A	Less than or equal to 10	Less than or equal to 10
B	>10 to 20	>10 to 15
C	>20 to 35	>15 to 25
D	>35 to 55	>25 to 35
E	>55 to 80	>35 to 50
F	More than 80	More than 50

The simulation settings for the Synchro model used the following parameters:

- Saturation flow rate of 1,900 vehicles per hour per lane.
- Passenger vehicle length of 7.5 meters.
- Heavy vehicle length of 12.2 meters.
- Peak Hour Factors (PHF) estimated from count data.
- Heavy vehicle % estimated from count data.

The 95<sup>th</sup> percentile queues are modelled in Synchro, unless otherwise noted. The observed and modelled traffic volumes were unbalanced (i.e., vehicles leaving one intersection do not all show up at the other intersection). **Appendix A** provides a copy of the Synchro reports.

## 2.5 Traffic Performance Thresholds

LOS D is the minimum accepted level of service for both signalized and unsignalized intersections in the City of North Vancouver. The minimum acceptable v/c ratio is 0.9 overall for signalized intersections, and 0.95 for individual movements.



## 2.6 Existing (2019) Traffic Conditions

The 2019 existing traffic conditions are summarized in **Table 2** and **Table 3** for the weekday morning/afternoon and Saturday periods respectively. The peak hour traffic volumes are shown in **Figure 2**. All intersection movements operate at LOS D or better during the peak period, and there are no major delays or queuing issues.

**Table 2: Existing (2019) Weekday Traffic Conditions**

Intersection	Movement	Weekday AM Peak Hour					Weekday PM Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)	Vol	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	8	0.01	A	9	0	13	0.03	A	9	1
	WBL	8	0.01	A	7	0	3	0.01	A	7	0
	WBT	10	-	A	0	0	11	-	A	0	0
	EBT	10	-	A	0	0	34	-	A	0	0
	EBR	7	-	A	0	0	4	-	A	0	0
	Overall	LOS A / DELAY 3s					LOS A / DELAY 3s				
St. Patricks Avenue/ East 3rd Street	NBLTR	36	0.16	C	15	5	85	0.4	D	25	14
	SBLTR	27	0.10	C	15	2	8	0.06	C	20	2
	WBL	19	0.02	A	8	1	22	0.03	A	9	1
	WBT	302	-	A	0	0	457	-	A	0	0
	WBR	4	-	A	0	0	6	-	A	0	0
	EBL	7	0.02	A	8	0	15	0.02	A	9	1
	EBT	269	-	A	0	0	530	-	A	0	0
	EBR	7	-	A	0	0	13	-	A	0	0
	Overall	LOS A / DELAY 2s					LOS A / DELAY 3s				
St. Georges Avenue/ East 4th Street	EBLTR	35	0.10	B	12	2	74	0.35	C	21	11
	WBLTR	25	0.07	B	13	2	29	0.18	C	19	5
	NBL	13	0.02	A	8	1	23	0.02	A	8	1
	NBT	113	-	A	0	0	319	-	A	0	0
	NBR	7	-	A	0	0	20	-	A	0	0
	SBL	1	0.07	A	8	0	10	0.01	A	8	0
	SBT	198	-	A	0	0	263	-	A	0	0
	SBR	12	-	A	0	0	12	-	A	0	0
	Overall	LOS A / DELAY 3s					LOS A / DELAY 4s				



**Table 3: Existing (2019) Saturday Traffic Conditions**

Intersection	Movement	Saturday Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	10	0.10	A	9	1
	WBL	3	0.00	A	7	0
	WBT	14	-	A	0	0
	EBT	13	-	A	0	0
	EBR	4	-	A	0	0
	Overall	LOS A / DELAY 3s				
St. Patricks Avenue/ East 3rd Street	NBLTR	29	0.09	B	15	2
	SBLTR	9	0.06	C	16	2
	WBL	11	0.02	A	8	1
	WBT	415	-	A	0	0
	WBR	4	-	A	0	0
	EBL	4	0.01	A	9	0
	EBT	345	-	A	0	0
	EBR	11	-	A	0	0
	Overall	LOS A / DELAY 1s				
St. Georges Avenue/ East 4th Street	EBLTR	39	0.17	C	16	5
	WBLTR	27	0.10	C	15	2
	NBL	15	0.02	A	8	1
	NBT	232	-	A	0	0
	NBR	14	-	A	0	0
	SBL	5	0.01	A	8	0
	SBT	233	-	A	0	0
	SBR	19	-	A	0	0
	Overall	LOS A / DELAY 2s				



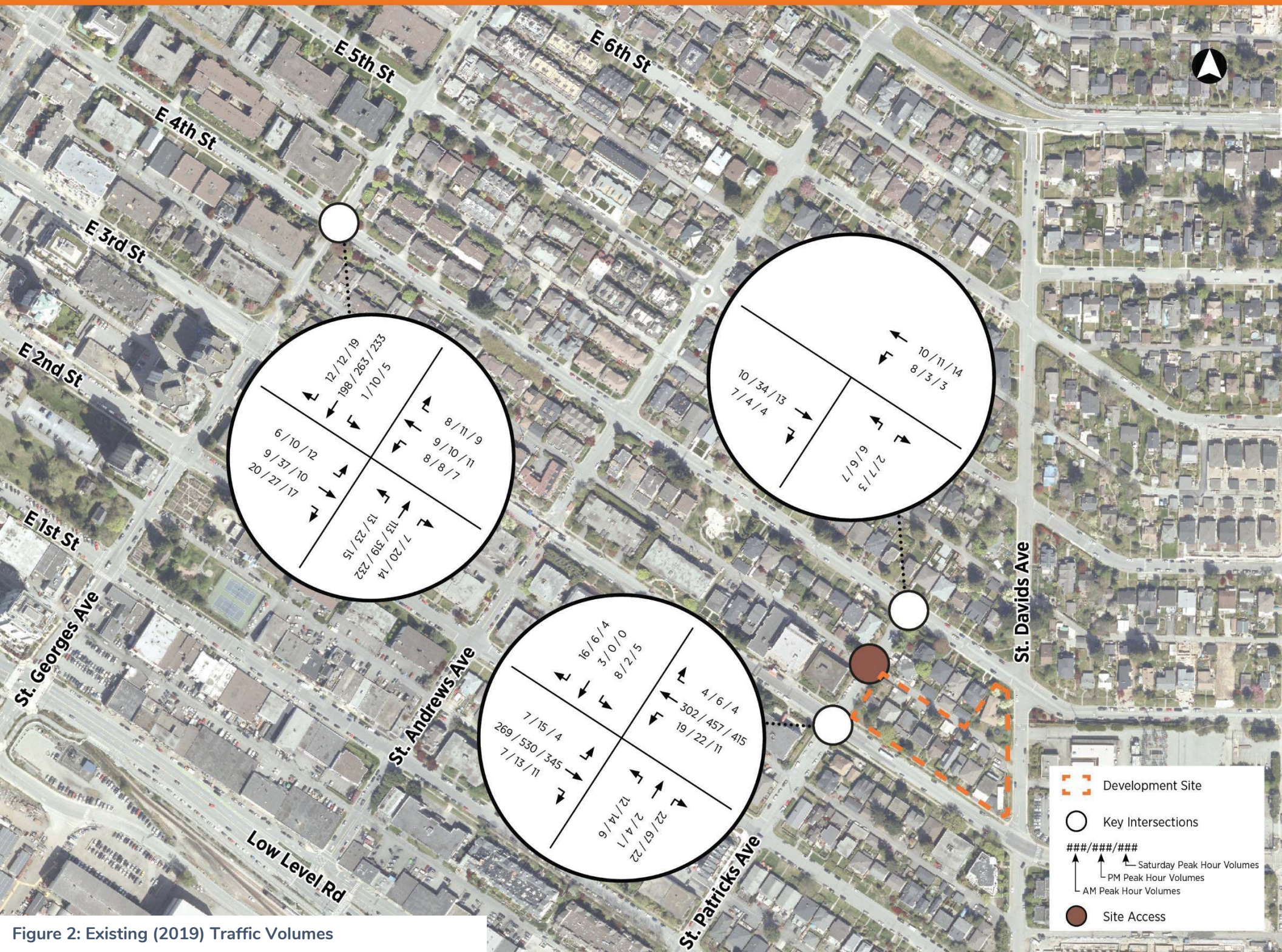


Figure 2: Existing (2019) Traffic Volumes





## 3.0 FUTURE BACKGROUND CONDITIONS

### 3.1 Trip Generation

Two horizon years for the operational analysis were defined based on the proposed development timeline: opening day of the development (2022) and five-year post-development horizon year (2027).

Two components of the background (or base) traffic volumes were estimated to determine future conditions. First, city-wide background traffic volumes were forecast using a 1.0% linear growth rate applied to the existing 2019 traffic volumes. Second, area-specific traffic volumes from anticipated redevelopment of the Moodyville area were added to background traffic as per the travel demand forecast methodology described in the *Moodyville Area Transportation Study*. These two components were summed together to estimate the total future background volumes.

The following list outlines the assumptions used as part of the trip generation component of the area-specific forecast, based on direction provided by City staff:

1. By 2045, the Moodyville area plan proposes a maximum buildout of up to 1,900 dwelling units in the area based on zoned capacity. The travel demand forecast in the *Moodyville Area Transportation Study* uses a full buildout of 1,334 dwelling units to estimate trip generation (70% of the maximum buildout).
2. According to the City, development growth in the area has occurred sooner than expected. For the purposes of the traffic analysis, 40% of the full buildout (439 of 1,334 dwelling units) was assumed to occur by 2022 (opening day horizon year) and 90% of the full buildout (1,106 out of 1,334 units) by 2027.
3. The area-specific traffic volumes excluded the 95 dwelling units identified in the *Moodyville study* for the subject site to avoid double counting.
4. Trip generation for the area-specific traffic volumes used the following parameters: 2.40 persons per dwelling unit; 3.03 trips per day; weekday AM share of daily traffic of 8.1% (30% inbound, 70% outbound); and weekday PM share of daily traffic of 9.0% (57% inbound, 43% outbound).



5. The mode share assignment used the moderate scenario (base year of 2015) of 60% auto and 40% non-auto (19% transit, 17% walk, 3% bicycle, and 1% other) for the 2045 horizon year. Mode share was adjusted for the 2022 and 2027 horizon years assuming a linear growth rate (see **Table 4**).

**Table 4: Traffic Forecast Mode Share Assumptions**

Year	Mode Share		
	Auto	Transit	Walk, Bike, and Other
2015 (Base)	69%	15%	17%
2022	67%	15%	18%
2027	65%	16%	19%
2045	60%	19%	21%

## 3.2 Trip Distribution and Assignment

The following list outlines the assumptions used as part of the trip distribution and assignment component of the city-wide and area-specific forecast.

1. Trip distribution and assignment for the city-wide traffic was based on observed directional splits in the adjacent road network from the existing 2019 count data.
2. Trip distribution and assignment for the area-specific traffic assumed 70% of trips would travel to/from the west (Lonsdale Corridor), and 30% of trips would travel to/from the east (District of North Vancouver) via East 3<sup>rd</sup> Street as per the *Moodyville Transportation Area Study*.
3. All area-specific traffic (from the 400, 500, 600, 700, and 800 block of Moodyville, representing approximately 70% of dwelling units in the full buildout for the area) travelling to/from the west for access and egress to Moodyville were assumed to use East 3<sup>rd</sup> Street due to the subject site's location on the western edge of Moodyville (see **Figure 3**). This specifically impacts the St. Patricks Avenue/East 3<sup>rd</sup> Avenue study intersection. This is a conservative assumption and potentially overestimates the amount of area-specific traffic travelling on East 3<sup>rd</sup> Street.





4. Area-specific traffic originating from the 400 block (representing approximately 30% of dwelling units in the full buildout for the area) travelling to the east are assumed to use the St. Patricks Avenue/East 3<sup>rd</sup> Avenue intersection for egress from Moodyville (see **Figure 3**). Traffic travelling from the east for access into Moodyville are assumed to use an intersection upstream of the St. Patricks Avenue/East 3<sup>rd</sup> Avenue where a full traffic signal is available for left-turning movements.
5. The City is proposing neighbourhood traffic calming measures as part of the proposed St. Davids Avenue Greenway. Specifically, within the study area, east-west traffic at St. Davids Avenue/East 4<sup>th</sup> Street will be restricted by use of a diverter. As the greenway configuration and the impact to neighbourhood circulation outside of the study area are unknown at the time of writing, all through east-west movements (i.e., the highest volumes) at St. Patricks Avenue Avenue/East 4<sup>th</sup> Street were rerouted to East 3<sup>rd</sup> Street. All other minor movement volumes remained the same. This is a conservative assumption and potentially overestimates the amount of area-specific traffic using the St. Patricks Avenue/East 3<sup>rd</sup> Avenue intersection.

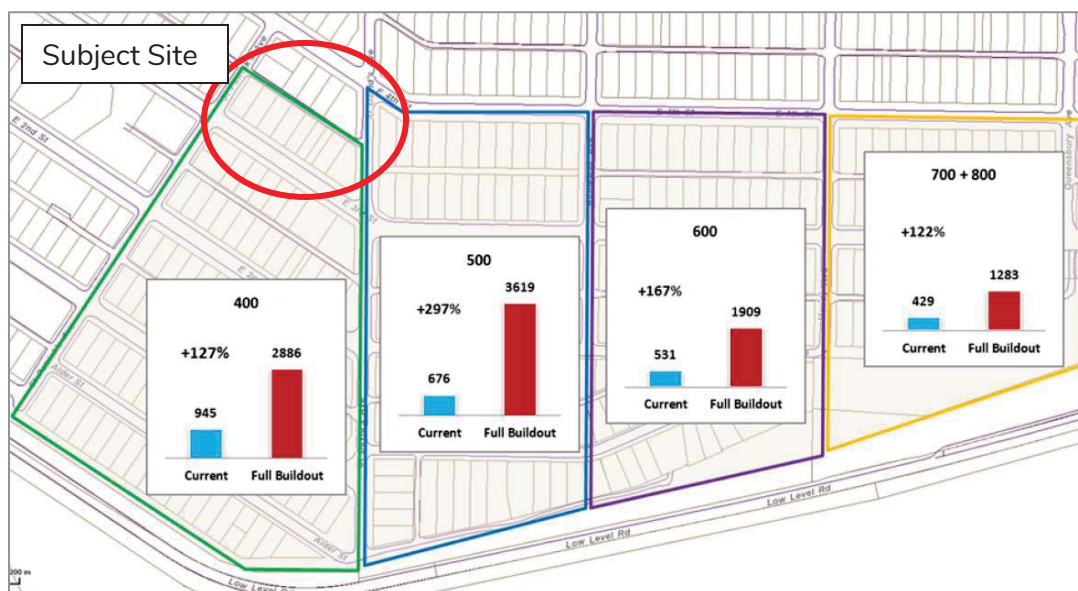


Figure 3: Moodyville Area Blocks



### 3.3 Future Background (2022) Traffic Conditions

The 2022 future background traffic conditions are summarized in **Table 5** and **Table 6** for the weekday morning/afternoon and Saturday periods respectively. The peak hour traffic volumes are shown in **Figure 4**.

During the PM peak hour, the northbound movement at St. Patricks Avenue/East 3<sup>rd</sup> Street is forecast to fail and operate at LOS E (v/c of 0.60; delay of 41 seconds per vehicle; and queue length of 23 metres). Volumes on both the minor north and southbound approach are less than 100 vehicles. All other movements operate at LOS D or better during the peak period, and there are no major delays or queuing issues.

**Table 5: Future Background (2022) Weekday Traffic Conditions**

Intersection	Movement	Weekday AM Peak Hour					Weekday PM Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)	Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	8	0.01	A	9	0	13	0.03	A	9	1
	WBL	8	0.01	A	7	0	3	0.01	A	7	0
	WBT	0	-	A	0	0	0	-	A	0	0
	EBT	0	-	A	0	0	0	-	A	0	0
	EBR	7	-	A	0	0	4	-	A	0	0
	Overall	LOS A / DELAY 6s					LOS A / DELAY 7s				
St. Patricks Avenue/ East 3rd Street	NBLTR	37	0.20	C	18	5	87	0.60	E	41	23
	SBLTR	27	0.13	C	18	3	8	0.09	D	27	2
	WBL	20	0.03	A	8	1	23	0.03	A	9	1
	WBT	389	-	A	0	0	553	-	A	0	0
	WBR	4	-	A	0	0	6	-	A	0	0
	EBL	7	0.02	A	9	0	15	0.03	A	9	1
	EBT	313	-	A	0	0	659	-	A	0	0
	EBR	7	-	A	0	0	13	-	A	0	0
	Overall	LOS A / DELAY 2s					LOS A / DELAY 4s				



**Table 5 (continued): Future Background (2022) Weekday Traffic Conditions**

Intersection	Movement	Weekday AM Peak Hour					Weekday PM Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)	Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Georges Avenue/ East 4th Street	EBLTR	36	0.10	B	12	2	76	0.37	C	22	12
	WBLTR	25	0.07	B	13	2	29	0.18	C	20	5
	NBL	13	0.02	A	8	1	24	0.03	A	8	1
	NBT	116	-	A	0	0	329	-	A	0	0
	NBR	7	-	A	0	0	21	-	A	0	0
	SBL	1	0.07	A	8	0	10	0.01	A	8	0
	SBT	204	-	A	0	0	271	-	A	0	0
	SBR	12	-	A	0	0	12	-	A	0	0
	Overall	LOS A / DELAY 3s					LOS A / DELAY 4s				





**Table 6: Future Background (2022) Saturday Traffic Conditions**

Intersection	Movement	Saturday Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	10	0.02	A	9	0
	WBL	3	0.01	A	7	0
	WBT	0	-	A	0	0
	EBT	0	-	A	0	0
	EBR	4	-	A	0	0
	Overall	LOS A / DELAY 7s				
St. Patricks Avenue/ East 3rd Street	NBLTR	30	0.11	C	15	3
	SBLTR	9	0.07	C	16	2
	WBL	11	0.02	A	8	1
	WBT	488	-	A	0	0
	WBR	4	-	A	0	0
	EBL	4	0.01	A	9	0
	EBT	424	-	A	0	0
	EBR	11	-	A	0	0
	Overall	LOS A / DELAY 1s				
St. Georges Avenue/ East 4th Street	EBLTR	40	0.17	C	16	5
	WBLTR	27	0.10	C	16	2
	NBL	15	0.02	A	8	1
	NBT	239	-	A	0	0
	NBR	14	-	A	0	0
	SBL	5	0.01	A	8	0
	SBT	240	-	A	0	0
	SBR	20	-	A	0	0
	Overall	LOS A / DELAY 2s				



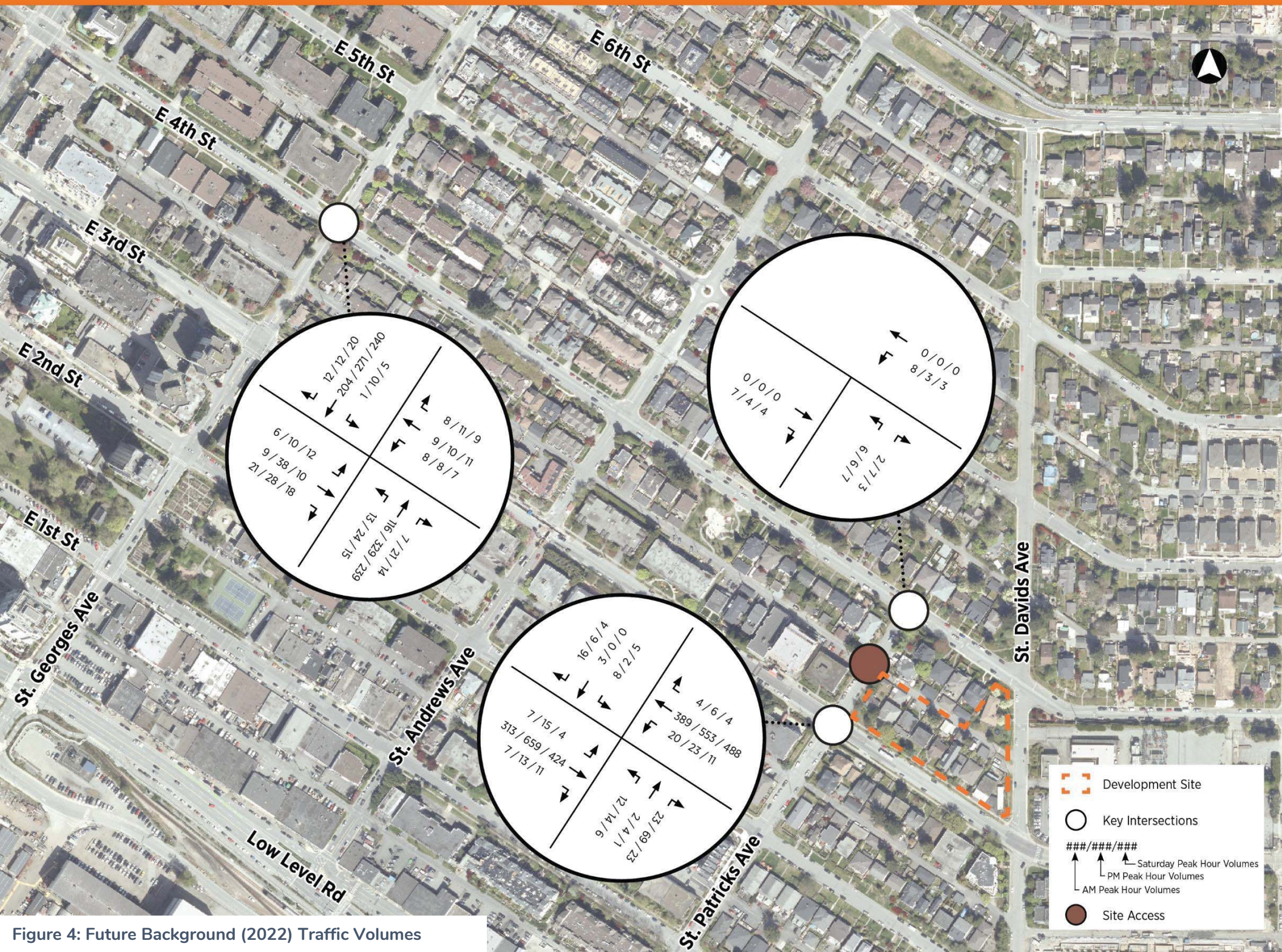


Figure 4: Future Background (2022) Traffic Volumes





### 3.4 Future Background (2027) Traffic Conditions

The 2027 future background traffic conditions are summarized in **Table 7** and **Table 8** for the weekday morning/afternoon and Saturday periods respectively. The peak hour traffic volumes are shown in **Figure 5**.

During the PM peak hour, the northbound movement at St. Patricks Avenue/East 3<sup>rd</sup> Street continues to fail and is forecast to operate at LOS F (v/c of 0.90; delay of 115 seconds per vehicle; and queue length of 46 metres). The southbound movement begins to fail and is forecast to operate at LOS E (v/c of 0.16; delay of 49 seconds; and queue length of 5 metres). Volumes on both the north and southbound minor approach are less than 100 vehicles. All other intersection movements operate at LOS D or better during the peak period, and there are no major delays or queuing issues.

**Table 7: Future Background (2027) Weekday Traffic Conditions**

Intersection	Movement	Weekday AM Peak Hour					Weekday PM Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)	Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	8	0.01	A	9	0	14	0.03	A	9	1
	WBL	9	0.01	A	7	0	3	0.01	A	7	0
	WBT	0	-	A	0	0	0	-	A	0	0
	EBT	0	-	A	0	0	0	-	A	0	0
	EBR	8	-	A	0	0	4	-	A	0	0
	Overall	LOS A / DELAY 6s					LOS A / DELAY 7s				
St. Patricks Avenue/ East 3rd Street	NBLTR	39	0.29	C	25	9	92	0.90	F	115	46
	SBLTR	29	0.19	C	24	5	8	0.16	E	49	5
	WBL	21	0.03	A	8	1	24	0.04	A	10	1
	WBT	511	-	A	0	0	687	-	A	10	0
	WBR	4	-	A	0	0	6	-	A	0	0
	EBL	8	0.02	A	9	1	16	0.03	A	9	1
	EBT	367	-	A	0	0	808	-	A	0	0
	EBR	8	-	A	0	0	14	-	A	0	0
	Overall	LOS A / DELAY 3s					LOS A / DELAY 8s				





**Table 7 (continued): Future Background (2027) Weekday Traffic Conditions**

Intersection	Movement	Weekday AM Peak Hour					Weekday PM Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)	Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Georges Avenue/ East 4th Street	EBLTR	38	0.11	B	13	3	80	0.41	D	25	14
	WBLTR	28	0.08	B	13	2	32	0.22	C	21	6
	NBL	14	0.02	A	8	1	25	0.03	A	8	1
	NBT	122	-	A	0	0	345	-	A	0	0
	NBR	8	-	A	0	0	22	-	A	0	0
	SBL	1	0.01	A	8	0	11	0.02	A	8	0
	SBT	214	-	A	0	0	285	-	A	0	0
	SBR	13	-	A	0	0	13	-	A	0	0
	Overall	LOS A / DELAY 3s					LOS A / DELAY 5s				



**Table 8: Future Background (2027) Saturday Traffic Conditions**

Intersection	Movement	Saturday Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	11	0.02	A	9	1
	WBL	3	0.01	A	7	0
	WBT	0	-	A	0	0
	EBT	0	-	A	0	0
	EBR	4	-	A	0	0
	Overall	LOS A / DELAY 7s				
St. Patricks Avenue/ East 3rd Street	NBLTR	31	0.15	C	21	4
	SBLTR	9	0.10	C	25	2
	WBL	12	0.02	A	9	1
	WBT	583	-	A	0	0
	WBR	4	-	A	0	0
	EBL	4	0.01	A	9	0
	EBT	526	-	A	0	0
	EBR	12	-	A	0	0
	Overall	LOS A / DELAY 1s				
St. Georges Avenue/ East 4th Street	EBLTR	42	0.19	C	17	5
	WBLTR	30	0.11	C	17	3
	NBL	16	0.02	A	8	1
	NBT	251	-	A	0	0
	NBR	15	-	A	0	0
	SBL	5	0.01	A	8	0
	SBT	252	-	A	0	0
	SBR	21	-	A	0	0
	Overall	LOS A / DELAY 3s				



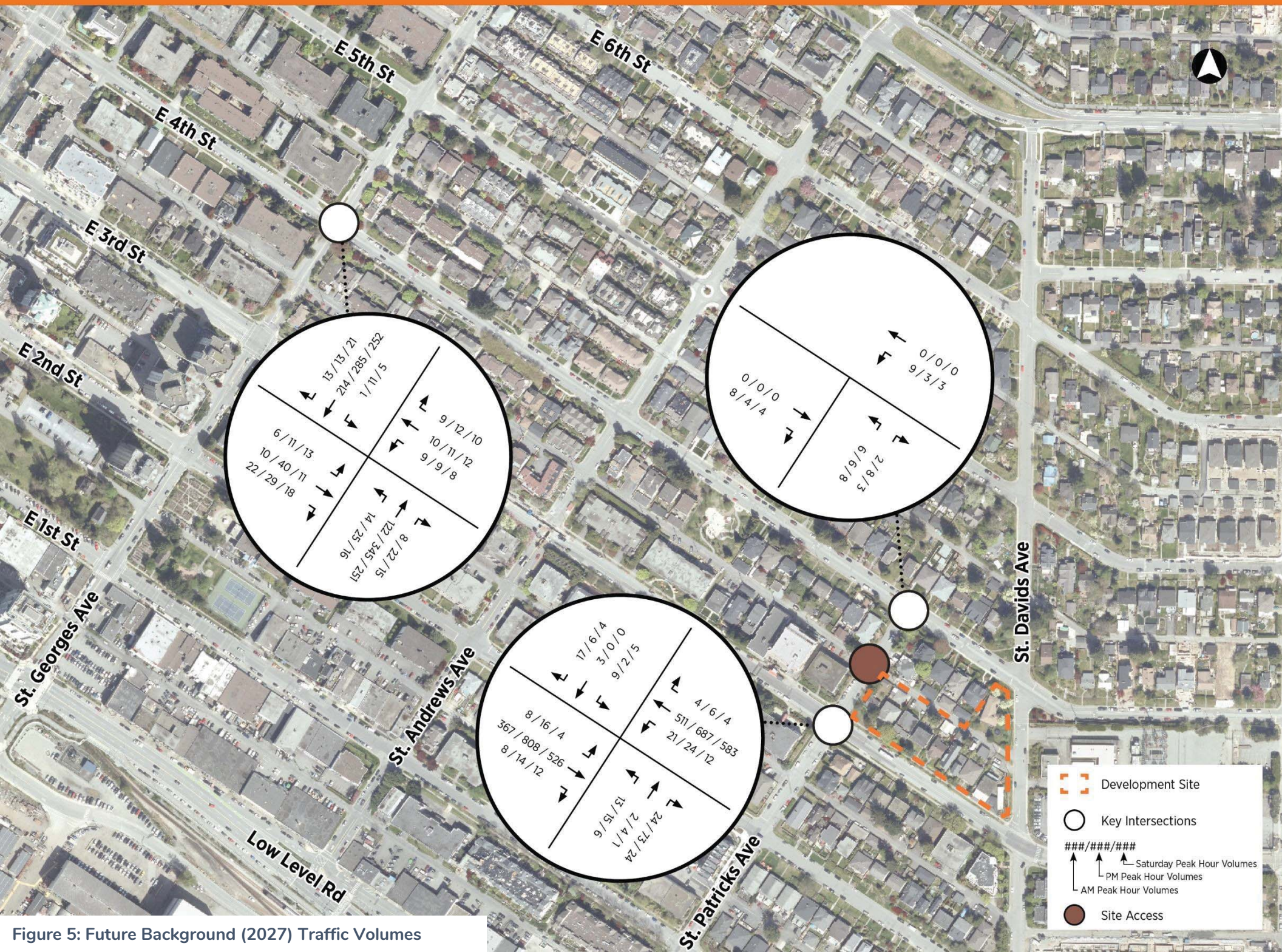


Figure 5: Future Background (2027) Traffic Volumes





### 3.6 Future Background Improvement Measures

By 2027, traffic operations for the north and southbound movements at the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street are forecast to fail and operate at LOS F and E respectively during the busiest analysis hour (weekday PM period). While traffic volumes on the minor approaches are less than 100 vehicles per hour during peak time, the intersection delays are a result of the heavy through volumes on East 3<sup>rd</sup> Street. This makes it difficult for north and southbound through and left-turning traffic to find a gap.

#### 3.6.1 Traffic Signal Warrant

A Transportation Association of Canada (TAC) signal warrant was conducted for the 2027 background scenario for the St. Patricks Avenue/East 3<sup>rd</sup> Street intersection (see **Appendix B**). Only two hours of traffic volume data was used to estimate the warrant score (six hours of volume data are recommended). For that reason, the warrant score will be overestimated as it does not take into account mid-day volumes, which are lower than the morning and afternoon peak hour volumes.

- The warrant score was estimated to be 50 (29 vehicle score and 21 pedestrian score) and did not meet the warrant threshold of 100 points.
- The warrant criteria of 75 vehicles on the side street was not satisfied.

Based on the TAC signal warrant, a signal at the St. Patricks Avenue/East 3<sup>rd</sup> Street intersection for the 2027 background horizon year is not recommended at this time. It is noted that meeting or not meeting the warrant calculation is not sufficient grounds by itself to recommend or not recommend a traffic signal.

#### 3.6.2 Transportation Impacts

A traffic signal was found to not be warranted for the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street based on the TAC signal warrant. Due to the expected congestion on East 3<sup>rd</sup> Street, drivers will likely take alternative routes.

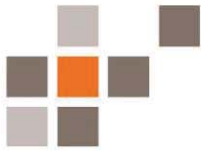
- Southbound right-turning traffic travelling to/from the west (Lonsdale Corridor) may re-route from using St. Patricks Avenue/East 3<sup>rd</sup> Street to using St. Patricks



- Avenue/East 4<sup>th</sup> Street. However, due to the low volume of vehicles travelling in this direction, this is not anticipated to be an issue with consideration to East 4<sup>th</sup> Street's classification as a shared neighbourhood bikeway.
- Southbound left-turning traffic using St. Patricks Avenue/East 3<sup>rd</sup> Street travelling to/from the east will have limited options, as no through movement in the eastbound and westbound direction will be permitted at St. Davids Avenue/East 4<sup>th</sup> Street as a result of the proposed diverter. However, less traffic is expected to go to/from this direction to the east compared to the west based on the expected trip distribution.
  - The adjacent signalized intersections on East 3<sup>rd</sup> Street at Ridgeway Avenue (to the east) and St. Andrews Avenue (to the west) are in close proximity to the St. Patricks Avenue/East 3<sup>rd</sup> Street intersection (less than 400 metres) and may provide a platooning effect that will provide sufficient gaps for traffic to turn out of the intersection onto East 3<sup>rd</sup> Street. Microsimulation modelling would be required to confirm this.

There are a number of pedestrians crossing on all four legs at the St. Patricks Avenue/East 3<sup>rd</sup> Street intersection based on existing count data (AM peak hour: 32 pedestrians; PM peak hour: 35 pedestrians; and Saturday peak hour: 33 pedestrians). As a local bus stop is located at this intersection (northwest and southeast corner), additional marked pedestrian crossings should be provided at the intersection, particularly on the east leg. Sensitivity testing using additional pedestrian volumes did not result in the warrant being met as the second warrant criteria of 75 vehicles on the side street was unchanged.

Traffic volumes at the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street should be monitored and a review of the existing crossing should be completed in the future to determine if upgrades are needed.



## 4.0 FUTURE DEVELOPMENT CONDITIONS

### 4.1 Proposed Land Use

The mixed-use development is planned to consist of approximately 146,638 ft<sup>2</sup> of gross floor area with the following proposed uses as of August 2020:

- Multi-family residential and live/work (166 dwelling units).
- Retail (11,071 ft<sup>2</sup> GFA).
- Restaurant (7,205 ft<sup>2</sup> GFA) and café (2,323 ft<sup>2</sup> GFA).
- Office (3,448 ft<sup>2</sup> GFA) and medical office (1,115 ft<sup>2</sup> GFA).
- Child care (3,354 ft<sup>2</sup> GFA; 30 to 35 spaces).

Site access is proposed to be located off of St. Patricks Avenue with access to structured underground parking. Access via the laneway to/from St. Davids Avenue will be restricted to support the proposed St. Davids Avenue Greenway. The development is planned to occur in one phase. The opening day of the development is anticipated to be 2022. **The traffic analysis in Section 4 are based on land use quantities from February 2020, which are larger in size compared to the current August 2020 program.**

### 4.2 Trip Generation

The number of external vehicle trips forecast to be generated from the proposed development was estimated using the methodology described in the Institute of Transportation Engineers (ITE)'s *Trip Generation Handbook*, 3<sup>rd</sup> Edition. Baseline vehicle trips were estimated using trip generation data from the *Trip Generation Manual*, 10<sup>th</sup> Edition, supplemented with additional data where possible (see **Table 9** for trip generation rates, and **Table 10 & 11** for trips based on the February 2020 program).

As the site is a mixed-use and infill development, internal capture and mode share adjustments were made following the methodology and procedures outlined in the NCHRP Report 684: *Enhancing Internal Trip Capture Estimation for Mixed-Use Development*. Mode share adjustments were consistent with the assumptions in the background scenario (see **Section 3.1**). See **Appendix B** for the internal trip calculations.





**Table 9: Site Vehicle Trip Generation Rates**

Land Use	Trip Generation Source	Land Use Unit	Weekday AM			Weekday PM			Saturday		
			Rate	In	Out	Rate	In	Out	Rate	In	Out
Residential	ITE 221: Multifamily Housing (Mid-Rise)	units	0.36	26%	74%	0.44	61%	39%	0.44	49%	51%
Retail	ITE 820: Shopping Center <sup>1</sup>	sq. ft. GLA	0.94	62%	38%	3.81	48%	52%	4.50	52%	48%
Restaurant	ITE 932: High-Turnover (Sit Down) Restaurant	sq. ft. GFA	9.94	55%	45%	9.77	62%	38%	11.19	51%	49%
Café	Caltrans Bakery & Café <sup>2</sup>	sq. ft. GFA	5.21	47%	53%	8.46	50%	50%	8.46	50%	50%
Office	ITE 710: General Office Building	sq. ft. GFA	1.16	86%	14%	1.15	16%	84%	0.53	54%	46%
Medical Office	ITE 720: Medical-Dental Office Building	sq. ft. GFA	2.78	78%	22%	3.46	28%	72%	3.10	57%	43%
Child Care	ITE 565: Day Care Center	sq. ft. GFA	11.00	53%	47%	11.12	47%	53%	1.70	63%	37%

<sup>1</sup> ITE land use code 820 (Shopping Center) uses gross leasable area as the independent variable to estimate trip generation. The floor area used to estimate trip generation in this report used gross floor area instead gross leasable area. As a result, the number of forecast vehicle trips for the proposed retail use will be overestimated.

<sup>2</sup> All baseline vehicle trip generation rates used in this report are based on data from ITE's *Trip Generation Manual*, 10<sup>th</sup> Edition except for the proposed "Café" use. Data from Caltran's *Trip-Generation Rates for Urban Infill Land Uses in California* report was used as it is a better reflection of the proposed use (i.e., neighbourhood-oriented bakery and coffee shop) and site context (i.e., urban infill) than the baseline ITE rate (ITE land use code 939). The baseline ITE rate overestimated peak hour traffic volumes by 93% and 70% respectively for the weekday morning and afternoon periods according to the Caltran report.



**Table 10: Site Vehicle Trips, Baseline**

Land Use	Trip Generation Source	Land Use Quantity	Land Use Unit	Weekday AM			Weekday PM			Saturday		
				In	Out	Total	In	Out	Total	In	Out	Total
Residential	ITE 221: Multifamily Housing (Mid-Rise)	171	units	16	46	62	46	29	75	37	38	75
Retail	ITE 820: Shopping Center	12,242	sq. ft. GFA	7	5	12	23	24	47	29	26	55
Restaurant	ITE 932: High-Turnover (Sit Down) Restaurant	7,222	sq. ft. GFA	40	32	72	44	27	71	41	40	81
Café	Caltrans Bakery & Café	2,025	sq. ft. GFA	5	6	11	9	8	17	9	8	17
Office	ITE 710: General Office Building	3,100	sq. ft. GFA	3	1	4	1	3	4	1	1	2
Medical Office	ITE 720: Medical-Dental Office Building	1,469	sq. ft. GFA	3	1	4	1	4	5	3	2	5
Child Care	ITE 565: Day Care Center	3,200	sq. ft. GFA	19	16	35	17	19	36	3	2	5
<b>Total (Baseline)</b>				<b>93</b>	<b>107</b>	<b>200</b>	<b>141</b>	<b>114</b>	<b>255</b>	<b>123</b>	<b>117</b>	<b>240</b>

Note: Land use quantities presented in Table 10 used in the traffic analysis reflect an earlier development program from February 2020. The latest quantities are presented on page 31 and reduced in size compared to March 2020—the difference is negligible. August 2020 baseline trip generation estimates are 198 trips for the weekday AM peak hour and 253 trips for the weekday PM peak hour.



**Table 11: Site Vehicle Trips, Adjusted for Mode Share and Internal Capture**

Land Use	Weekday AM			Weekday PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total
Residential	16	46	62	46	29	75	37	38	75
Retail	7	5	12	23	24	47	29	26	55
Restaurant and Café	45	38	83	53	35	88	50	48	98
Office and Medical Office	6	2	8	2	7	9	4	3	7
Child Care	19	16	35	17	19	36	3	2	5
<b>Total (Baseline)</b>	<b>93</b>	<b>107</b>	<b>200</b>	<b>141</b>	<b>114</b>	<b>255</b>	<b>123</b>	<b>117</b>	<b>240</b>
<b>Total (Adjusted for Mode Share and Internal Capture)</b>	<b>54</b>	<b>60</b>	<b>114</b>	<b>67</b>	<b>48</b>	<b>115</b>	<b>49</b>	<b>47</b>	<b>96</b>

Note: Internal capture rates for the Saturday peak period use the weekday PM peak hour due to the lack of available national data from ITE and lack of available local data specific to the Vancouver region. Average vehicle occupancy numbers used to estimate person trips are based on the baseline ITE occupancy for available land uses; all other vehicle occupancy numbers are based on a local average for all trips as reported in TransLink's 2011 Metro Vancouver Regional Screenline Survey.





The forecast number of external site vehicle trips based on the estimated trip generation for the proposed development are as follows (see **Figure 5**):

- **Weekday morning (AM) peak hour:** 114 total vehicle trips (54 inbound trips and 60 outbound trips);
- **Weekday afternoon (PM) peak hour:** 115 total vehicle trips (67 inbound trips and 48 outbound trips); and
- **Saturday mid-day peak hour:** 96 total vehicle trips (49 inbound trips and 47 outbound trips).

Vehicle trips from the existing subject site consisting of single detached and duplex residential uses were not removed from the background traffic. As a result, volumes on the southbound movement for St. Patricks Avenue/East 3<sup>rd</sup> Street and northbound movement for St. Patricks Avenue/East 4<sup>th</sup> Street are likely to be overestimated for the analysis time periods.

Further reductions to the number of net external vehicle trip are feasible by accounting for pass-by trips and transportation demand management measures. However, they are not considered in the analysis. Specific to trip reductions associated with TDM, there are no reliable data to estimate trip reductions in the literature (except for parking reduction) and are avoided here as a conservative assumption. Potential reductions in vehicle trips attributed to the planned RapidBus service could also be considered, but are assumed to be already included within the Moodyville mode share target as a conservative assumption (see **Section 3.1**).



### 4.3 Trip Distribution and Assignment

Trip distribution and assignment was estimated by a combination of the observed directional splits on the adjacent road network from the existing 2019 count data, and TransLink's trip diary origin and destination data, as described in the *Moodyville Area Transportation Study*. Trip distribution for the weekday AM and PM peak hours were assumed to be the same, while the Saturday distribution differed slightly.

The weekday AM and PM peak hour distribution are as follows:

1. 60% of trips to/from the west (Lonsdale Corridor and north of Highway 1) via East 3<sup>rd</sup> Street.
  - a. 70% of trips to/from the west (Lonsdale Corridor) via East 3<sup>rd</sup> Street.
  - b. 30% of trips to/from the north of Highway 1 via East 3<sup>rd</sup> Street and St. Georges Avenue.
2. 30% to/from the east (District of North Vancouver) via East 3<sup>rd</sup> Street.
3. 10% to/from the south via St. Patricks Avenue.

The Saturday mid-day peak hour distribution are as follows:

1. 40% of trips to/from the west (Lonsdale Corridor and north of Highway 1) via East 3<sup>rd</sup> Street.
  - a. 70% of trips to/from the west (Lonsdale Corridor) via East 3<sup>rd</sup> Street.
  - b. 30% of trips to/from the north of Highway 1 via East 3<sup>rd</sup> Street and St. Georges Avenue.
2. 60% to/from the east (District of North Vancouver) via East 3<sup>rd</sup> Street.



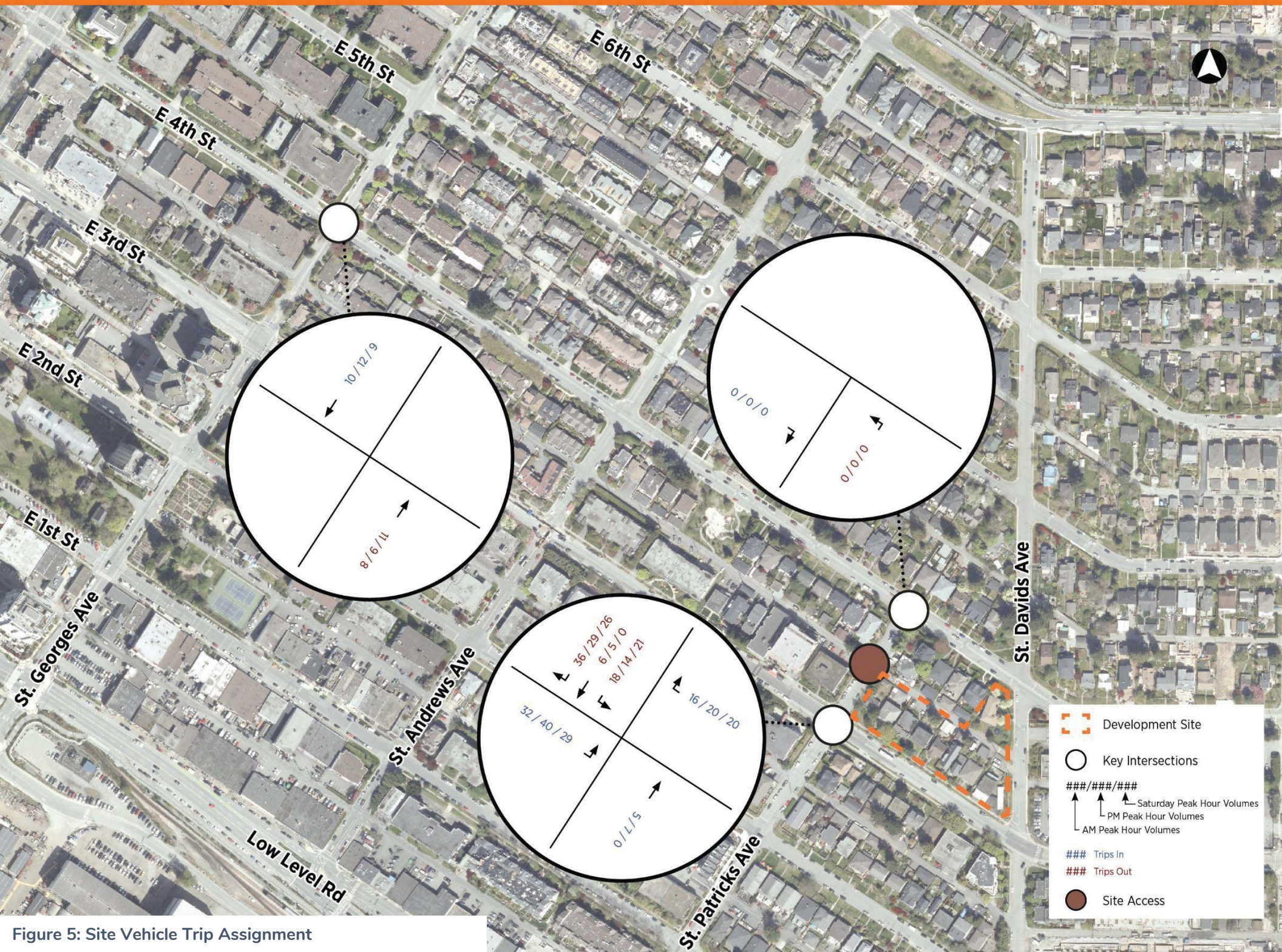


Figure 5: Site Vehicle Trip Assignment





#### 4.4 Future Post-Development (2022) Traffic Conditions

The 2022 future post-development traffic conditions are summarized in **Table 12** and **Table 13** for the weekday morning/afternoon and Saturday periods respectively. The peak hour traffic volumes are shown in **Figure 7**.

Traffic operations are comparable to the 2022 background scenario. During the PM peak hour at the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street:

- The overall intersection is forecast to operate at LOS D with an average delay of 32 seconds per vehicle.
- The northbound movement fails and is forecast to operate at LOS F (v/c of 1.13; delay of 187 seconds per vehicle; and queue length of 62 metres). The modelled queue length extends past mid-block towards East 2<sup>nd</sup> Street.
- The southbound movement fails is forecast to operate at LOS F (v/c of 1.26, delay of 273 seconds per vehicle; and queue length of 59 metres). The modelled queue length extends past mid-block and the proposed site access towards East 4<sup>th</sup> Street.
- Volumes on both the north and southbound minor approach are less than 100 vehicles.

All other intersection movements operate at LOS D or better during the peak period, and there are no major delays or queuing issues.



**Table 12: Future Post-Development (2022) Weekday Traffic Conditions**

Intersection	Movement	Weekday AM Peak Hour					Weekday PM Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)	Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	8	0.01	A	9	0	13	0.03	A	9	1
	WBL	8	0.01	A	7	0	3	0.01	A	7	0
	WBT	0	-	A	0	0	0	-	A	0	0
	EBT	0	-	A	0	0	0	-	A	0	0
	EBR	7	-	A	0	0	4	-	A	0	0
	Overall	LOS A / DELAY 6s					LOS A / DELAY 7s				
St. Patricks Avenue/ East 3rd Street	NBLTR	42	0.36	D	30	11.3	94	1.13	F	187	62
	SBLTR	87	0.52	D	35	21.0	56	1.26	F	273	59
	WBL	20	0.03	A	8	0.8	23	0.03	A	9	1
	WBT	389	-	A	0	0.0	553	-	A	0	0
	WBR	20	-	A	0	0.0	26	-	A	0	0
	EBL	39	0.09	A	9	2.3	55	0.1	A	10	2
	EBT	313	-	A	0	0.0	659	-	A	0	0
	EBR	7	-	A	0	0.0	13	-	A	0	0
	Overall	LOS A / DELAY 6s					LOS D / DELAY 32s				
St. Georges Avenue/ East 4th Street	EBLTR	36	0.10	B	13	2	76	0.38	C	23	13
	WBLTR	25	0.07	B	13	2	29	0.19	C	20	5
	NBL	13	0.02	A	8	1	24	0.03	A	8	1
	NBT	127	-	A	0	0	338	-	A	0	0
	NBR	7	-	A	0	0	21	-	A	0	0
	SBL	1	0.07	A	8	0	10	0.01	A	8	0
	SBT	214	-	A	0	0	283	-	A	0	0
	SBR	12	-	A	0	0	12	-	A	0	0
	Overall	LOS A / DELAY 2s					LOS A / DELAY 4s				



**Table 13: Future Post-Development (2022) Saturday Traffic Conditions**

Intersection	Movement	Saturday Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	10	0.02	A	9	0
	WBL	3	0.01	A	7	0
	WBT	0	-	A	0	0
	EBT	0	-	A	0	0
	EBR	4	-	A	0	0
	Overall	LOS A / DELAY 7s				
St. Patricks Avenue/ East 3rd Street	NBLTR	30	0.15	C	22	4
	SBLTR	56	0.53	D	35	21
	WBL	11	0.02	A	8	1
	WBT	488	-	A	0	0
	WBR	24	-	A	0	0
	EBL	33	0.07	A	9	2
	EBT	424	-	A	0	0
	EBR	11	-	A	0	0
	Overall	LOS A / DELAY 5s				
St. Georges Avenue/ East 4th Street	EBLTR	40	0.18	C	16	5
	WBLTR	27	0.10	C	16	3
	NBL	15	0.02	A	8	1
	NBT	247	-	A	0	0
	NBR	14	-	A	0	0
	SBL	5	0.01	A	8	0
	SBT	249	-	A	0	0
	SBR	20	-	A	0	0
	Overall	LOS A / DELAY 2s				



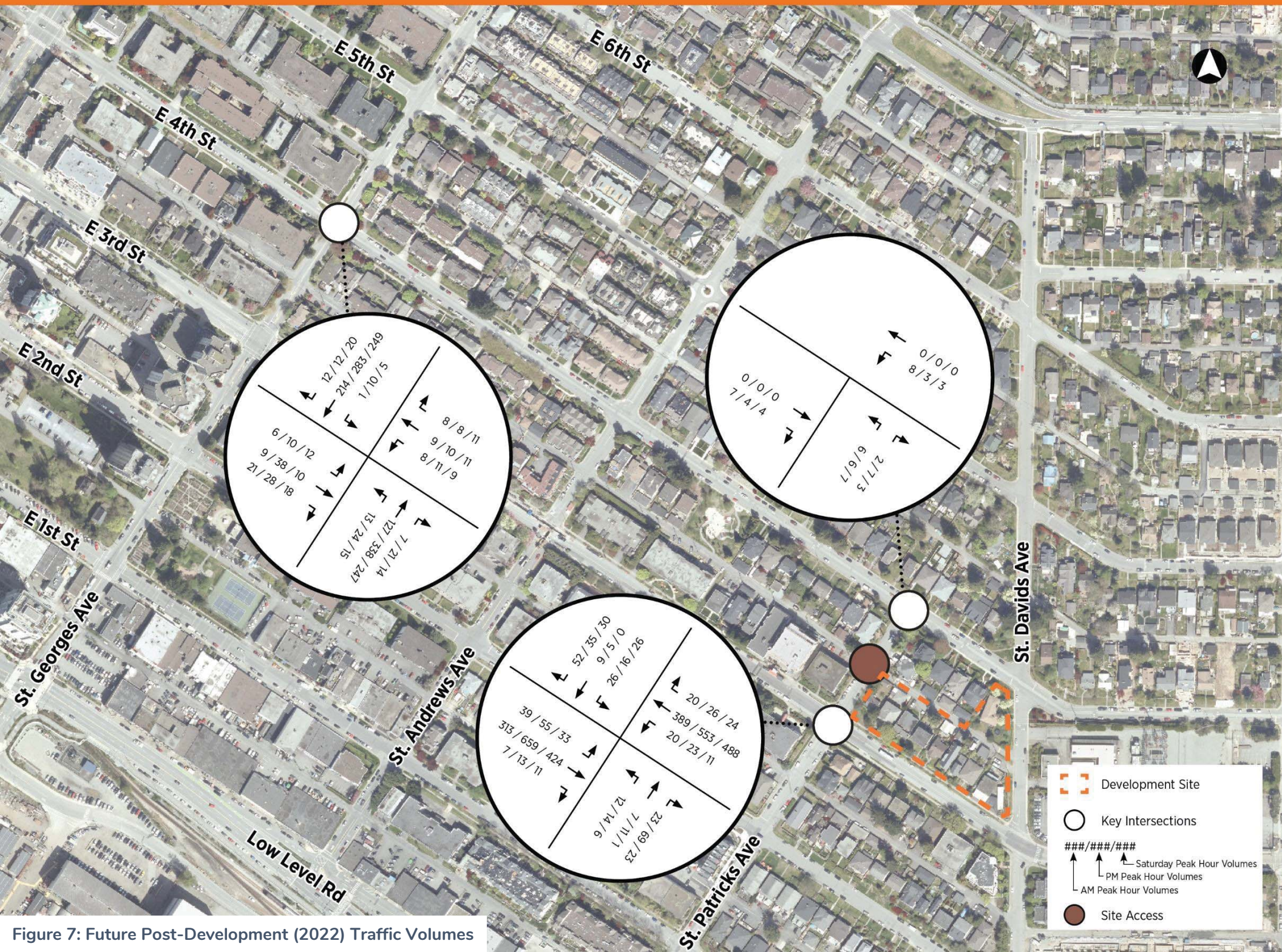


Figure 7: Future Post-Development (2022) Traffic Volumes





## 4.5 Future Post-Development (2027) Traffic Conditions

The 2027 future post-development traffic conditions are summarized in **Table 14** and **Table 15** for the weekday morning/afternoon and Saturday periods respectively. The peak hour traffic volumes are shown in **Figure 8**.

Traffic operations are comparable to the 2027 background scenario. During the PM peak hour at the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street:

- The overall intersection is forecast to operate at LOS F with an average delay of 170 seconds per vehicle.
- The northbound movement fails and is forecast to operate at LOS F (v/c of 2.06; delay of 615 seconds per vehicle; and queue length of 101 metres). The modelled queue length extends to the upstream intersection at East 2<sup>nd</sup> Street.
- The southbound movement fails is forecast to operate at LOS F (v/c of 5.65, delay of 2,499 seconds per vehicle; and queue length of 104 metres). The modelled queue length extends to the upstream intersection at East 4<sup>th</sup> Street.
- Volumes on both the north and southbound minor approach are less than 100 vehicles.

Traffic operations at St. Patricks Avenue/East 3<sup>rd</sup> Street similarly fail during the AM peak hour (both north and southbound) and during the Saturday peak hour (northbound only), although the forecast delay and queue lengths are less than the PM period.

All other intersection movements operate at LOS D or better during the peak period, and there are no major delays or queuing issues.



**Table 14: Future Post-Development (2027) Weekday Traffic Conditions**

Intersection	Movement	Weekday AM Peak Hour					Weekday PM Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)	Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	15	0.01	A	9	0	14	0.03	A	9	1
	WBL	9	0.01	A	7	0	3	0.01	A	7	0
	WBT	11	-	A	0	0	0	-	A	0	0
	EBT	11	-	A	0	0	0	-	A	0	0
	EBR	14	-	A	0	0	4	-	A	0	0
	Overall	LOS A / DELAY 6s					LOS A / DELAY 7s				
St. Patricks Avenue/ East 3rd Street	NBLTR	52	0.55	F	54	20	99	2.06	F	615	101
	SBLTR	155	0.78	F	76	38	56	5.65	F	2499	104
	WBL	21	0.03	A	8	1	24	0.04	A	10	1
	WBT	548	-	A	0	0	687	-	A	10	0
	WBR	42	-	A	0	0	26	-	A	0	0
	EBL	78	0.11	A	10	3	56	0.12	B	11	3
	EBT	386	-	A	0	0	808	-	A	0	0
	EBR	8	-	A	0	0	14	-	A	0	0
	Overall	LOS B / DELAY 10s					LOS F / DELAY 170s				
St. Georges Avenue/ East 4th Street	EBLTR	38	0.11	B	13	3	80	0.43	D	26	15
	WBLTR	28	0.09	B	13	2	32	0.23	C	22	7
	NBL	14	0.02	A	8	1	25	0.03	A	8	1
	NBT	133	-	A	0	0	354	-	A	0	0
	NBR	8	-	A	0	0	22	-	A	0	0
	SBL	1	0.01	A	8	0	11	0.02	A	8	0
	SBT	224	-	A	0	0	297	-	A	0	0
	SBR	13	-	A	0	0	13	-	A	0	0
	Overall	LOS A / DELAY 3s					LOS A / DELAY 5s				





**Table 15: Future Post-Development (2027) Saturday Traffic Conditions**

Intersection	Movement	Saturday Peak Hour				
		Vol (veh)	v/c	LOS	Delay (s/veh)	Queue (m)
St. Patricks Avenue/ East 4th Street	NBLR	11	0.02	A	9	1
	WBL	3	0.01	A	7	0
	WBT	0	-	A	0	0
	EBT	0	-	A	0	0
	EBR	4	-	A	0	0
	Overall	LOS A / DELAY 7s				
St. Patricks Avenue/ East 3rd Street	NBLTR	31	0.22	D	31	6
	SBLTR	56	0.72	F	63	34
	WBL	12	0.02	A	9	1
	WBT	583	-	A	0	0
	WBR	24	-	A	0	0
	EBL	33	0.08	A	10	2
	EBT	526	-	A	0	0
	EBR	12	-	A	0	0
	Overall	LOS A / DELAY 7s				
St. Georges Avenue/ East 4th Street	EBLTR	42	0.20	C	17	5
	WBLTR	30	0.12	C	17	3
	NBL	16	0.02	A	8	1
	NBT	259	-	A	0	0
	NBR	15	-	A	0	0
	SBL	5	0.01	A	8	0
	SBT	261	-	A	0	0
	SBR	21	-	A	0	0
	Overall	LOS A / DELAY 3s				



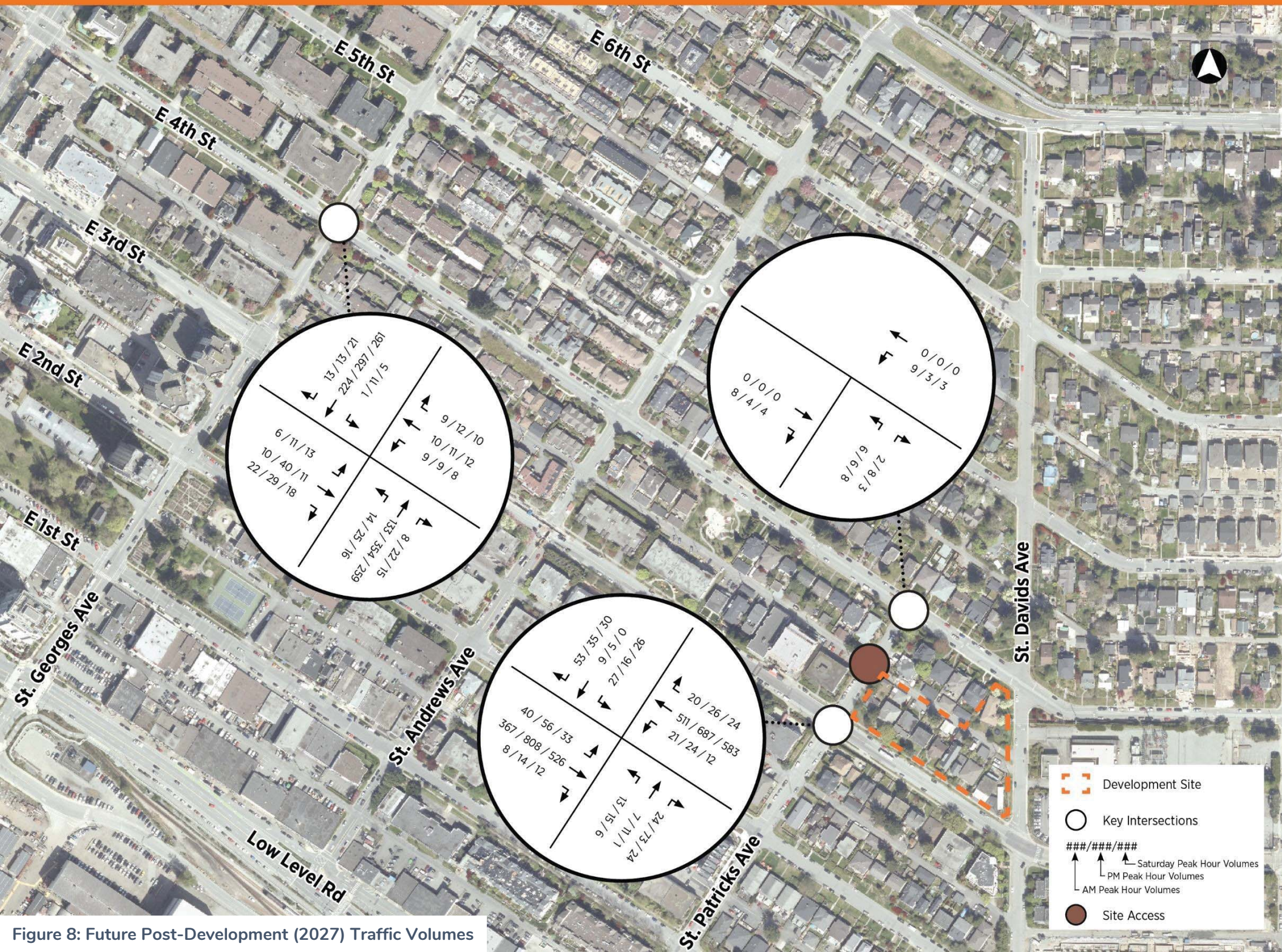


Figure 8: Future Post-Development (2027) Traffic Volumes





## 4.6 Future Post-Development Mitigation Measures

By 2027, traffic operations for the north and southbound movements at the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street are forecast to fail and operate at LOS F during the busiest analysis hour (weekday PM period). The movements are forecast to fail during the weekday AM period (both north and southbound) and the Saturday period (northbound only) as well. Similar to the background scenario, traffic volumes on the minor approaches are less than 100 vehicles per hour during peak time. For this reason, the intersection delays are a result of the heavy through volumes on East 3<sup>rd</sup> Street. This makes it difficult for north and southbound through and left-turning traffic to find a gap.

### 4.6.1 TAC Traffic Signal Warrant

A Transportation Association of Canada (TAC) signal warrant was conducted for the 2027 post-development scenario for the St. Patricks Avenue/East 3<sup>rd</sup> Street intersection (see **Appendix B**). Only two hours of traffic volume data was used to estimate the warrant score (six hours of volume data are recommended). For that reason, the warrant score will be overestimated as it does not take into account mid-day volumes, which are lower than the morning and afternoon peak hour volumes.

- The warrant score was estimated to be 112 (83 vehicle score and 29 pedestrian score) and met the warrant threshold of 100 points.
- The warrant criteria of 75 vehicles on the side street was not satisfied.

Based on the TAC signal warrant, a signal at the St. Patricks Avenue/East 3<sup>rd</sup> Street intersection for the 2027 background horizon year is not recommended at this time. It is noted that meeting or not meeting the warrant calculation is not sufficient grounds by itself to recommend or not recommend a traffic signal.



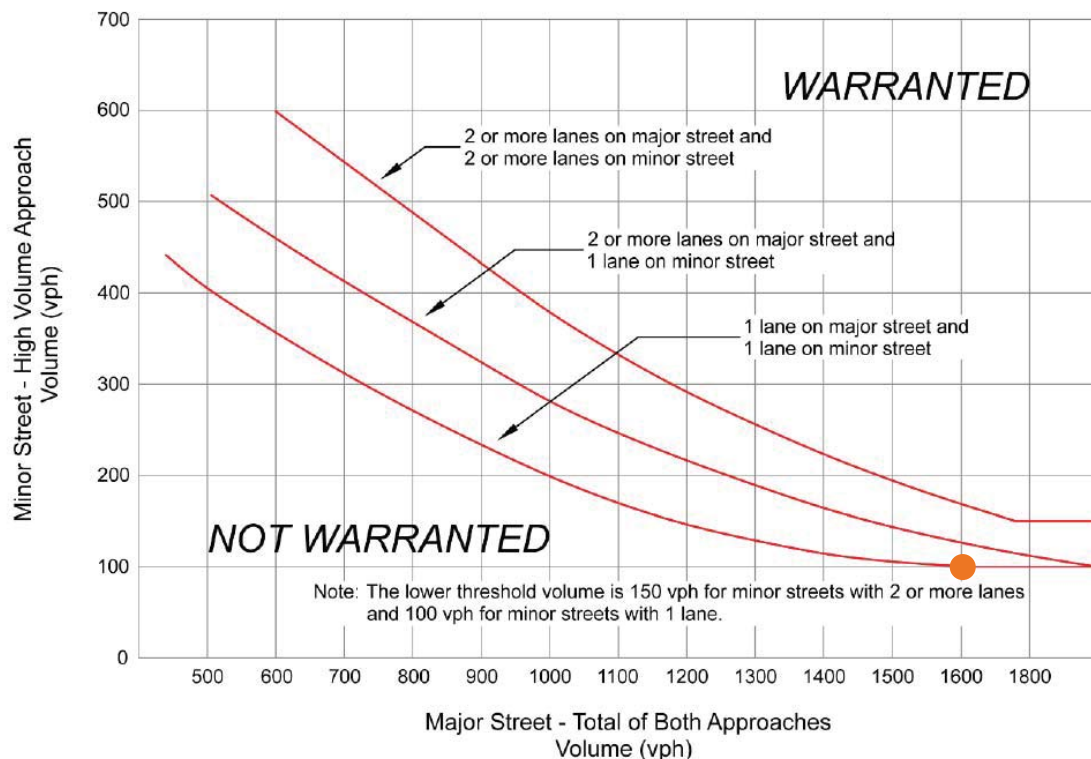


#### 4.6.2 BC MOTI Traffic Signal Warrant

A BC Ministry of Transportation and Infrastructure (MOTI) signal warrant (as described in Section 400 of the *Electrical and Traffic Engineering Manual*) was conducted for the 2027 post-development scenario for the St. Patricks Avenue/East 3<sup>rd</sup> Street intersection for the PM peak hour. The warrant for a “Large Urban” location type (population of 10,000 or more) with a major (posted or 85<sup>th</sup> percentile) road speed of 70 km/h or less was used.

Based on a major approach volume of 1,615 vehicles per hour and a minor approach volume of 99 vehicles (northbound approach based on the larger volume of the minor approaches; see orange dot in **Figure 9**), the warrant was not satisfied.

**Figure 9: BC MOTI Signal Warrant Analysis Result**





#### 4.6.3 BC MOTI Peak Hour Delay Warrant

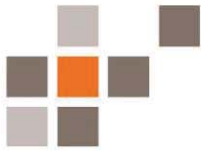
A BC Ministry of Transportation and Infrastructure (MOTI) signal warrant (as described in Section 400 of the *Electrical and Traffic Engineering Manual*) was conducted for the 2027 post-development scenario for the St. Patricks Avenue/East 3<sup>rd</sup> Street intersection for the PM peak hour.

An overview of the warrant criteria is summarized below.

1. The total delay experienced by traffic on one minor street approach in one direction only and controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach.
2. The volume of the same minor street approach in one direction only equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes.
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

The first criteria of total delay for the minor street approach (southbound on St. Patricks Avenue) is satisfied at 38 hours (56 vehicles × 2,499 seconds / 3,600 seconds). The second criteria of volume exceeding 100 vehicles per hour on the same minor street approach is not satisfied (56 vehicles). The third criteria of total entering volume serviced for the intersection is satisfied (1,770 vehicles per hour).

Based on the warrant criteria, the warrant was not satisfied. For comparison, only the third criteria of the peak hour delay warrant is met in the background 2027 scenario.



#### 4.6.4 Storage Lane Length

According to the TAC's *Geometric Design Guide for Canadian Roads*, the length for a left-turning storage lane at an unsignalized intersection can be calculated by multiplying the design volume of turning vehicles (1.5 times the average number of vehicles) by the design vehicle length divided by 30.

- Using the eastbound left-turn volume in the 2027 post-development scenario, a minimum storage length of 20 metres would accommodate the forecast number of left-turning vehicles (56 left-turning vehicles).
- Using the westbound left-turn volumes, a minimum storage length of 15 metres would accommodate the forecast number of left-turning vehicles (24 left-turning vehicles).

Specific to the proposed development, the eastbound left-turn storage lane will facilitate vehicular access to the site. Based on TAC guidelines, an eastbound left-turn storage lane of 20 metres and westbound left-turn storage lane of 15 metres is recommended if space permits within the East 3<sup>rd</sup> Street cross-section.

TAC specifies that queuing analysis using a micro-simulation model is required to confirm the left-turn storage lengths. The 95<sup>th</sup> percentile queue lengths were modelled in SimTraffic for the 2027 post-development scenario:

- If the intersection is to remain unsignalized, an eastbound left-turn storage lane length of 85 metres and westbound storage of 30 metres is recommended.
- If the intersection is to be signalized, an eastbound left-turn storage of 20 metres and westbound left-turn storage of 15 metres is recommended.

#### 4.6.5 Transportation Impacts

A traffic signal was found to not be warranted for the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street based on the TAC and BC MOTI signal warrant, and the BC MOTI peak hour delay warrant. Based on these findings, a traffic signal is not recommended at this time. A left-turn storage lane is recommended for the intersection:





- If the intersection is to remain unsignalized, an eastbound left-turn storage lane length of 85 metres and westbound storage of 30 metres is recommended.
- If the intersection is to be signalized, an eastbound left-turn storage of 20 metres and westbound left-turn storage of 15 metres is recommended.

It should be noted that the assumptions used to estimate the background traffic volumes were conservative and likely overestimate the amount of through traffic on East 3<sup>rd</sup> Street (see **Section 3.1** and **Section 4.2**).

The addition of site traffic attributed to the development on the minor approaches at the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street is forecast to increase overall delay, attributed to the additional number of vehicles turning left or travelling through at the intersection. However, the intersection is forecast to already fail by the background 2027 scenario at LOS F for both minor approaches—not as a result of the forecast site traffic. For example, the development is forecast to add 115 vehicle trips during the PM peak hour, broken down as follows: 14 southbound left, 5 southbound through, 29 southbound right, 20 westbound right, 40 eastbound left, and 7 northbound through trips. This represents approximately 7% of total traffic for the intersection for all approaches in the 2027 post-development scenario.

While the trip assignment for the traffic operational analysis assumed all site traffic would access the network at St. Patricks Avenue/East 3<sup>rd</sup> Street, due to the expected congestion on East 3<sup>rd</sup> Street, drivers will likely take alternative routes when exiting the site (e.g., make a right-turn from the site access towards East 4<sup>th</sup> Street). Volumes on East 4<sup>th</sup> Street were reviewed to determine if volumes would exceed the threshold for a shared roadway/neighbourhood bikeway.

- The average daily traffic on East 4<sup>th</sup> Street was estimated to be 210 vehicles (10% of the PM peak hour volume of 21 vehicles PM peak hour volume).
- According to the *British Columbia Active Transportation Design Guide*, the maximum average daily traffic for a shared roadway is 1,000 vehicles per day. In



- order to pass this volume threshold, more than 80% of the average daily site traffic would need to divert to East 4<sup>th</sup> Street.
- Exceeding this volume threshold is not considered to be a likely scenario at this time due to the expected trip distribution pattern (see **Section 4.3**), which estimates a minimum of 30% of site traffic would be travelling to/from east of the site (i.e., to/from District of North Vancouver). East 4<sup>th</sup> Street will not be a viable route for these trips due to the proposed diverter that will restrict east-west traffic; as a result, the amount of traffic re-routing would not exceed the 80% of site traffic required to pass the volume threshold.
  - For this reason, due to the low number of vehicles, no major impacts to East 4<sup>th</sup> Street are anticipated based on the findings of the traffic operational analysis.
  - The proposed diverter at St. Davids Avenue/East 4<sup>th</sup> Street will help further reduce east-west traffic volumes to be consistent with the current road classification for East 4<sup>th</sup> Street. While the proposed diverter will manage neighbourhood short-cutting and reduce east-west traffic volumes, it will simultaneously reduce the overall access routes to the subject site.

Similar to the background scenario, traffic volumes at the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street should be monitored and a review of the existing crossing should be completed in the future to determine if upgrades are needed.



## 5.0 ACCESS AND CIRCULATION REVIEW

### 5.1 Site Access

The site access is proposed to be located off of St. Patricks Avenue, immediately south of the existing laneway. The rationale for locating access here is as follows:

1. Due to the limited access points, this location is more favourable from a grade perspective (low point of the slope) and minimizes the impact to the architecture.
2. Avoiding the use of the laneway minimizes the impact to the adjacent properties north of the subject site with respect to the number of site trips. In the event that these properties were to redevelop in the future, no constraints to the building form are expected through the current proposed design of the subject site.
3. St. Patricks Avenue is a low volume local road and serves a limited number of properties, particularly with the proposed diverter at St. Davids Avenue/East 4<sup>th</sup> Street. As a result, minimal conflicts are anticipated with other road users.
4. The current grades on St. Patricks Avenue (approximately 6%) are not anticipated to be an issue with respect to circulation and access for passenger vehicles and/or waste collection vehicles.

Due to the potential southbound queue identified in the post-development scenarios for the 2022 and 2027 horizon years, vehicles turning left from the site access onto St. Patricks Avenue may experience delays due to inadequate gaps in the traffic flow. No impact to northbound traffic on St. Patricks Avenue past East 3<sup>rd</sup> Street is expected with respect to the site access and southbound queuing.

- Forecast queue lengths reported in the analysis are calculated at the 95<sup>th</sup> percentile, representing the upper range/maximum length and not the average.
- Queue lengths at the intersection are forecast to go past the site access only for the weekday PM peak period in the 2022 post-development scenario, and for both weekday AM and PM peak period in the 2027 post-development scenario. This represents only the worst hour of the day. Furthermore, due to the inherent uncertainties associated with the longer time horizon, traffic volumes would need to be monitored to determine if they materialize.





- Delays associated with the spillover from the southbound queue are expected to primarily impact vehicles exiting the site making a left. This will likely result in some drivers re-routing and making a right instead towards East 4<sup>th</sup> Street.
- Pavement marking could be considered to create a no stopping zone on St. Patricks Avenue by the site access, however, these are generally ineffective.

The laneway will continue to function as access for the adjacent properties to the north and provide loading access for commercial tenants and residents of the subject site. Access via the laneway to/from St. Davids Avenue will be restricted to support the proposed St. Davids Avenue Greenway. In addition, this will support an activated pedestrian space and public realm as part of the proposed retail uses by the east end of the laneway.

## 5.2 Sightline Review

Sightlines were reviewed for the proposed access and the major access point to the road network at the intersection of St. Patricks Avenue/East 3<sup>rd</sup> Street based on the guidelines in TAC's *Geometric Design Guide for Canadian Roads*.

- For the proposed access point, sightlines are sufficient as drivers will be able to see oncoming traffic from the adjacent intersections.
- For the intersection for St. Patricks Avenue/East 3<sup>rd</sup> Street, sight distances can be satisfied (95 metres for right-turning vehicles, and 105 metres for left-turning vehicles) if vegetation and on-street parking can be cleared or eliminated. As part of the proposed RapidBus improvements, on-street parking on East 3<sup>rd</sup> Street will be removed.



### 5.3 On-site and Off-site Circulation

A swept path analysis was conducted for passenger vehicles, waste collection vehicles, and loading vehicles to determine if the proposed site layout is functional for parking and loading, and to assess the impacts to the adjacent road network (see **Appendix D** for drawings). The following design vehicles were used for the swept path analysis:

- **Passenger vehicle:** TAC Passenger Car (P), 5.6 metre length and 2.0 metre width;
- **Residential and commercial loading vehicle:** TAC Medium Single-Unit (MSU), 10.0 metre length and 2.6 metre width; and
- **Waste collection vehicle:** Front loading garbage truck, 10.00 metre length and 2.58 metre width.

#### 5.3.1 Access to Adjacent Properties

Access to the adjacent properties to the north (duplex garage ports) and sufficient space for maneuvering is maintained for passenger vehicles with the proposed site plan and laneway design.

#### 5.3.2 Residential and Commercial Loading

There is limited space to conduct residential and commercial loading on- and off-site.

- **East 3<sup>rd</sup> Street:** The existing on-street parking lane on both sides of the road have been removed as part of the RapidBus route, so no loading zone is feasible.
- **St. Davids Avenue:** This road is designated as a future greenway with limited vehicle access. Any potential on-street loading space must consider the proposed greenway cross-section design.
- **St. Patricks Avenue:** There is limited frontage on this side of the site due to the proposed site access and parkade entry. Furthermore, the commercial units are on the east side of the site, reducing the usability of a potential access route.
- **East 4<sup>th</sup> Street:** There is limited frontage on this side of the site.



An on-site loading space is proposed to be located at the proposed breezeway at the center of the site between the west and east building. Access will occur via a hammerhead movement using the laneway. This location is centrally located to all the proposed residential and non-residential uses. Furthermore, staff have indicated support for a second, off-site informal loading space on St. Davids Avenue.<sup>1</sup> With respect to serving commercial needs, the location of the loading space at the breezeway provides direct access to the proposed non-residential uses via the laneway (see **Figure 10**).

The design vehicle used for reviewing the functionality of the proposed on- and off-site loading was a Medium Single-Unit (MSU) vehicle. This vehicle is consistent with the City's loading space standard of 2.7 metres in width and 9 metres in length. As the proposed commercial uses are planned to consist of small format, locally serving retail and restaurant uses, the MSU design vehicle is considered appropriate. To mitigate potential conflicts in loading, the applicant has proposed that the frequency and timing of loading operations will be coordinated between the future commercial tenants and building residents as part of the strata council.

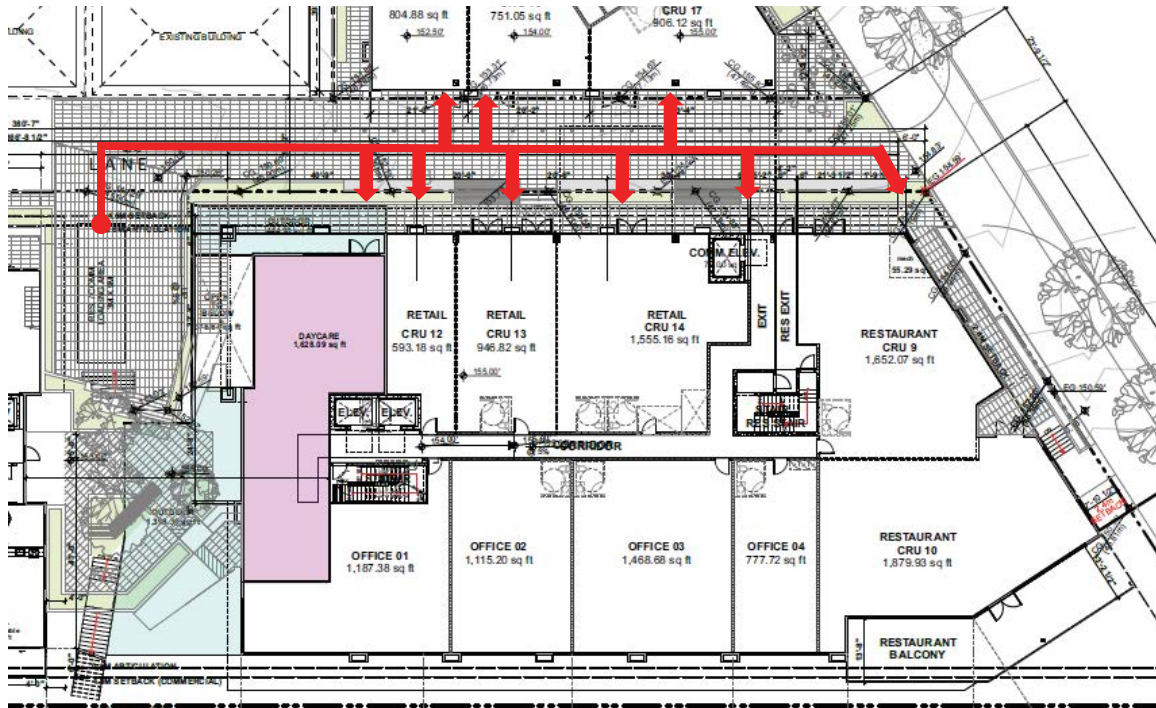
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<sup>1</sup> Meeting with City staff, February 26, 2020 and email correspondence on March 12, 2020.





Figure 10: Proposed Loading Access to Non-Residential Uses



### 5.3.3 Waste Collection

A garbage staging area is provided by the entrance of the laneway on the west side of the site. A small tow truck will be used to transport waste bins from the residential and/or commercial collection points located in the parkade on level 1 or the ground level of the north building. Garbage trucks can use the breezeway hammerhead movement if required to exit the site in a forward direction.

### 5.3.4 Emergency Access

The CNV Fire Department has indicated that emergency access will not rely on the existing laneway. However, access from the lane to St. Davids Avenue should be accommodated based on direction by City staff.



## 6.0 PARKING REVIEW

### 6.1 Off-street Parking

#### 6.1.1 Off-street Parking Supply, Bylaw Requirement

The City of North Vancouver's Zoning Bylaw, Division IV: Parking and Loading Standards describes the bylaw requirements for off-street parking. A summary of the City's bylaw requirements for the proposed development is provided in **Table 16**.

A total of 257 off-street vehicle parking spaces are required as per the City's bylaw based on the latest proposal as of August 2020.

**Table 16: Bylaw Off-street Parking Requirement**

Land Use	Quantity	Bylaw Supply Rate	Bylaw Requirement
<b>Residential</b>			
Residential	170 dwelling units	0.95 per DU	158
Residential Visitor	170 dwelling units	0.10 per DU	17
<u>Sub-total</u>			174
<b>Commercial</b>			
Retail	11,071 ft <sup>2</sup> GFA	1 per 538.2 ft <sup>2</sup>	21
Office and Medical Office	4,563 ft <sup>2</sup> GFA	1 per 538.2 ft <sup>2</sup>	8
Restaurant and Café	9,528 ft <sup>2</sup> GFA	1 per 204.5 ft <sup>2</sup>	47
Child Care	3,354 ft <sup>2</sup> GFA	1 per 538.2 ft <sup>2</sup>	6
<u>Sub-total</u>			82
<b><u>Total</u></b>			<b>257 spaces</b>



### 6.1.2 Off-street Parking Demand Analysis

The City has requested the applicant propose a specific parking supply rate for the site. The *Moodyville Development Permit Area Guidelines* recommends a maximum of number of 1.5 spaces per dwelling unit, including visitor parking (see Guideline 9.5.6).

To determine an appropriate off-street parking supply, a parking demand analysis was conducted using secondary data with consideration to proximity to the Frequent Transit Network and time-of-day shared parking.

#### Frequent Transit Proximity

The City's Zoning Bylaw has no formal provision for reductions in the off-street parking supply requirement with the exception of Section 905.3.d, which allows an applicant to substitute a shared vehicle and shared vehicle space with a required parking space at a one to four ratio. In lieu of formal provisions, base parking demand reduction factors were developed based on transit proximity. These reflect transportation attributes of the site regardless of transportation demand management measures.

The site is serviced by the R2 Marine Drive RapidBus operating on East 3<sup>rd</sup> Street. The nearest stops are located at Ridgeway Avenue, approximately 200 metres from the site (two-minute walk). The *Metro Vancouver 2018 Regional Parking Study* found that parking demand is lower for residential buildings within 400 metres of rapid bus service compared to buildings outside of the Frequent Transit Network. The average parking demand reduction associated with frequent bus service was calculated for residential strata sites using demand rates by bedroom type (see **Table 17**). The findings of the *Metro Vancouver 2018 Regional Parking Study* found that typical municipal off-street parking requirement resulted in an oversupply of parking, and that there was a consistent reduction in parking demand across bedroom types for residential strata sites, particularly for 0 to 1 bedroom (22.2% reduction) and 3-bedroom units (26.9% reduction).





Based on the parking reductions described by Metro Vancouver, the parking supply rate for the City's "All other Residential Uses" of 1.05 space per dwelling unit (including 0.10 spaces per unit for visitor parking) was adjusted by transit proximity with a maximum reduction capped at 20%. This resulted in an overall adjusted parking rate of 0.84 spaces per dwelling unit for the proposed residential uses (see **Table 18**).

**Table 17: Transit Accessibility Parking Reduction for Strata Residential**

Bedroom Type	Parked Vehicles per Household (within 400 metres of frequent bus)	Parked Vehicles per Household (outside Frequent Transit Network)	Percentage Difference	Absolute Reduction
0 to 1 bedroom	0.92 vehicles	1.15 vehicles	-22.2%	-0.23
2 bedrooms	1.29 vehicles	1.30 vehicles	-0.8%	-0.01
3 bedrooms	1.32 vehicles	1.73 vehicles	-26.9%	-0.41

**Table 18: Residential Parking Demand Analysis**

Bedroom Type	Quantity	Bylaw Supply Rate	Transit-Adjusted Supply Rate	Transit-Adjusted Requirement
Residential	166 units	0.95 per DU	0.84 per DU	139 spaces
Residential Visitor	166 units	0.10 per DU	0.05 per DU	8 spaces
<b>Total</b>				<b>147 spaces</b>

A minimum residential parking supply of 139 parking spaces using a supply rate of 0.84 spaces per dwelling unit is supported based on transit accessibility (excluding residential visitor) and the proposed TDM measures (see **Section 7**). This represents an absolute reduction of 19 spaces from the bylaw requirement of 158 resident spaces. No reductions are applied to the proposed non-residential uses from frequent transit proximity for a conservative estimate.



The Metro Vancouver 2012 *Regional Parking Study* also found that peak residential visitor parking demand did not exceed the standard municipal rate of 0.10 spaces per dwelling unit. Instead, the average demand rate was approximately 0.05 spaces per dwelling unit. A minimum residential visitor parking supply of 8 parking spaces using a supply rate of 0.05 spaces per dwelling unit is supported. This represents an absolute reduction of 9 spaces from the bylaw requirement of 17 spaces (see **Table 18**).

### **Time-of-Day Shared Parking**

Time-of-day shared parking refers to varying periods of parking demand throughout the day and week. For example, peak parking demand for residential typically occurs overnight, while commercial typically peaks during the weekday daytime.

A shared parking analysis was conducted to identify opportunities to share parking with the proposed residential and non-residential uses. Under a conventional parking arrangement, each use would provide enough parking to satisfy its own peak parking demand. However, under a shared parking arrangement, the total parking supply for a site seeks to meet the peak parking demand of all uses combined, rather than the combined peak demands for all uses separately. To determine shared parking opportunities, base parking ratios (the distribution of demand by visitor and employee) and time-of-day factors were obtained using Urban Land Institute (ULI)'s *Shared Parking, Second Edition* report.

Based on the proposed land uses, parking utilization was found to be highest for non-residential and residential visitor parking combined during the weekday noon period (12:00 pm) at 75 vehicles. **Table 19** provides a summary of the parking supply adjusted for time-of-day shared parking. Land use quantities are categorized under shared parking uses for analysis purposes.



The time-of-day utilization factors during a weekday noontime period, averaged across both employee and visitors, are as follows:

- Residential visitor: 20%;
- Retail: 98%;
- Office: 53%;
- Medical office: 65%; and
- Restaurant and cafe: 100%.

**Table 19: Non-Residential Shared Parking Analysis**

Land Use	Shared Parking Land Use	Quantity	Transit-Adjusted Parking Spaces	Shared-Parking-Adjusted Parking Spaces	Absolute Reduction
Residential	Residential	166 dwelling units	139	139	0
Residential Visitor	Residential Visitor	166 dwelling units	8	2	6
Retail	Retail	11,071 ft <sup>2</sup> GFA	21	20	1
Office and Medical Office	Office	3,448 ft <sup>2</sup> GFA	6	5	1
	Medical Office	1,115 ft <sup>2</sup> GFA	2	1	1
Restaurant and Café	Restaurant	7,205 ft <sup>2</sup> GFA	35	35	0
	Cafe	2,323 ft <sup>2</sup> GFA	12	12	0
Child Care	Child Care	3,354 ft <sup>2</sup> GFA	6	6	0
<b>Total</b>			<b>229 spaces</b>	<b>220 spaces</b>	<b>9 spaces</b>

A parking reduction associated with time-of-day shared parking of 9 spaces for non-residential and residential visitor parking is supported.





### Child Care Parking Demand

The City's Zoning Bylaw requires the proposed child care use to provide parking at a commercial rate at 1 space per 538.2 ft<sup>2</sup>, with a minimum of 1 space to be marked as passenger loading (drop-off and pick-up) located as close as possible to the building entry.

Parking demand for child care uses are primarily generated by employees. A parking demand analysis was conducted by WATT for a daycare located at 3755 Banff Avenue (Burnaby Association for Community Inclusion) in Burnaby. The site is located in a suburban location characterized by single-detached residential uses. The analysis found a peak parking demand rate of approximately 0.28 spaces per child care space. The proposed child care use at the subject site is expected to have a minimum of 30 child care spaces. This suggests a parking demand of 8 parking spaces in a suburban context. This is in range with the City's parking requirement of 6 parking spaces with consideration to the more urban land use context.

Due to the lack of available frontage and space at-grade (see **Section 5**), the marked passenger loading space will be located in the underground parkade closest to the elevator that directly serves the daycare. Additional on-street passenger loading could be considered on St. Davids Avenue.



### 6.1.3 Off-street Parking Supply, Adjusted

**Table 20** provides a breakdown of the parking supply requirement, adjusted requirements based on transit accessibility, the proposed amount, and the variance.

Based on parking reductions associated with proximity to frequent transit and shared parking, an overall minimum residential and non-residential parking supply of 220 for the site is supported. The development currently proposes an overall total of 223 spaces, including 1 space shared between visitor and non-residential. This represents a variance of 34 spaces from the bylaw requirement of 257 spaces.



**Table 20: Adjusted Off-street Parking Requirement**

Land Use	Quantity	Bylaw Supply Rate	Bylaw	Transit-Adjusted Supply	Shared-Parking-Adjusted Supply	Proposed
<b>Residential</b>						
Residential	166 units	0.95 per DU	158	139	139	135
Residential Visitor	166 units	0.10 per DU	17	8	2	7 + 1 shared = 8 total
<u>Sub-total</u>			174	147	141	142 + 1 shared = 143 total
<b>Commercial</b>						
Retail	11,071 ft <sup>2</sup> GFA	1 per 538.2 ft <sup>2</sup>	21	21	20	33 + 1 shared = 34 total
Office and Medical Office	4,563 ft <sup>2</sup> GFA	1 per 538.2 ft <sup>2</sup>	8	8	6	
Child Care	3,354 ft <sup>2</sup> GFA	1 per 538.2 ft <sup>2</sup>	6	6	6	
Restaurant and Café	7,205 ft <sup>2</sup> GFA	1 per 204.5 ft <sup>2</sup>	47	47	47	47
<u>Sub-total</u>			82	82	79	80 + 1 shared = 81 total
<u><b>Total</b></u>			<b>257 spaces</b>	<b>229 spaces</b>	<b>220 spaces</b>	<b>222 + 1 shared = 223 total spaces</b>



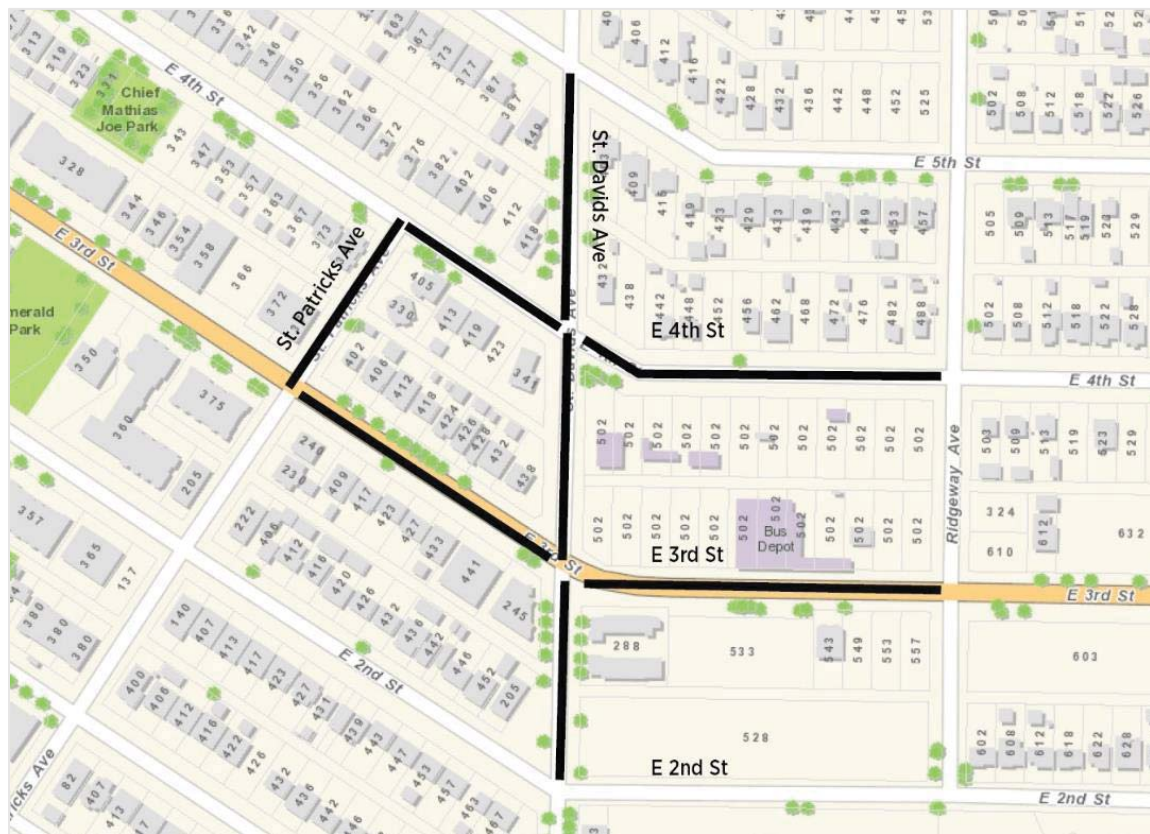


## 6.2 On-street Parking

An on-street parking occupancy survey was completed to determine the availability of on-street parking within walking distance of the subject site. The survey was conducted for the following time periods:

- **Weekday daytime:** Wednesday, December 12, 2018 (9:00 am to 11:00 am);
- **Weekday overnight:** Wednesday, December 12, 2018 (9:00 pm); and
- **Weekend daytime:** Sunday, December 9, 2018 (9:00 am to 4:00 pm).

Figure 11: On-street Parking Occupancy Survey Study Area



Within the study area, there are currently an estimated total of 235 on-street parking spaces currently and an estimated 139 spaces in the future (see **Figure 11**).

The assumptions used to estimate the future parking supply are summarized below:



- The R2 Marine Drive RapidBus resulted in the removal of approximately 62 on-street parking spaces within the study area to accommodate the dedicated bus lane.
- The proposed St. Davids Avenue Greenway will result in the removal of approximately 34 on-street parking spaces within the study area to accommodate a cycling facility.

### 6.2.1 Existing Parking Conditions

- Peak parking occupancy for the weekday occurred at 9:00 am with a total of 97 vehicles observed, resulting in a parking utilization rate of 41% (138 spaces vacant).
- Peak occupancy for the weekend occurred at 9:00 am and 2:00 pm with a total of 76 vehicles observed, resulting in a parking utilization rate of 32% (159 spaces vacant).
- In summary, peak parking demand was observed to occur during weekday mornings. Parking utilization decreased over the course of the day, suggesting many of the vehicles are likely attributed to residential uses in the area.

### 6.2.2 Future Parking Conditions

- Assuming all displaced vehicles from the loss of 96 on-street parking spaces continued to park within the study area, the peak parking utilization is forecast to be 70% (42 spaces vacant) for the weekday peak hour (9:00 am) and 55% (63 spaces vacant) for the weekend peak hour (9:00 am and 2:00 pm).

In summary, there is sufficient on-street parking supply to meet existing and future parking demand.



## 7.0 TRANSPORTATION DEMAND MANAGEMENT REVIEW

A transportation demand management review was conducted to identify appropriate measures to reduce vehicle trips to/from the site, and subsequently parking supply.

### 7.1 Pedestrian Improvements

The site is contributing to pedestrian improvements as part of the implementation of the proposed St. Davids Greenway. The City of San Francisco's *Transportation Demand Management Technical Justification Report* estimated a 2% reduction in vehicle miles travelled as a result of pedestrian improvements in the adjacent road network.

### 7.2 Bicycle Improvements

The subject site is located within proximity to a number of high-quality, all ages and abilities cycling facilities, including the Green Necklace and the Spirit Trail, and other facilities such as East 4<sup>th</sup> Street and the proposed facility on the East 3<sup>rd</sup> Street frontage of the site. The site is also contributing to cycling improvements as part of the implementation of the proposed St. Davids Greenway. This number of cycling options form a robust network for site users to reach destinations that are within comfortable biking distance, including the Lonsdale Corridor, which is a major transit hub.

To support on-site bicycle improvements, the following facilities are proposed: (1) a bicycle repair station located by the visitor bicycle parking area; and (2) additional 10% secure bicycle parking beyond the base bylaw requirement. A systematic review of the transportation literature found that bicycle parking supply and other end-of-trip





amenities is a key determinant for current and potential cyclists.<sup>2</sup> The study found that additional bicycle parking is associated with an increase of cycling of 10 to 40%.

### 7.3 Unbundled Parking

Parking supply for the junior 1-bedroom dwelling units at the subject site is planned to be “unbundled”, which means the parking space associated with the purchase of the residential unit is separated. This can be implemented through purchase agreements with potential residents.

Research has shown that younger and lower income households tend to be most interested in smaller dwelling units as the purchase price is within their household income range. Research has also shown that household income is negatively correlated with vehicle ownership; in other words, the lower your income, the less likely you will own a vehicle. According to the Victoria Transport Policy Institute, unbundled parking can reduce parking demand by 10 to 30%.

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<sup>2</sup> Hein, E. & Buehler, R. (2019). Bicycle parking: a systematic review of scientific literature on parking behaviour, parking preferences, and their influence on cycling and travel behaviour. *Transport Reviews*, 39(5).



## 8.0 CONCLUSION AND RECOMMENDATIONS

### 8.1 Findings

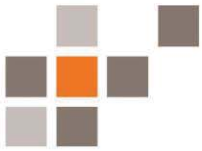
**Background traffic conditions** are within acceptable operating thresholds (movements are operating at LOS D or better) during the weekday AM/PM and Saturday peak hour up to background 2022.

- By background 2027, the northbound and southbound movements at St. Patricks Avenue/East 3rd Street is forecast to fail and operate at LOS F and E respectively due to heavy through volumes that are expected to reduce the number of gaps for left-turning and through traffic from the side streets.
- A TAC signal warrant was completed, but the warrant was not met for the intersection. Adjacent signals in proximity to the site may result in a platooning effect, which will allow for gaps in traffic.

**Post-development traffic conditions** are within acceptable operating thresholds except for the northbound and southbound movements at St. Patricks Avenue/East 3<sup>rd</sup> Street, which are forecast to fail and operate at LOS F as of the post-development 2020 scenario. The traffic operational analysis found significant delays and queue lengths for the minor approaches.

- A traffic signal was found to not be warranted for the intersection based on the TAC and BC MOTI signal warrant, and the BC MOTI peak hour delay warrant.
- If the intersection is to remain unsignalized, an eastbound left-turn storage lane length of 85 metres and westbound storage of 30 metres is recommended.
- If the intersection is to be signalized, an eastbound left-turn storage of 20 metres and westbound left-turn storage of 15 metres is recommended.

A **parking demand analysis and TDM review** was conducted. An overall minimum residential and non-residential parking supply of 220 for the site is supported. The development currently proposes an overall total of 223 spaces, including 1 space shared between visitor and non-residential. This represents a variance of 34 spaces from the bylaw requirement of 257 spaces.







## 8.2 Recommendations

- The applicant is recommended to coordinate with the City to install a left-turn storage lane at East 3<sup>rd</sup> Street/St. Patricks Avenue.
- The City is recommended to monitor East 3rd Street/St. Patricks Avenue to determine if a signal is needed in the long-term.



## APPENDIX A

### Traffic Operational Analysis Results

# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-16-2020

Intersection													
Int Delay, s/veh	2.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Vol, veh/h	7	269	7	19	302	4	12	2	22	8	3	16	
Future Vol, veh/h	7	269	7	19	302	4	12	2	22	8	3	16	
Conflicting Peds, #/hr	5	0	6	6	0	5	20	0	1	1	0	20	
Sign Control	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-	0	-	
Grade, %	-	0	-	-	0	-	0	-	0	-	0	-	
Peak Hour Factor	44	85	88	68	79	50	50	50	55	67	75	67	
Heavy Vehicles, %	14	6	0	0	9	0	0	0	0	13	0	13	
Mvmt Flow	16	316	8	28	382	8	24	4	40	12	4	24	

Major/Minor	Major1	Major2	Minor1	Minor2									
Conflicting Flow All	395	0	0	330	0	0	834	809	327	822	809	411	
Stage 1	-	-	-	-	-	-	358	358	-	447	447	-	
Stage 2	-	-	-	-	-	-	476	451	-	375	362	-	
Critical Hdwy	4.24	-	-	4.1	-	-	7.1	6.5	6.2	7.23	6.5	6.33	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-	
Follow-up Hdwy	2.326	-	-	2.2	-	-	3.5	4	3.3	3.617	4	3.417	
Pot Cap-1 Maneuver	1101	-	-	1241	-	-	290	317	719	281	317	618	
Stage 1	-	-	-	-	-	-	664	631	-	570	577	-	
Stage 2	-	-	-	-	-	-	574	574	-	624	629	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1080	-	-	1240	-	-	260	299	714	252	299	604	
Mov Cap-2 Maneuver	-	-	-	-	-	-	260	299	-	252	299	-	
Stage 1	-	-	-	-	-	-	648	616	-	557	558	-	
Stage 2	-	-	-	-	-	-	522	555	-	574	614	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.5	15.2	15.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	421	1080	-	-	1240	-	-	397
HCM Lane V/C Ratio	0.162	0.015	-	-	0.023	-	-	0.1
HCM Control Delay (s)	15.2	8.4	0	-	8	0	-	15.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	0.3

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-16-2020

Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	7	8	10	6	2
Future Vol, veh/h	10	7	8	10	6	2
Conflicting Peds, #/hr	0	5	5	0	7	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	88	50	50	75	50
Heavy Vehicles, %	0	14	0	0	0	0
Mvmt Flow	16	8	16	20	8	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	29	0	84	28
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	59	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1597	-	923	1053
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	969	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1593	-	904	1045
Mov Cap-2 Maneuver	-	-	-	-	904	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	953	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	947	-	-	1593	-
HCM Lane V/C Ratio	0.013	-	-	0.01	-
HCM Control Delay (s)	8.9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-



# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-16-2020

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	6	9	20	8	9	8	13	113	7	1	198	12
Future Vol, veh/h	6	9	20	8	9	8	13	113	7	1	198	12
Conflicting Peds, #/hr	2	0	19	19	0	2	33	0	18	18	0	33
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	56	71	67	75	67	65	74	88	25	87	75
Heavy Vehicles, %	17	22	0	0	11	0	8	3	0	0	1	0
Mvmt Flow	8	16	28	12	12	12	20	153	8	4	228	16

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	488	496	288	500	500	177	277	0	0	179	0	0
Stage 1	277	277	-	215	215	-	-	-	-	-	-	-
Stage 2	211	219	-	285	285	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.72	6.2	7.1	6.61	6.2	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.198	3.3	3.5	4.099	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	466	447	756	484	460	871	1252	-	-	1409	-	-
Stage 1	698	646	-	792	708	-	-	-	-	-	-	-
Stage 2	758	686	-	727	660	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	428	417	720	429	429	855	1230	-	-	1406	-	-
Mov Cap-2 Maneuver	428	417	-	429	429	-	-	-	-	-	-	-
Stage 1	664	624	-	765	684	-	-	-	-	-	-	-
Stage 2	720	662	-	667	638	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.3		12.5		0.9		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1230	-	-	542	514	1406	-	-
HCM Lane V/C Ratio	0.016	-	-	0.096	0.07	0.003	-	-
HCM Control Delay (s)	8	0	-	12.3	12.5	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.2	0	-	-

# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-16-2020

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	15	530	13	22	457	6	14	4	67	2	0	6
Future Vol, veh/h	15	530	13	22	457	6	14	4	67	2	0	6
Conflicting Peds, #/hr	4	0	7	7	0	4	23	0	1	1	0	23
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	96	54	79	83	50	70	33	80	50	92	50
Heavy Vehicles, %	2	3	2	5	3	2	2	25	2	2	2	2
Mvmt Flow	24	552	24	28	551	12	20	12	84	4	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	567	0	0	583	0	0	1260	1241	572	1277	1247	584
Stage 1	-	-	-	-	-	-	619	619	-	616	616	-
Stage 2	-	-	-	-	-	-	641	622	-	661	631	-
Critical Hdwy	4.12	-	-	4.15	-	-	7.12	6.75	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.75	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.75	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.245	-	-	3.518	4.225	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1005	-	-	977	-	-	147	158	520	143	173	512
Stage 1	-	-	-	-	-	-	476	446	-	478	482	-
Stage 2	-	-	-	-	-	-	463	445	-	452	474	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	983	-	-	976	-	-	131	144	516	105	158	499
Mov Cap-2 Maneuver	-	-	-	-	-	-	131	144	-	105	158	-
Stage 1	-	-	-	-	-	-	456	427	-	459	460	-
Stage 2	-	-	-	-	-	-	424	425	-	354	454	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4	25.4	19.9
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	290	983	-	-	976	-	-	257
HCM Lane V/C Ratio	0.4	0.024	-	-	0.029	-	-	0.062
HCM Control Delay (s)	25.4	8.8	0	-	8.8	0	-	19.9
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0.1	-	-	0.2

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-16-2020

Intersection						
Int Delay, s/veh	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	34	4	3	11	6	7
Future Vol, veh/h	34	4	3	11	6	7
Conflicting Peds, #/hr	0	8	8	0	17	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	50	38	92	50	44
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	8	8	12	12	16

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	68	0	109	66
Stage 1	-	-	-	-	64	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1533	-	888	998
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	1530	-	863	989
Mov Cap-2 Maneuver	-	-	-	-	863	-
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	957	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	931	-	-	1530	-
HCM Lane V/C Ratio	0.03	-	-	0.005	-
HCM Control Delay (s)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-16-2020

Intersection													
Int Delay, s/veh	4.1												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	10	37	27	8	10	11	23	319	20	10	263	12	
Future Vol, veh/h	10	37	27	8	10	11	23	319	20	10	263	12	
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18	
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	63	58	75	67	42	55	82	86	71	63	87	43	
Heavy Vehicles, %	2	1	2	2	1	2	2	2	2	2	10	2	
Mvmt Flow	16	64	36	12	24	20	28	371	28	16	302	28	

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	840	836	352	872	836	411	348	0	0	414	0	0
Stage 1	366	366	-	456	456	-	-	-	-	-	-	-
Stage 2	474	470	-	416	380	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.51	6.22	7.12	6.51	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.009	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	285	304	692	271	304	641	1211	-	-	1145	-	-
Stage 1	653	624	-	584	570	-	-	-	-	-	-	-
Stage 2	571	562	-	614	616	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	242	281	669	198	281	626	1191	-	-	1133	-	-
Mov Cap-2 Maneuver	242	281	-	198	281	-	-	-	-	-	-	-
Stage 1	623	603	-	559	545	-	-	-	-	-	-	-
Stage 2	507	538	-	502	595	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21.4		18.9		0.5		0.4	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1191	-	-	334	315	1133	-	-
HCM Lane V/C Ratio	0.024	-	-	0.346	0.177	0.014	-	-
HCM Control Delay (s)	8.1	0	-	21.4	18.9	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.5	0.6	0	-	-



# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-16-2020

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	345	11	11	415	4	6	1	22	5	0	4
Future Vol, veh/h	4	345	11	11	415	4	6	1	22	5	0	4
Conflicting Peds, #/hr	7	0	5	5	0	7	21	0	0	0	0	21
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	95	69	55	83	50	75	25	92	63	92	33
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	8	363	16	20	500	8	8	4	24	8	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	515	0	0	384	0	0	963	947	376	952	951	532
Stage 1	-	-	-	-	-	-	392	392	-	551	551	-
Stage 2	-	-	-	-	-	-	571	555	-	401	400	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1051	-	-	1174	-	-	235	261	670	239	260	547
Stage 1	-	-	-	-	-	-	633	606	-	519	515	-
Stage 2	-	-	-	-	-	-	506	513	-	626	602	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1030	-	-	1174	-	-	218	249	667	220	248	533
Mov Cap-2 Maneuver	-	-	-	-	-	-	218	249	-	220	248	-
Stage 1	-	-	-	-	-	-	624	597	-	510	499	-
Stage 2	-	-	-	-	-	-	473	497	-	594	593	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	14.8	16.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	405	1030	-	-	1174	-	-	341
HCM Lane V/C Ratio	0.089	0.008	-	-	0.017	-	-	0.059
HCM Control Delay (s)	14.8	8.5	0	-	8.1	0	-	16.2
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-16-2020

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	4	3	14	7	3
Future Vol, veh/h	13	4	3	14	7	3
Conflicting Peds, #/hr	0	4	4	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	100	38	88	58	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	4	8	16	12	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	24	0	54	23
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1591	-	954	1054
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	1590	-	946	1049
Mov Cap-2 Maneuver	-	-	-	-	946	-
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	986	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	970	-	-	1590	-
HCM Lane V/C Ratio	0.017	-	-	0.005	-
HCM Control Delay (s)	8.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-16-2020

Intersection													
Int Delay, s/veh	2.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	12	10	17	7	11	9	15	232	14	5	233	19	
Future Vol, veh/h	12	10	17	7	11	9	15	232	14	5	233	19	
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18	
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	60	50	61	88	69	75	63	73	58	63	87	59	
Heavy Vehicles, %	2	1	2	2	2	5	2	2	2	14	2	2	
Mvmt Flow	20	20	28	8	16	12	24	318	24	8	268	32	

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	720	723	320	734	726	356	318	0	0	357	0	0
Stage 1	318	318	-	392	392	-	-	-	-	-	-	-
Stage 2	402	405	-	342	334	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.51	6.22	7.12	6.52	6.25	4.12	-	-	4.24	-	-
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.018	3.345	2.218	-	-	2.326	-	-
Pot Cap-1 Maneuver	343	354	721	336	351	681	1242	-	-	1138	-	-
Stage 1	693	655	-	633	606	-	-	-	-	-	-	-
Stage 2	625	600	-	673	643	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	308	332	697	291	329	665	1221	-	-	1126	-	-
Mov Cap-2 Maneuver	308	332	-	291	329	-	-	-	-	-	-	-
Stage 1	665	638	-	609	583	-	-	-	-	-	-	-
Stage 2	577	577	-	610	627	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.5		15.4		0.5		0.2	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1221	-	-	411	383	1126	-	-
HCM Lane V/C Ratio	0.02	-	-	0.165	0.094	0.007	-	-
HCM Control Delay (s)	8	0	-	15.5	15.4	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.3	0	-	-

# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-16-2020

Intersection													
Int Delay, s/veh	2.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	7	313	7	20	389	4	12	2	23	8	3	16	
Future Vol, veh/h	7	313	7	20	389	4	12	2	23	8	3	16	
Conflicting Peds, #/hr	5	0	6	6	0	5	20	0	1	1	0	20	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	44	85	88	68	79	50	50	50	55	67	75	67	
Heavy Vehicles, %	14	6	0	0	9	0	0	0	0	13	0	13	
Mvmt Flow	16	368	8	29	492	8	24	4	42	12	4	24	

Major/Minor	Major1	Major2	Minor1	Minor2									
Conflicting Flow All	505	0	0	382	0	0	999	974	379	988	974	521	
Stage 1	-	-	-	-	-	-	410	410	-	560	560	-	
Stage 2	-	-	-	-	-	-	589	564	-	428	414	-	
Critical Hdwy	4.24	-	-	4.1	-	-	7.1	6.5	6.2	7.23	6.5	6.33	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-	
Follow-up Hdwy	2.326	-	-	2.2	-	-	3.5	4	3.3	3.617	4	3.417	
Pot Cap-1 Maneuver	1001	-	-	1188	-	-	224	254	672	216	254	534	
Stage 1	-	-	-	-	-	-	623	599	-	494	514	-	
Stage 2	-	-	-	-	-	-	498	512	-	584	597	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	982	-	-	1187	-	-	197	238	668	191	238	522	
Mov Cap-2 Maneuver	-	-	-	-	-	-	197	238	-	191	238	-	
Stage 1	-	-	-	-	-	-	607	583	-	481	494	-	
Stage 2	-	-	-	-	-	-	447	492	-	532	581	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.5	18	17.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	347	982	-	-	1187	-	-	318
HCM Lane V/C Ratio	0.201	0.016	-	-	0.025	-	-	0.125
HCM Control Delay (s)	18	8.7	0	-	8.1	0	-	17.9
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.4

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-16-2020

Intersection						
Int Delay, s/veh	6.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	7	8	0	6	2
Future Vol, veh/h	0	7	8	0	6	2
Conflicting Peds, #/hr	0	5	5	0	7	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	88	50	50	75	50
Heavy Vehicles, %	0	14	0	0	0	0
Mvmt Flow	0	8	16	0	8	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	13	0	48	12
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	39	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1619	-	967	1074
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1614	-	947	1066
Mov Cap-2 Maneuver	-	-	-	-	947	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	973	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.3	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	984	-	-	1614	-
HCM Lane V/C Ratio	0.012	-	-	0.01	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-



# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-16-2020

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	6	9	21	8	9	8	13	116	7	1	204	12
Future Vol, veh/h	6	9	21	8	9	8	13	116	7	1	204	12
Conflicting Peds, #/hr	2	0	19	19	0	2	33	0	18	18	0	33
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	56	71	67	75	67	65	74	88	25	87	75
Heavy Vehicles, %	17	22	0	0	11	0	8	3	0	0	1	0
Mvmt Flow	8	16	30	12	12	12	20	157	8	4	234	16

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	498	506	294	511	510	181	283	0	0	183	0	0
Stage 1	283	283	-	219	219	-	-	-	-	-	-	-
Stage 2	215	223	-	292	291	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.72	6.2	7.1	6.61	6.2	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.198	3.3	3.5	4.099	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	459	441	750	476	454	867	1246	-	-	1404	-	-
Stage 1	693	642	-	788	705	-	-	-	-	-	-	-
Stage 2	754	683	-	720	656	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	422	411	714	421	424	851	1224	-	-	1401	-	-
Mov Cap-2 Maneuver	422	411	-	421	424	-	-	-	-	-	-	-
Stage 1	660	620	-	761	681	-	-	-	-	-	-	-
Stage 2	716	659	-	658	634	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.4		12.6		0.9		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1224	-	-	539	508	1401	-	-
HCM Lane V/C Ratio	0.016	-	-	0.1	0.071	0.003	-	-
HCM Control Delay (s)	8	0	-	12.4	12.6	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.2	0	-	-

# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-18-2020

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	15	659	13	23	553	6	14	4	69	2	0	6
Future Vol, veh/h	15	659	13	23	553	6	14	4	69	2	0	6
Conflicting Peds, #/hr	4	0	7	7	0	4	23	0	1	1	0	23
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	96	54	79	83	50	70	33	80	50	92	50
Heavy Vehicles, %	2	3	2	5	3	2	2	25	2	2	2	2
Mvmt Flow	24	686	24	29	666	12	20	12	86	4	0	12

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	682	0	0	718
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.15
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.245
Pot Cap-1 Maneuver	911	-	-	869
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	891	-	-	868
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4	41.2	27.4
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	213	891	-	-	868	-	-	177
HCM Lane V/C Ratio	0.556	0.027	-	-	0.034	-	-	0.09
HCM Control Delay (s)	41.2	9.2	0	-	9.3	0	-	27.4
HCM Lane LOS	E	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	3	0.1	-	-	0.1	-	-	0.3

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-18-2020

Intersection						
Int Delay, s/veh	6.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	4	3	0	6	7
Future Vol, veh/h	0	4	3	0	6	7
Conflicting Peds, #/hr	0	8	8	0	17	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	50	38	92	50	44
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	8	0	12	16

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	16
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1602
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1599
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.3	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1002	-	-	1599	-
HCM Lane V/C Ratio	0.028	-	-	0.005	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-18-2020

Intersection													
Int Delay, s/veh	4.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	10	38	28	8	10	11	24	329	21	10	271	12	
Future Vol, veh/h	10	38	28	8	10	11	24	329	21	10	271	12	
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	63	58	75	67	42	55	82	86	71	63	87	43	
Heavy Vehicles, %	2	1	2	2	1	2	2	2	2	2	10	2	
Mvmt Flow	16	66	37	12	24	20	29	383	30	16	311	28	

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	864	861	361	898	860	423	357	0	0	427	0	0
Stage 1	375	375	-	471	471	-	-	-	-	-	-	-
Stage 2	489	486	-	427	389	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.51	6.22	7.12	6.51	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.009	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	274	294	684	260	295	631	1202	-	-	1132	-	-
Stage 1	646	619	-	573	561	-	-	-	-	-	-	-
Stage 2	561	553	-	606	610	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	232	271	661	187	272	616	1182	-	-	1120	-	-
Mov Cap-2 Maneuver	232	271	-	187	272	-	-	-	-	-	-	-
Stage 1	615	598	-	547	535	-	-	-	-	-	-	-
Stage 2	497	528	-	492	589	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	22.4		19.5		0.5		0.4	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1182	-	-	324	303	1120	-	-
HCM Lane V/C Ratio	0.025	-	-	0.366	0.184	0.014	-	-
HCM Control Delay (s)	8.1	0	-	22.4	19.5	8.3	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.6	0.7	0	-	-



## HCM 2010 TWSC

1: St. Patricks Avenue &amp; East 3rd Street

02-16-2020

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	4	424	11	11	488	4	6	1	23	5	0	4
Future Vol, veh/h	4	424	11	11	488	4	6	1	23	5	0	4
Conflicting Peds, #/hr	7	0	5	5	0	7	21	0	0	0	0	21
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	95	69	55	83	50	75	25	92	63	92	33
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	8	446	16	20	588	8	8	4	25	8	0	12

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	603	0	0	467	0	0	1134	1118	459	1124	1122	620
Stage 1	-	-	-	-	-	-	475	475	-	639	639	-
Stage 2	-	-	-	-	-	-	659	643	-	485	483	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	975	-	-	1094	-	-	180	207	602	183	206	488
Stage 1	-	-	-	-	-	-	570	557	-	464	470	-
Stage 2	-	-	-	-	-	-	453	468	-	563	553	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	956	-	-	1094	-	-	166	197	599	167	196	475
Mov Cap-2 Maneuver	-	-	-	-	-	-	166	197	-	167	196	-
Stage 1	-	-	-	-	-	-	561	548	-	456	454	-
Stage 2	-	-	-	-	-	-	421	452	-	530	544	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	17	19.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	336	956	-	-	1094	-	-	275
HCM Lane V/C Ratio	0.11	0.008	-	-	0.018	-	-	0.073
HCM Control Delay (s)	17	8.8	0	-	8.4	0	-	19.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.2

## HCM 2010 TWSC

2: St. Patricks Avenue &amp; East 4th Street

02-16-2020

Intersection						
Int Delay, s/veh	7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	4	3	0	7	3
Future Vol, veh/h	0	4	3	0	7	3
Conflicting Peds, #/hr	0	4	4	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	100	38	88	58	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	8	0	12	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	8	0	22	7
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1612	-	995	1075
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	1610	-	986	1070
Mov Cap-2 Maneuver	-	-	-	-	986	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1002	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1006	-	-	1610	-
HCM Lane V/C Ratio	0.016	-	-	0.005	-
HCM Control Delay (s)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-16-2020

Intersection													
Int Delay, s/veh	2.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	12	10	18	7	11	9	15	239	14	5	240	20	
Future Vol, veh/h	12	10	18	7	11	9	15	239	14	5	240	20	
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18	
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	60	50	61	88	69	75	63	73	58	63	87	59	
Heavy Vehicles, %	2	1	2	2	2	5	2	2	2	14	2	2	
Mvmt Flow	20	20	30	8	16	12	24	327	24	8	276	34	

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	739	741	329	753	746	365	328	0	0	367	0	0
Stage 1	327	327	-	402	402	-	-	-	-	-	-	-
Stage 2	412	414	-	351	344	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.51	6.22	7.12	6.52	6.25	4.12	-	-	4.24	-	-
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.018	3.345	2.218	-	-	2.326	-	-
Pot Cap-1 Maneuver	333	345	712	326	342	673	1232	-	-	1128	-	-
Stage 1	686	650	-	625	600	-	-	-	-	-	-	-
Stage 2	617	595	-	666	637	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	298	323	688	281	320	657	1211	-	-	1116	-	-
Mov Cap-2 Maneuver	298	323	-	281	320	-	-	-	-	-	-	-
Stage 1	658	633	-	601	577	-	-	-	-	-	-	-
Stage 2	568	572	-	601	621	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.8		15.7		0.5		0.2	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1211	-	-	404	372	1116	-	-
HCM Lane V/C Ratio	0.02	-	-	0.172	0.096	0.007	-	-
HCM Control Delay (s)	8	0	-	15.8	15.7	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.3	0	-	-

# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-16-2020

Intersection													
Int Delay, s/veh	2.6												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	8	367	8	21	511	4	13	2	24	9	3	17	
Future Vol, veh/h	8	367	8	21	511	4	13	2	24	9	3	17	
Conflicting Peds, #/hr	5	0	6	6	0	5	20	0	1	1	0	20	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	44	85	88	68	79	50	50	50	55	67	75	67	
Heavy Vehicles, %	14	6	0	0	9	0	0	0	0	13	0	13	
Mvmt Flow	18	432	9	31	647	8	26	4	44	13	4	25	

Major/Minor	Major1	Major2	Minor1	Minor2									
Conflicting Flow All	660	0	0	447	0	0	1226	1201	443	1215	1201	676	
Stage 1	-	-	-	-	-	-	479	479	-	718	718	-	
Stage 2	-	-	-	-	-	-	747	722	-	497	483	-	
Critical Hdwy	4.24	-	-	4.1	-	-	7.1	6.5	6.2	7.23	6.5	6.33	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-	
Follow-up Hdwy	2.326	-	-	2.2	-	-	3.5	4	3.3	3.617	4	3.417	
Pot Cap-1 Maneuver	874	-	-	1124	-	-	157	186	619	150	186	435	
Stage 1	-	-	-	-	-	-	571	558	-	403	436	-	
Stage 2	-	-	-	-	-	-	408	434	-	535	556	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	858	-	-	1123	-	-	134	171	615	129	171	425	
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	171	-	129	171	-	
Stage 1	-	-	-	-	-	-	552	539	-	390	415	-	
Stage 2	-	-	-	-	-	-	357	413	-	479	537	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.4	24.8	24.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	255	858	-	-	1123	-	-	229
HCM Lane V/C Ratio	0.289	0.021	-	-	0.027	-	-	0.187
HCM Control Delay (s)	24.8	9.3	0	-	8.3	0	-	24.3
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.2	0.1	-	-	0.1	-	-	0.7

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-16-2020

Intersection						
Int Delay, s/veh	6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	8	9	0	6	2
Future Vol, veh/h	0	8	9	0	6	2
Conflicting Peds, #/hr	0	5	5	0	7	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	88	50	50	75	50
Heavy Vehicles, %	0	14	0	0	0	0
Mvmt Flow	0	9	18	0	8	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	14	0	53
Stage 1	-	-	-	-	10
Stage 2	-	-	-	-	43
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1617	-	960
Stage 1	-	-	-	-	1018
Stage 2	-	-	-	-	985
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1612	-	939
Mov Cap-2 Maneuver	-	-	-	-	939
Stage 1	-	-	-	-	1013
Stage 2	-	-	-	-	968

Approach	EB	WB	NB
HCM Control Delay, s	0	7.3	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	978	-	-	1612	-
HCM Lane V/C Ratio	0.012	-	-	0.011	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-



# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-16-2020

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	6	10	22	9	10	9	14	122	8	1	214	13
Future Vol, veh/h	6	10	22	9	10	9	14	122	8	1	214	13
Conflicting Peds, #/hr	2	0	19	19	0	2	33	0	18	18	0	33
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	56	71	67	75	67	65	74	88	25	87	75
Heavy Vehicles, %	17	22	0	0	11	0	8	3	0	0	1	0
Mvmt Flow	8	18	31	13	13	13	22	165	9	4	246	17

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	524	531	307	536	534	189	296	0	0	192	0	0
Stage 1	296	296	-	230	230	-	-	-	-	-	-	-
Stage 2	228	235	-	306	304	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.72	6.2	7.1	6.61	6.2	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.198	3.3	3.5	4.099	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	441	427	738	459	440	858	1232	-	-	1394	-	-
Stage 1	681	634	-	777	698	-	-	-	-	-	-	-
Stage 2	742	675	-	708	647	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	402	398	703	402	410	842	1210	-	-	1391	-	-
Mov Cap-2 Maneuver	402	398	-	402	410	-	-	-	-	-	-	-
Stage 1	647	613	-	749	673	-	-	-	-	-	-	-
Stage 2	700	650	-	644	625	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.7		13		0.9		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1210	-	-	522	491	1391	-	-
HCM Lane V/C Ratio	0.018	-	-	0.109	0.082	0.003	-	-
HCM Control Delay (s)	8	0	-	12.7	13	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-	-

# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-18-2020

Intersection												
Int Delay, s/veh	8.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	16	808	14	24	687	6	15	4	73	2	0	6
Future Vol, veh/h	16	808	14	24	687	6	15	4	73	2	0	6
Conflicting Peds, #/hr	4	0	7	7	0	4	23	0	1	1	0	23
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	96	54	79	83	50	70	33	80	50	92	50
Heavy Vehicles, %	2	3	2	5	3	2	2	25	2	2	2	2
Mvmt Flow	25	842	26	30	828	12	21	12	91	4	0	12

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	844	0	0	875	0	0	1835	1816	863	1856	1823	861
Stage 1	-	-	-	-	-	-	912	912	-	898	898	-
Stage 2	-	-	-	-	-	-	923	904	-	958	925	-
Critical Hdwy	4.12	-	-	4.15	-	-	7.12	6.75	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.75	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.75	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.245	-	-	3.518	4.225	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	792	-	-	759	-	-	58	68	354	56	77	355
Stage 1	-	-	-	-	-	-	328	323	-	334	358	-
Stage 2	-	-	-	-	-	-	323	326	-	309	348	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	775	-	-	758	-	-	49	58	351	31	66	346
Mov Cap-2 Maneuver	-	-	-	-	-	-	49	58	-	31	66	-
Stage 1	-	-	-	-	-	-	305	301	-	312	330	-
Stage 2	-	-	-	-	-	-	283	301	-	205	324	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.3		0.3		114.8		48.8	
HCM LOS					F		E	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	138	775	-	-	758	-	-	98
HCM Lane V/C Ratio	0.904	0.033	-	-	0.04	-	-	0.163
HCM Control Delay (s)	114.8	9.8	0	-	9.9	0	-	48.8
HCM Lane LOS	F	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	6.1	0.1	-	-	0.1	-	-	0.6

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-18-2020

Intersection						
Int Delay, s/veh	6.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	4	3	0	6	8
Future Vol, veh/h	0	4	3	0	6	8
Conflicting Peds, #/hr	0	8	8	0	17	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	50	38	92	50	44
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	8	0	12	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	16	0	45	14
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1602	-	965	1066
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1599	-	938	1056
Mov Cap-2 Maneuver	-	-	-	-	938	-
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	968	-

Approach	EB		WB		NB	
HCM Control Delay, s	0		7.3		8.7	
HCM LOS					A	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1006	-	-	1599	-
HCM Lane V/C Ratio	0.03	-	-	0.005	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-18-2020

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	11	40	29	9	11	12	25	345	22	11	285	13
Future Vol, veh/h	11	40	29	9	11	12	25	345	22	11	285	13
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	58	75	67	42	55	82	86	71	63	87	43
Heavy Vehicles, %	2	1	2	2	1	2	2	2	2	2	10	2
Mvmt Flow	17	69	39	13	26	22	30	401	31	17	328	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	909	904	379	942	904	443	376	0	0	447	0	0
Stage 1	396	396	-	493	493	-	-	-	-	-	-	-
Stage 2	513	508	-	449	411	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.51	6.22	7.12	6.51	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.009	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	256	278	668	243	278	615	1182	-	-	1113	-	-
Stage 1	629	606	-	558	549	-	-	-	-	-	-	-
Stage 2	544	540	-	589	597	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	212	255	646	169	255	600	1162	-	-	1102	-	-
Mov Cap-2 Maneuver	212	255	-	169	255	-	-	-	-	-	-	-
Stage 1	597	585	-	531	523	-	-	-	-	-	-	-
Stage 2	476	514	-	471	576	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	25		21.4		0.5		0.4	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1162	-	-	303	281	1102	-	-
HCM Lane V/C Ratio	0.026	-	-	0.413	0.219	0.016	-	-
HCM Control Delay (s)	8.2	0	-	25	21.4	8.3	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.9	0.8	0	-	-



# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-16-2020

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	4	526	12	12	583	4	6	1	24	5	0	4
Future Vol, veh/h	4	526	12	12	583	4	6	1	24	5	0	4
Conflicting Peds, #/hr	7	0	5	5	0	7	21	0	0	0	0	21
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	95	69	55	83	50	75	25	92	63	92	33
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	8	554	17	22	702	8	8	4	26	8	0	12

Major/Minor	Major1			Major2			Minor1		Minor2			
Conflicting Flow All	717	0	0	576	0	0	1360	1344	567	1350	1349	734
Stage 1	-	-	-	-	-	-	583	583	-	757	757	-
Stage 2	-	-	-	-	-	-	777	761	-	593	592	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	884	-	-	997	-	-	126	152	523	128	151	420
Stage 1	-	-	-	-	-	-	498	499	-	400	416	-
Stage 2	-	-	-	-	-	-	390	414	-	492	494	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	867	-	-	997	-	-	115	143	521	114	142	409
Mov Cap-2 Maneuver	-	-	-	-	-	-	115	143	-	114	142	-
Stage 1	-	-	-	-	-	-	489	490	-	392	398	-
Stage 2	-	-	-	-	-	-	357	396	-	457	485	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	21.4	24.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	258	867	-	-	997	-	-	202
HCM Lane V/C Ratio	0.148	0.009	-	-	0.022	-	-	0.099
HCM Control Delay (s)	21.4	9.2	0	-	8.7	0	-	24.8
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.3

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-16-2020

Intersection						
Int Delay, s/veh	7.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	4	3	0	8	3
Future Vol, veh/h	0	4	3	0	8	3
Conflicting Peds, #/hr	0	4	4	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	100	38	88	58	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	8	0	14	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	8	0	22	7
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1612	-	995	1075
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	1610	-	986	1070
Mov Cap-2 Maneuver	-	-	-	-	986	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1002	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1004	-	-	1610	-
HCM Lane V/C Ratio	0.018	-	-	0.005	-
HCM Control Delay (s)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-16-2020

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	13	11	18	8	12	10	16	251	15	5	252	21
Future Vol, veh/h	13	11	18	8	12	10	16	251	15	5	252	21
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	50	61	88	69	75	63	73	58	63	87	59
Heavy Vehicles, %	2	1	2	2	2	5	2	2	2	14	2	2
Mvmt Flow	22	22	30	9	17	13	25	344	26	8	290	36

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	775	776	343	790	782	383	343	0	0	385	0	0
Stage 1	341	341	-	423	423	-	-	-	-	-	-	-
Stage 2	434	435	-	367	359	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.51	6.22	7.12	6.52	6.25	4.12	-	-	4.24	-	-
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.018	3.345	2.218	-	-	2.326	-	-
Pot Cap-1 Maneuver	315	330	700	308	326	658	1216	-	-	1111	-	-
Stage 1	674	640	-	609	588	-	-	-	-	-	-	-
Stage 2	600	582	-	653	627	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	280	309	677	263	305	642	1196	-	-	1100	-	-
Mov Cap-2 Maneuver	280	309	-	263	305	-	-	-	-	-	-	-
Stage 1	645	624	-	585	565	-	-	-	-	-	-	-
Stage 2	549	559	-	587	611	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.7		16.5		0.5		0.2	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1196	-	-	381	354	1100	-	-
HCM Lane V/C Ratio	0.021	-	-	0.192	0.112	0.007	-	-
HCM Control Delay (s)	8.1	0	-	16.7	16.5	8.3	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.4	0	-	-

# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-18-2020

Intersection													
Int Delay, s/veh	6.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	39	313	7	20	389	20	12	7	23	26	9	52	
Future Vol, veh/h	39	313	7	20	389	20	12	7	23	26	9	52	
Conflicting Peds, #/hr	5	0	6	6	0	5	20	0	1	1	0	20	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	44	85	88	68	79	50	50	50	55	67	75	67	
Heavy Vehicles, %	14	6	0	0	9	0	0	0	0	13	0	13	
Mvmt Flow	89	368	8	29	492	40	24	14	42	39	12	78	

Major/Minor	Major1	Major2	Minor1	Minor2									
Conflicting Flow All	537	0	0	382	0	0	1191	1151	379	1154	1135	537	
Stage 1	-	-	-	-	-	-	555	555	-	576	576	-	
Stage 2	-	-	-	-	-	-	636	596	-	578	559	-	
Critical Hdwy	4.24	-	-	4.1	-	-	7.1	6.5	6.2	7.23	6.5	6.33	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-	
Follow-up Hdwy	2.326	-	-	2.2	-	-	3.5	4	3.3	3.617	4	3.417	
Pot Cap-1 Maneuver	973	-	-	1188	-	-	166	200	672	166	204	523	
Stage 1	-	-	-	-	-	-	520	516	-	484	505	-	
Stage 2	-	-	-	-	-	-	469	495	-	483	514	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	955	-	-	1187	-	-	115	168	668	129	172	511	
Mov Cap-2 Maneuver	-	-	-	-	-	-	115	168	-	129	172	-	
Stage 1	-	-	-	-	-	-	456	453	-	425	485	-	
Stage 2	-	-	-	-	-	-	367	475	-	387	451	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.4	29.5	34.6
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	225	955	-	-	1187	-	-	246
HCM Lane V/C Ratio	0.355	0.093	-	-	0.025	-	-	0.522
HCM Control Delay (s)	29.5	9.2	0	-	8.1	0	-	34.6
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.5	0.3	-	-	0.1	-	-	2.8

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-18-2020

Intersection						
Int Delay, s/veh	6.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	7	8	0	6	2
Future Vol, veh/h	0	7	8	0	6	2
Conflicting Peds, #/hr	0	5	5	0	7	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	88	50	50	75	50
Heavy Vehicles, %	0	14	0	0	0	0
Mvmt Flow	0	8	16	0	8	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	13	0	48	12
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	39	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1619	-	967	1074
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1614	-	947	1066
Mov Cap-2 Maneuver	-	-	-	-	947	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	973	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.3	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	984	-	-	1614	-
HCM Lane V/C Ratio	0.012	-	-	0.01	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-18-2020

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	6	9	21	8	9	8	13	127	7	1	214	12
Future Vol, veh/h	6	9	21	8	9	8	13	127	7	1	214	12
Conflicting Peds, #/hr	2	0	19	19	0	2	33	0	18	18	0	33
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	56	71	67	75	67	65	74	88	25	87	75
Heavy Vehicles, %	17	22	0	0	11	0	8	3	0	0	1	0
Mvmt Flow	8	16	30	12	12	12	20	172	8	4	246	16

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	525	533	306	538	537	196	295	0	0	198	0	0
Stage 1	295	295	-	234	234	-	-	-	-	-	-	-
Stage 2	230	238	-	304	303	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.72	6.2	7.1	6.61	6.2	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.198	3.3	3.5	4.099	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	440	426	739	457	438	850	1233	-	-	1387	-	-
Stage 1	682	634	-	774	695	-	-	-	-	-	-	-
Stage 2	740	673	-	710	648	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	404	397	704	403	409	834	1211	-	-	1384	-	-
Mov Cap-2 Maneuver	404	397	-	403	409	-	-	-	-	-	-	-
Stage 1	649	613	-	747	671	-	-	-	-	-	-	-
Stage 2	702	650	-	649	626	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.7		12.9		0.8		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1211	-	-	524	490	1384	-	-
HCM Lane V/C Ratio	0.017	-	-	0.102	0.073	0.003	-	-
HCM Control Delay (s)	8	0	-	12.7	12.9	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.2	0	-	-



# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-18-2020

Intersection												
Int Delay, s/veh	31.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	55	659	13	23	553	26	14	11	69	16	5	35
Future Vol, veh/h	55	659	13	23	553	26	14	11	69	16	5	35
Conflicting Peds, #/hr	4	0	7	7	0	4	23	0	1	1	0	23
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	96	54	79	83	50	70	33	80	50	92	50
Heavy Vehicles, %	2	3	2	5	3	2	2	25	2	2	2	2
Mvmt Flow	87	686	24	29	666	52	20	33	86	32	5	70

Major/Minor	Major1	Major2	Minor1	Minor2		
Conflicting Flow All	722	0	0	718	0	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.15	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.245	-	-
Pot Cap-1 Maneuver	880	-	-	869	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	861	-	-	868	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.4	186.8	272.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	124	861	-	-	868	-	-	85
HCM Lane V/C Ratio	1.126	0.101	-	-	0.034	-	-	1.264
HCM Control Delay (s)	186.8	9.7	0	-	9.3	0	-	272.9
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	8.3	0.3	-	-	0.1	-	-	7.9

Notes									
-: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon									

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-18-2020

Intersection						
Int Delay, s/veh	6.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	4	3	0	6	7
Future Vol, veh/h	0	4	3	0	6	7
Conflicting Peds, #/hr	0	8	8	0	17	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	50	38	92	50	44
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	8	0	12	16

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	16	0	45
Stage 1	-	-	-	-	12
Stage 2	-	-	-	-	33
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1602	-	965
Stage 1	-	-	-	-	1011
Stage 2	-	-	-	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1599	-	938
Mov Cap-2 Maneuver	-	-	-	-	938
Stage 1	-	-	-	-	1003
Stage 2	-	-	-	-	968

Approach	EB	WB	NB
HCM Control Delay, s	0	7.3	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1002	-	-	1599	-
HCM Lane V/C Ratio	0.028	-	-	0.005	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-18-2020

Intersection													
Int Delay, s/veh	4.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	10	38	28	8	10	11	24	338	21	10	283	12	
Future Vol, veh/h	10	38	28	8	10	11	24	338	21	10	283	12	
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	63	58	75	67	42	55	82	86	71	63	87	43	
Heavy Vehicles, %	2	1	2	2	1	2	2	2	2	2	10	2	
Mvmt Flow	16	66	37	12	24	20	29	393	30	16	325	28	

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	888	885	375	921	884	434	371	0	0	438	0	0	
Stage 1	389	389	-	481	481	-	-	-	-	-	-	-	
Stage 2	499	496	-	440	403	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.51	6.22	7.12	6.51	6.22	4.12	-	-	4.12	-	-	
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.009	3.318	2.218	-	-	2.218	-	-	
Pot Cap-1 Maneuver	264	285	671	251	285	622	1188	-	-	1122	-	-	
Stage 1	635	610	-	566	555	-	-	-	-	-	-	-	
Stage 2	554	547	-	596	601	-	-	-	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	222	262	649	178	262	607	1168	-	-	1111	-	-	
Mov Cap-2 Maneuver	222	262	-	178	262	-	-	-	-	-	-	-	
Stage 1	604	589	-	540	529	-	-	-	-	-	-	-	
Stage 2	490	522	-	482	580	-	-	-	-	-	-	-	

Approach	EB			WB			NB			SB			
HCM Control Delay, s	23.4			20.2			0.5			0.4			
HCM LOS	C			C									

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR	
Capacity (veh/h)	1168	-	-	313	292	1111	-	-	
HCM Lane V/C Ratio	0.025	-	-	0.379	0.191	0.014	-	-	
HCM Control Delay (s)	8.2	0	-	23.4	20.2	8.3	0	-	
HCM Lane LOS	A	A	-	C	C	A	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	1.7	0.7	0	-	-	

# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-18-2020

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	33	424	11	11	488	24	6	1	23	26	0	30
Future Vol, veh/h	33	424	11	11	488	24	6	1	23	26	0	30
Conflicting Peds, #/hr	7	0	5	5	0	7	21	0	0	0	0	21
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	95	69	55	83	50	75	25	92	63	92	33
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	66	446	16	20	588	48	8	4	25	41	0	91

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	643	0	0	467	0	0	1309	1274	459	1260	1258	640
Stage 1	-	-	-	-	-	-	591	591	-	659	659	-
Stage 2	-	-	-	-	-	-	718	683	-	601	599	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	942	-	-	1094	-	-	136	167	602	147	171	475
Stage 1	-	-	-	-	-	-	493	494	-	453	461	-
Stage 2	-	-	-	-	-	-	420	449	-	487	490	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	924	-	-	1094	-	-	97	145	599	124	148	463
Mov Cap-2 Maneuver	-	-	-	-	-	-	97	145	-	124	148	-
Stage 1	-	-	-	-	-	-	444	444	-	407	445	-
Stage 2	-	-	-	-	-	-	321	433	-	418	441	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.3	22.4	34.5
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	244	924	-	-	1094	-	-	250
HCM Lane V/C Ratio	0.152	0.071	-	-	0.018	-	-	0.529
HCM Control Delay (s)	22.4	9.2	0	-	8.4	0	-	34.5
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0.1	-	-	2.8

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-18-2020

Intersection						
Int Delay, s/veh	7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	4	3	0	7	3
Future Vol, veh/h	0	4	3	0	7	3
Conflicting Peds, #/hr	0	4	4	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	100	38	88	58	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	8	0	12	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	8	0	22	7
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1612	-	995	1075
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	1610	-	986	1070
Mov Cap-2 Maneuver	-	-	-	-	986	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1002	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1006	-	-	1610	-
HCM Lane V/C Ratio	0.016	-	-	0.005	-
HCM Control Delay (s)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-18-2020

Intersection													
Int Delay, s/veh	2.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	12	10	18	7	11	9	15	247	14	5	249	20	
Future Vol, veh/h	12	10	18	7	11	9	15	247	14	5	249	20	
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18	
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	60	50	61	88	69	75	63	73	58	63	87	59	
Heavy Vehicles, %	2	1	2	2	2	5	2	2	2	14	2	2	
Mvmt Flow	20	20	30	8	16	12	24	338	24	8	286	34	

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	760	762	339	775	767	376	338	0	0	377	0	0
Stage 1	337	337	-	413	413	-	-	-	-	-	-	-
Stage 2	423	425	-	362	354	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.51	6.22	7.12	6.52	6.25	4.12	-	-	4.24	-	-
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.018	3.345	2.218	-	-	2.326	-	-
Pot Cap-1 Maneuver	323	336	703	315	332	664	1221	-	-	1119	-	-
Stage 1	677	643	-	616	594	-	-	-	-	-	-	-
Stage 2	609	588	-	657	630	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	289	315	680	271	311	648	1201	-	-	1108	-	-
Mov Cap-2 Maneuver	289	315	-	271	311	-	-	-	-	-	-	-
Stage 1	649	627	-	592	571	-	-	-	-	-	-	-
Stage 2	561	565	-	593	614	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.1		16		0.5		0.2	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1201	-	-	395	362	1108	-	-
HCM Lane V/C Ratio	0.02	-	-	0.176	0.099	0.007	-	-
HCM Control Delay (s)	8.1	0	-	16.1	16	8.3	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.3	0	-	-



# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-18-2020

Intersection												
Int Delay, s/veh	10.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	40	367	8	21	511	20	13	7	24	27	9	53
Future Vol, veh/h	40	367	8	21	511	20	13	7	24	27	9	53
Conflicting Peds, #/hr	5	0	6	6	0	5	20	0	1	1	0	20
Sign Control	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	44	85	88	68	79	50	50	50	55	67	75	67
Heavy Vehicles, %	14	6	0	0	9	0	0	0	0	13	0	13
Mvmt Flow	91	432	9	31	647	40	26	14	44	40	12	79

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	692	0	0	447	0	0	1418	1378	443	1382	1363	692
Stage 1	-	-	-	-	-	-	624	624	-	734	734	-
Stage 2	-	-	-	-	-	-	794	754	-	648	629	-
Critical Hdwy	4.24	-	-	4.1	-	-	7.1	6.5	6.2	7.23	6.5	6.33
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-
Follow-up Hdwy	2.326	-	-	2.2	-	-	3.5	4	3.3	3.617	4	3.417
Pot Cap-1 Maneuver	850	-	-	1124	-	-	116	146	619	115	149	426
Stage 1	-	-	-	-	-	-	477	481	-	395	429	-
Stage 2	-	-	-	-	-	-	384	420	-	441	478	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	834	-	-	1123	-	-	73	118	615	83	120	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	73	118	-	83	120	-
Stage 1	-	-	-	-	-	-	406	409	-	336	408	-
Stage 2	-	-	-	-	-	-	283	399	-	338	406	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	1.7		0.4		53.8		76	
HCM LOS					F		F	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	153	834	-	-	1123	-	-	169
HCM Lane V/C Ratio	0.547	0.109	-	-	0.027	-	-	0.778
HCM Control Delay (s)	53.8	9.8	0	-	8.3	0	-	76
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	2.7	0.4	-	-	0.1	-	-	5.1

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-18-2020

Intersection						
Int Delay, s/veh	6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	8	9	0	6	2
Future Vol, veh/h	0	8	9	0	6	2
Conflicting Peds, #/hr	0	5	5	0	7	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	88	50	50	75	50
Heavy Vehicles, %	0	14	0	0	0	0
Mvmt Flow	0	9	18	0	8	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	14	0	53	13
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1617	-	960	1073
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1612	-	939	1065
Mov Cap-2 Maneuver	-	-	-	-	939	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	968	-

Approach	EB		WB		NB	
HCM Control Delay, s	0		7.3		8.7	
HCM LOS					A	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	978	-	-	1612	-
HCM Lane V/C Ratio	0.012	-	-	0.011	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-18-2020

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	6	10	22	9	10	9	14	133	8	1	224	13
Future Vol, veh/h	6	10	22	9	10	9	14	133	8	1	224	13
Conflicting Peds, #/hr	2	0	19	19	0	2	33	0	18	18	0	33
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	56	71	67	75	67	65	74	88	25	87	75
Heavy Vehicles, %	17	22	0	0	11	0	8	3	0	0	1	0
Mvmt Flow	8	18	31	13	13	13	22	180	9	4	257	17

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	550	557	318	563	561	204	308	0	0	207	0	0
Stage 1	307	307	-	245	245	-	-	-	-	-	-	-
Stage 2	243	250	-	318	316	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.72	6.2	7.1	6.61	6.2	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.72	-	6.1	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.198	3.3	3.5	4.099	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	423	412	727	440	424	842	1219	-	-	1376	-	-
Stage 1	672	626	-	763	687	-	-	-	-	-	-	-
Stage 2	728	665	-	698	639	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	385	383	692	384	394	826	1197	-	-	1373	-	-
Mov Cap-2 Maneuver	385	383	-	384	394	-	-	-	-	-	-	-
Stage 1	638	605	-	734	661	-	-	-	-	-	-	-
Stage 2	686	640	-	634	618	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13		13.3		0.8		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1197	-	-	507	472	1373	-	-
HCM Lane V/C Ratio	0.018	-	-	0.112	0.085	0.003	-	-
HCM Control Delay (s)	8.1	0	-	13	13.3	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-	-

# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-18-2020

Intersection												
Int Delay, s/veh	169.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	808	14	24	687	26	15	11	73	16	5	35
Future Vol, veh/h	56	808	14	24	687	26	15	11	73	16	5	35
Conflicting Peds, #/hr	4	0	7	7	0	4	23	0	1	1	0	23
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	96	54	79	83	50	70	33	80	50	92	50
Heavy Vehicles, %	2	3	2	5	3	2	2	25	2	2	2	2
Mvmt Flow	89	842	26	30	828	52	21	33	91	32	5	70

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	884	0	0	875	0	0	2014	1983	863	2014	1970	881	
Stage 1	-	-	-	-	-	-	1039	1039	-	918	918	-	
Stage 2	-	-	-	-	-	-	975	944	-	1096	1052	-	
Critical Hdwy	4.12	-	-	4.15	-	-	7.12	6.75	6.22	7.12	6.52	6.22	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.75	-	6.12	5.52	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.75	-	6.12	5.52	-	
Follow-up Hdwy	2.218	-	-	2.245	-	-	3.518	4.225	3.318	3.518	4.018	3.318	
Pot Cap-1 Maneuver	765	-	-	759	-	-	44	53	354	44	63	346	
Stage 1	-	-	-	-	-	-	279	281	-	326	350	-	
Stage 2	-	-	-	-	-	-	303	312	-	259	303	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	749	-	-	758	-	-	24	37	351	-	6	44	337
Mov Cap-2 Maneuver	-	-	-	-	-	-	24	37	-	-	6	44	-
Stage 1	-	-	-	-	-	-	213	215	-	250	321	-	
Stage 2	-	-	-	-	-	-	213	287	-	124	231	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.3	\$ 615	\$ 2498.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	71	749	-	-	758	-	-	19
HCM Lane V/C Ratio	2.057	0.119	-	-	0.04	-	-	5.654
HCM Control Delay (s)	\$ 615	10.5	0	-	9.9	0	-	\$ 2498.3
HCM Lane LOS	F	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	13.4	0.4	-	-	0.1	-	-	13.9

Notes												
-: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon												

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-18-2020

Intersection						
Int Delay, s/veh	6.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	4	3	0	6	8
Future Vol, veh/h	0	4	3	0	6	8
Conflicting Peds, #/hr	0	8	8	0	17	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	50	38	92	50	44
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	8	0	12	18

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	16	0	45	14
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1602	-	965	1066
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	1599	-	938	1056
Mov Cap-2 Maneuver	-	-	-	-	938	-
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	968	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.3	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1006	-	-	1599	-
HCM Lane V/C Ratio	0.03	-	-	0.005	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

02-18-2020

Intersection													
Int Delay, s/veh	4.8												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	11	40	29	9	11	12	25	354	22	11	297	13	
Future Vol, veh/h	11	40	29	9	11	12	25	354	22	11	297	13	
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	63	58	75	67	42	55	82	86	71	63	87	43	
Heavy Vehicles, %	2	1	2	2	1	2	2	2	2	2	10	2	
Mvmt Flow	17	69	39	13	26	22	30	412	31	17	341	30	

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	932	928	392	966	928	453	390	0	0	458	0	0
Stage 1	409	409	-	503	503	-	-	-	-	-	-	-
Stage 2	523	519	-	463	425	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.51	6.22	7.12	6.51	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.009	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	247	269	657	234	269	607	1169	-	-	1103	-	-
Stage 1	619	598	-	551	543	-	-	-	-	-	-	-
Stage 2	537	534	-	579	588	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	204	247	635	160	247	592	1149	-	-	1092	-	-
Mov Cap-2 Maneuver	204	247	-	160	247	-	-	-	-	-	-	-
Stage 1	587	576	-	524	517	-	-	-	-	-	-	-
Stage 2	469	508	-	461	567	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	26		22.1		0.5		0.4	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1149	-	-	294	271	1092	-	-
HCM Lane V/C Ratio	0.027	-	-	0.425	0.227	0.016	-	-
HCM Control Delay (s)	8.2	0	-	26	22.1	8.3	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2	0.9	0	-	-



# HCM 2010 TWSC

1: St. Patricks Avenue & East 3rd Street

02-18-2020

Intersection													
Int Delay, s/veh	6.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	33	526	12	12	583	24	6	1	24	26	0	30	
Future Vol, veh/h	33	526	12	12	583	24	6	1	24	26	0	30	
Conflicting Peds, #/hr	7	0	5	5	0	7	21	0	0	0	0	21	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	50	95	69	55	83	50	75	25	92	63	92	33	
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2	
Mvmt Flow	66	554	17	22	702	48	8	4	26	41	0	91	

Major/Minor	Major1	Major2	Minor1	Minor2	
Conflicting Flow All	757	0	0	576	0
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-
Pot Cap-1 Maneuver	854	-	-	997	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	837	-	-	997	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.2	31	62.9
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	176	837	-	-	997	-	-	184
HCM Lane V/C Ratio	0.216	0.079	-	-	0.022	-	-	0.718
HCM Control Delay (s)	31	9.7	0	-	8.7	0	-	62.9
HCM Lane LOS	D	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.8	0.3	-	-	0.1	-	-	4.5

# HCM 2010 TWSC

2: St. Patricks Avenue & East 4th Street

02-18-2020

Intersection						
Int Delay, s/veh	7.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	4	3	0	8	3
Future Vol, veh/h	0	4	3	0	8	3
Conflicting Peds, #/hr	0	4	4	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	100	38	88	58	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	8	0	14	4

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	8	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.218	-
Pot Cap-1 Maneuver	-	-	1612	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1610	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1004	-	-	1610	-
HCM Lane V/C Ratio	0.018	-	-	0.005	-
HCM Control Delay (s)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

# HCM 2010 TWSC

## 3: St. Georges Avenue & East 4th Street

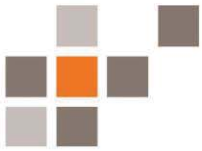
02-18-2020

Intersection													
Int Delay, s/veh	2.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Traffic Vol, veh/h	13	11	18	8	12	10	16	259	15	5	261	21	
Future Vol, veh/h	13	11	18	8	12	10	16	259	15	5	261	21	
Conflicting Peds, #/hr	11	0	18	18	0	11	18	0	15	15	0	18	
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	60	50	61	88	69	75	63	73	58	63	87	59	
Heavy Vehicles, %	2	1	2	2	2	5	2	2	2	14	2	2	
Mvmt Flow	22	22	30	9	17	13	25	355	26	8	300	36	

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	797	798	354	811	803	394	354	0	0	396	0	0
Stage 1	352	352	-	434	434	-	-	-	-	-	-	-
Stage 2	445	446	-	377	369	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.51	6.22	7.12	6.52	6.25	4.12	-	-	4.24	-	-
Critical Hdwy Stg 1	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.51	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.009	3.318	3.518	4.018	3.345	2.218	-	-	2.326	-	-
Pot Cap-1 Maneuver	305	320	690	298	317	649	1205	-	-	1100	-	-
Stage 1	665	633	-	600	581	-	-	-	-	-	-	-
Stage 2	592	576	-	644	621	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	270	299	667	254	296	633	1185	-	-	1089	-	-
Mov Cap-2 Maneuver	270	299	-	254	296	-	-	-	-	-	-	-
Stage 1	636	617	-	576	557	-	-	-	-	-	-	-
Stage 2	541	553	-	578	605	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	17.2		16.8		0.5		0.2	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1185	-	-	369	344	1089	-	-
HCM Lane V/C Ratio	0.021	-	-	0.198	0.116	0.007	-	-
HCM Control Delay (s)	8.1	0	-	17.2	16.8	8.3	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.4	0	-	-



## APPENDIX B

### Traffic Signal Warrant Analysis



## City of North Vancouver - Traffic Signal Warrant Analysis

Main Street (name) East 3rd Street  
Side Street (name) St. Patricks Avenue  
Quadrant / Int #  
CHECK SHEET

Direction (EW or NS) EW  
Direction (EW or NS) NS  
Comments Traffic volumes averaged for two hours - 2027 Background

Road Authority: City of North Vancouver  
City: City of North Vancouver  
Analysis Date: 2020 Feb 19, Wed  
Count Date: 2019 Jun 18, Tue  
Date Entry Format: (yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
East 3rd Street WB	WB				1			260	1
East 3rd Street EB	EB				1			400	1
St. Patricks Avenue NB	NB				1				
St. Patricks Avenue SB	SB				1				

Are the St Patrick Avenue NB right turns significantly impeded by through movements? (y/n) n  
Are the St Patrick Avenue SB right turns significantly impeded by through movements? (y/n) n

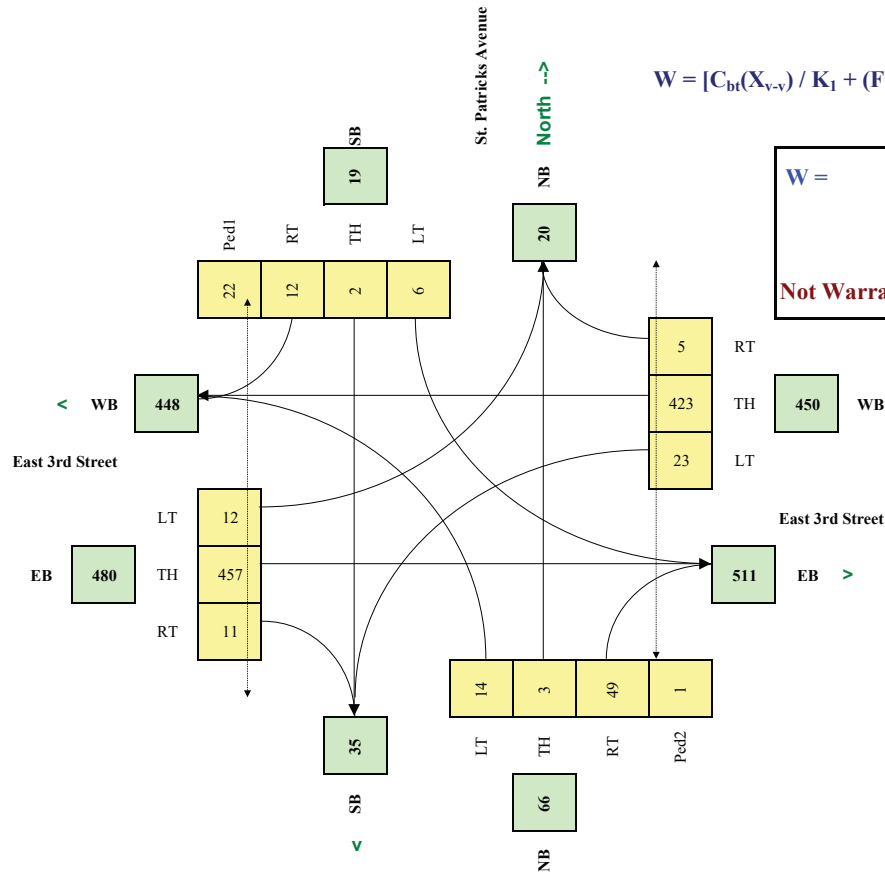
Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
East 3rd Street	EW	50	2.0%	y	1.4
St. Patricks Avenue	NS	50	2.0%	y	

Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	52,898
Central Business District	(y/n)	n

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
AM Peak Hour	13	2	24	9	3	17	21	338	4	8	302	8	20	1	5	6
PM Peak Hour	15	4	73	2	0	6	24	507	6	16	611	14	23	1	4	7
Total	28	6	97	11	3	23	45	845	10	24	913	22	43	2	9	13
Average	14	3	49	6	2	12	23	423	5	12	457	11	22	1	5	7

Average Peak Turning Movements

$$W = [C_{bt}(X_{v-v}) / K_1 + (F(X_{v-p}) L) / K_2] \times C_i$$



W = 50 29 21  
Veh Ped  
Not Warranted - Vs<75

RESET SHEET





## City of North Vancouver - Traffic Signal Warrant Analysis

Main Street (name) **East 3rd Street**  
Side Street (name) **St. Patricks Avenue**  
Quadrant / Int #  
**CHECK SHEET**

Direction (EW or NS) **EW**  
Direction (EW or NS) **NS**  
Comments **Traffic volumes averaged for two hours - 2027 Post Development**

Road Authority: **City of North Vancouver**  
City: **City of North Vancouver**  
Analysis Date: **2020 Feb 19, Wed**  
Count Date: **2019 Jun 18, Tue**  
Date Entry Format: **(yyyy-mm-dd)**

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
East 3rd Street WB	WB				1			260	1
East 3rd Street EB	EB				1			400	1
St. Patricks Avenue NB	NB								
St. Patricks Avenue SB	SB				1				

Are the St Patrick Avenue NB right turns significantly impeded by through movements? (y/n) **n**  
Are the St Patrick Avenue SB right turns significantly impeded by through movements? (y/n) **n**

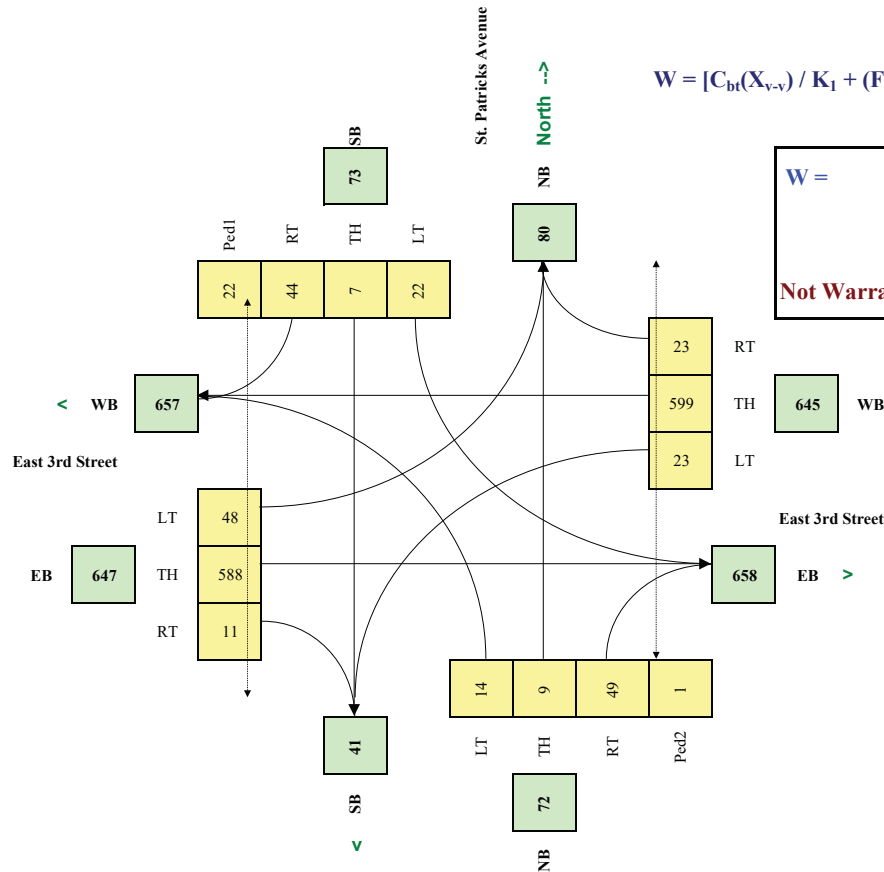
Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
East 3rd Street	EW	50	2.0%	y	1.4
St. Patricks Avenue	NS	50	2.0%	y	

Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	52,898
Central Business District	(y/n)	n

Set Peak Hours													Ped1	Ped2	Ped3	Ped4
Traffic Input	NB			SB			WB			EB			NS	NS	EW	EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
AM Peak Hour	13	7	24	27	9	53	21	511	20	40	367	8	20	1	5	6
PM Peak Hour	15	11	73	16	5	35	24	687	26	56	808	14	23	1	4	7
Total	28	18	97	43	14	88	45	1,198	46	96	1,175	22	43	2	9	13
Average	14	9	49	22	7	44	23	599	23	48	588	11	22	1	5	7

### Average Peak Turning Movements

$$W = [C_{bt}(X_{v-v}) / K_1 + (F(X_{v-p}) L) / K_2] \times C_i$$





## APPENDIX C

### Trip Generation Internal Capture Estimation

NCHRP 8-51 Internal Trip Capture Estimation Tool					
<b>Project Name:</b>	402-438 East 3rd Street TIA	<b>Organization:</b>	WATT Consulting Group		
<b>Project Location:</b>	402-438 East 3rd Street, North Vancouver, BC	<b>Performed By:</b>	Victor Ngo		
<b>Scenario Description:</b>	Post-Development	<b>Date:</b>	2020-02-19		
<b>Analysis Year:</b>	2027	<b>Checked By:</b>			
<b>Analysis Period:</b>	PM Street Peak Hour	<b>Date:</b>			

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs <sup>1</sup>	Quantity	Units	Total	Entering	Exiting
Office				9	2	7
Retail				47	23	24
Restaurant				88	53	35
Cinema/Entertainment				0		
Residential				75	46	29
Hotel				0		
All Other Land Uses <sup>2</sup>				36	17	19
<b>Total</b>				<b>255</b>	<b>141</b>	<b>114</b>

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.10	16%	19%	1.10	16%	19%
Retail	1.24	16%	19%	1.24	16%	19%
Restaurant	1.52	16%	19%	1.52	16%	19%
Cinema/Entertainment						
Residential	1.24	16%	19%	1.24	16%	19%
Hotel						
All Other Land Uses <sup>2</sup>	1.24	16%	19%	1.24	16%	19%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	0		9	0	8	0
Restaurant	0	15		0	9	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	3	8	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	341	190	151
Internal Capture Percentage	32%	28%	36%
External Vehicle-Trips <sup>3</sup>	115	67	48
External Transit-Trips <sup>4</sup>	36	20	16
External Non-Motorized Trips <sup>4</sup>	45	26	19

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	0%	25%
Retail	69%	57%
Restaurant	21%	45%
Cinema/Entertainment	N/A	N/A
Residential	30%	31%
Hotel	N/A	N/A

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

<sup>3</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>4</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

*Estimation Tool Developed by the Texas Transportation Institute*

NCHRP 8-51 Internal Trip Capture Estimation Tool					
<b>Project Name:</b>	402-438 East 3rd Street TIA	<b>Organization:</b>	WATT Consulting Group		
<b>Project Location:</b>	402-438 East 3rd Street, North Vancouver, BC	<b>Performed By:</b>	Victor Ngo		
<b>Scenario Description:</b>	Post-Development	<b>Date:</b>	2020-02-19		
<b>Analysis Year:</b>	2027	<b>Checked By:</b>			
<b>Analysis Period:</b>	AM Street Peak Hour	<b>Date:</b>			

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs <sup>1</sup>	Quantity	Units	Total	Entering	Exiting
Office				8	6	2
Retail				12	7	5
Restaurant				83	45	38
Cinema/Entertainment				0		
Residential				62	16	46
Hotel				0		
All Other Land Uses <sup>2</sup>				35	19	16
<b>Total</b>				<b>200</b>	<b>93</b>	<b>107</b>

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.10	16%	19%	1.10	16%	19%
Retail	1.24	16%	19%	1.24	16%	19%
Restaurant	1.52	16%	19%	1.52	16%	19%
Cinema/Entertainment						
Residential	1.24	16%	19%	1.24	16%	19%
Hotel						
All Other Land Uses <sup>2</sup>	1.24	16%	19%	1.24	16%	19%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	0	0
Retail	0		1	0	0	0
Restaurant	1	1		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	11	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	271	128	143
Internal Capture Percentage	13%	13%	12%
External Vehicle-Trips <sup>3</sup>	114	54	60
External Transit-Trips <sup>4</sup>	38	18	20
External Non-Motorized Trips <sup>4</sup>	45	21	24

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	14%	50%
Retail	22%	17%
Restaurant	19%	5%
Cinema/Entertainment	N/A	N/A
Residential	5%	21%
Hotel	N/A	N/A

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

<sup>3</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

<sup>4</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

*Estimation Tool Developed by the Texas Transportation Institute*



<b>Project Name:</b>	402-438 East 3rd Street TIA
<b>Analysis Period:</b>	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.10	6	7	1.10	2	2
Retail	1.24	7	9	1.24	5	6
Restaurant	1.52	45	68	1.52	38	58
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.24	16	20	1.24	46	57
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	1	0	0	0
Retail	2		1	0	1	0
Restaurant	18	8		0	2	2
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	11	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	16	0	0	0
Retail	0		34	0	0	0
Restaurant	1	1		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	2	14	0		0
Hotel	0	0	4	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	1	6	7	4	1	1
Retail	2	7	9	4	1	1
Restaurant	13	55	68	24	9	10
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	19	20	10	3	4
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	24	24	12	4	5

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	1	1	2	1	0	0
Retail	1	5	6	2	1	1
Restaurant	3	55	58	24	9	10
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	45	57	23	7	9
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	20	20	10	3	4

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

\*Indicates computation that has been rounded to the nearest whole number.

<b>Project Name:</b>	402-438 East 3rd Street TIA
<b>Analysis Period:</b>	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.10	2	2	1.10	7	8
Retail	1.24	23	29	1.24	24	30
Restaurant	1.52	53	81	1.52	35	53
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.24	46	57	1.24	29	36
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	1		9	1	8	2
Restaurant	2	22		4	10	4
Cinema/Entertainment	0	0	0		0	0
Residential	1	15	8	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	2	0	2	0
Retail	1		23	0	26	0
Restaurant	1	15		0	9	0
Cinema/Entertainment	0	1	2		2	0
Residential	1	3	11	0		0
Hotel	0	1	4	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	0	2	2	2	0	0
Retail	20	9	29	5	1	2
Restaurant	17	64	81	28	10	12
Cinema/Entertainment	0	0	0	0	0	0
Residential	17	40	57	21	6	8
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	21	21	11	3	4

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	2	6	8	4	1	1
Retail	17	13	30	7	2	2
Restaurant	24	29	53	12	5	6
Cinema/Entertainment	0	0	0	0	0	0
Residential	11	25	36	13	4	5
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	24	24	12	4	5

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

\*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool					
<b>Project Name:</b>	402-438 East 3rd Street TIA	<b>Organization:</b>	WATT Consulting Group		
<b>Project Location:</b>	402-438 East 3rd Street, North Vancouver, BC	<b>Performed By:</b>	Victor Ngo		
<b>Scenario Description:</b>	Post-Development	<b>Date:</b>	2020-02-19		
<b>Analysis Year:</b>	2027	<b>Checked By:</b>			
<b>Analysis Period:</b>	Saturday Street Peak Hour	<b>Date:</b>			

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs <sup>1</sup>	Quantity	Units	Total	Entering	Exiting
Office				7	4	3
Retail				55	29	26
Restaurant				98	50	48
Cinema/Entertainment				0		
Residential				75	37	38
Hotel				0		
All Other Land Uses <sup>2</sup>				5	3	2
<b>Total</b>				<b>240</b>	<b>123</b>	<b>117</b>

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.10	16%	19%	1.10	16%	19%
Retail	1.24	16%	19%	1.24	16%	19%
Restaurant	1.52	16%	19%	1.52	16%	19%
Cinema/Entertainment						
Residential	1.24	16%	19%	1.24	16%	19%
Hotel						
All Other Land Uses <sup>2</sup>	1.24	16%	19%	1.24	16%	19%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	0	0
Retail	1		9	0	8	0
Restaurant	1	18		0	7	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	4	10	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	323	166	157
Internal Capture Percentage	38%	37%	39%
External Vehicle-Trips <sup>3</sup>	96	49	47
External Transit-Trips <sup>4</sup>	32	17	15
External Non-Motorized Trips <sup>4</sup>	38	20	18

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	100%	33%
Retail	64%	56%
Restaurant	25%	36%
Cinema/Entertainment	N/A	N/A
Residential	33%	34%
Hotel	N/A	N/A

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

<sup>3</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>4</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

*Estimation Tool Developed by the Texas Transportation Institute*

<b>Project Name:</b>	402-438 East 3rd Street TIA
<b>Analysis Period:</b>	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.10	4	4	1.10	3	3
Retail	1.24	29	36	1.24	26	32
Restaurant	1.52	50	76	1.52	48	73
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.24	37	46	1.24	38	47
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	0	0
Retail	1		9	1	8	2
Restaurant	2	30		6	13	5
Cinema/Entertainment	0	0	0		0	0
Residential	2	20	10	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	2	0	2	0
Retail	1		22	0	21	0
Restaurant	1	18		0	7	0
Cinema/Entertainment	0	1	2		2	0
Residential	2	4	11	0		0
Hotel	0	1	4	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	4	0	4	0	0	0
Retail	23	13	36	7	2	2
Restaurant	19	57	76	24	9	11
Cinema/Entertainment	0	0	0	0	0	0
Residential	15	31	46	16	5	6
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	4	4	2	1	1

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	1	2	3	2	0	0
Retail	18	14	32	7	2	3
Restaurant	26	47	73	20	8	9
Cinema/Entertainment	0	0	0	0	0	0
Residential	16	31	47	16	5	6
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	2	2	2	0	0

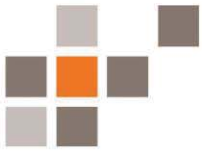
<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

\*Indicates computation that has been rounded to the nearest whole number.

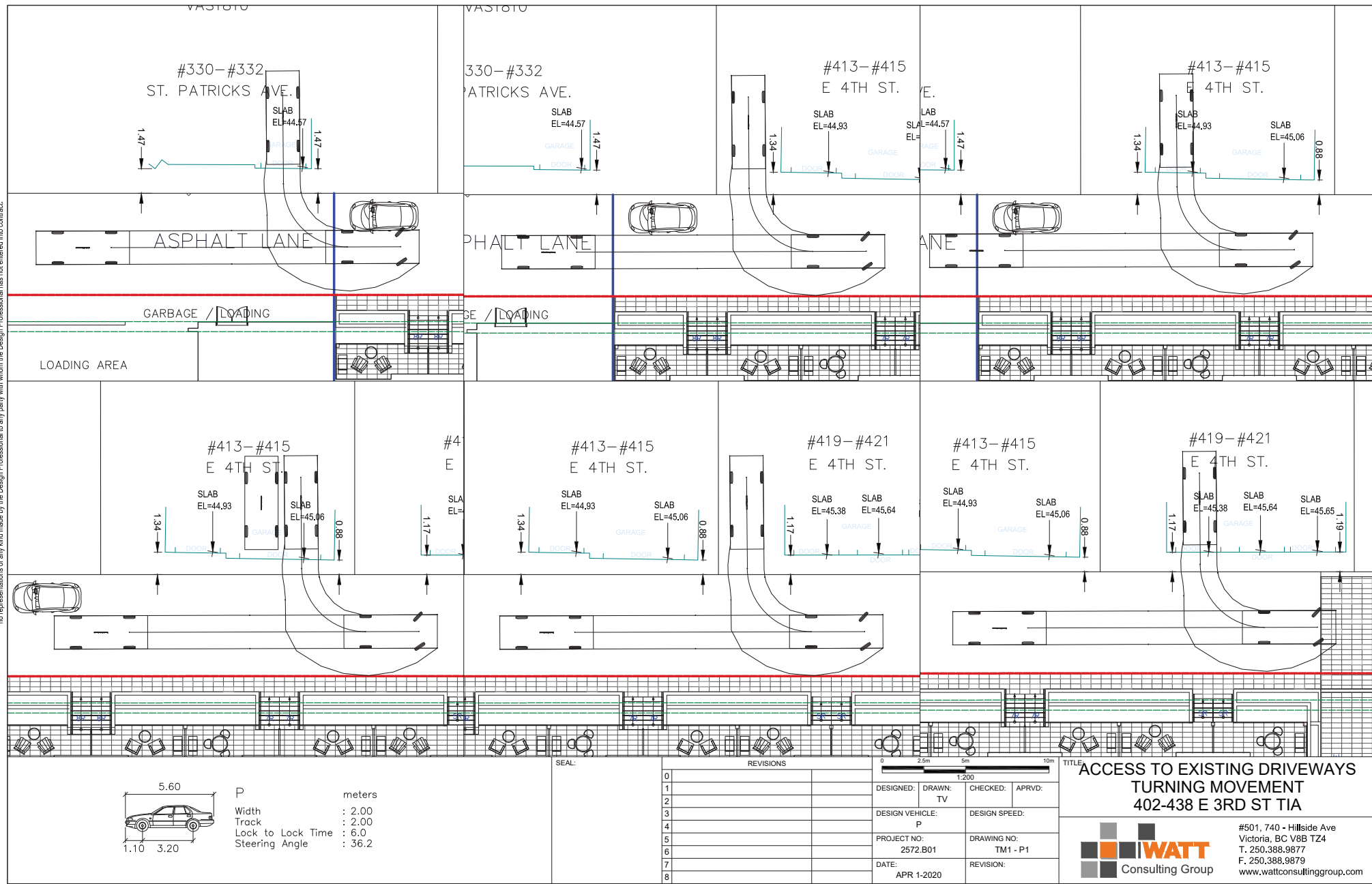


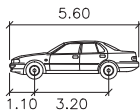


## APPENDIX D

### Swept Path Analysis and Loading Review

PROJECT: V:\Project Files\2572 - 402-438 E 3rd St TIA - North Vancouver\5 - Design\Sheet Path - 2020-03-31 - Access and Loading.dwg  
PLOT DATE: 4/1/2020 12:27 PM  
PLOTED BY: J. B. V. V.  
These Design Documents are prepared solely for the use by the party with whom the Design Professional has entered into a contract, and there are no representations of any kind made by the Design Professional to any party with whom the Design Professional has not entered into contract.









REVISIONS		
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DESIGNED:	DRAWN: TV	CHECKED:	APRVD:
DESIGN VEHICLE: MSU		DESIGN SPEED:	
PROJECT NO: 2572.B01		DRAWING NO: TM3 - MSU2	
DATE: APR 1-2020		REVISION:	

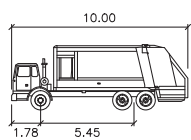
MSU LOADING VEHICLE - TURNAROUND  
TURNING MOVEMENT  
402-438 E 3RD ST TIA



#501, 740 - Hillside Ave  
Victoria, BC V8B TZ4  
T. 250.388.9877  
F. 250.388.9879  
[www.wattconsultinggroup.com](http://www.wattconsultinggroup.com)

PROJECT: V:\Project Files\2572 - 402-438 E 3rd St TIA - North Vancouver\5 - Design\Sheet Path - 2020-03-31 - Access and Loading.dwg  
PLOT DATE: 4/1/2020 12:27 PM  
PLOTTER: B710user, Vellum

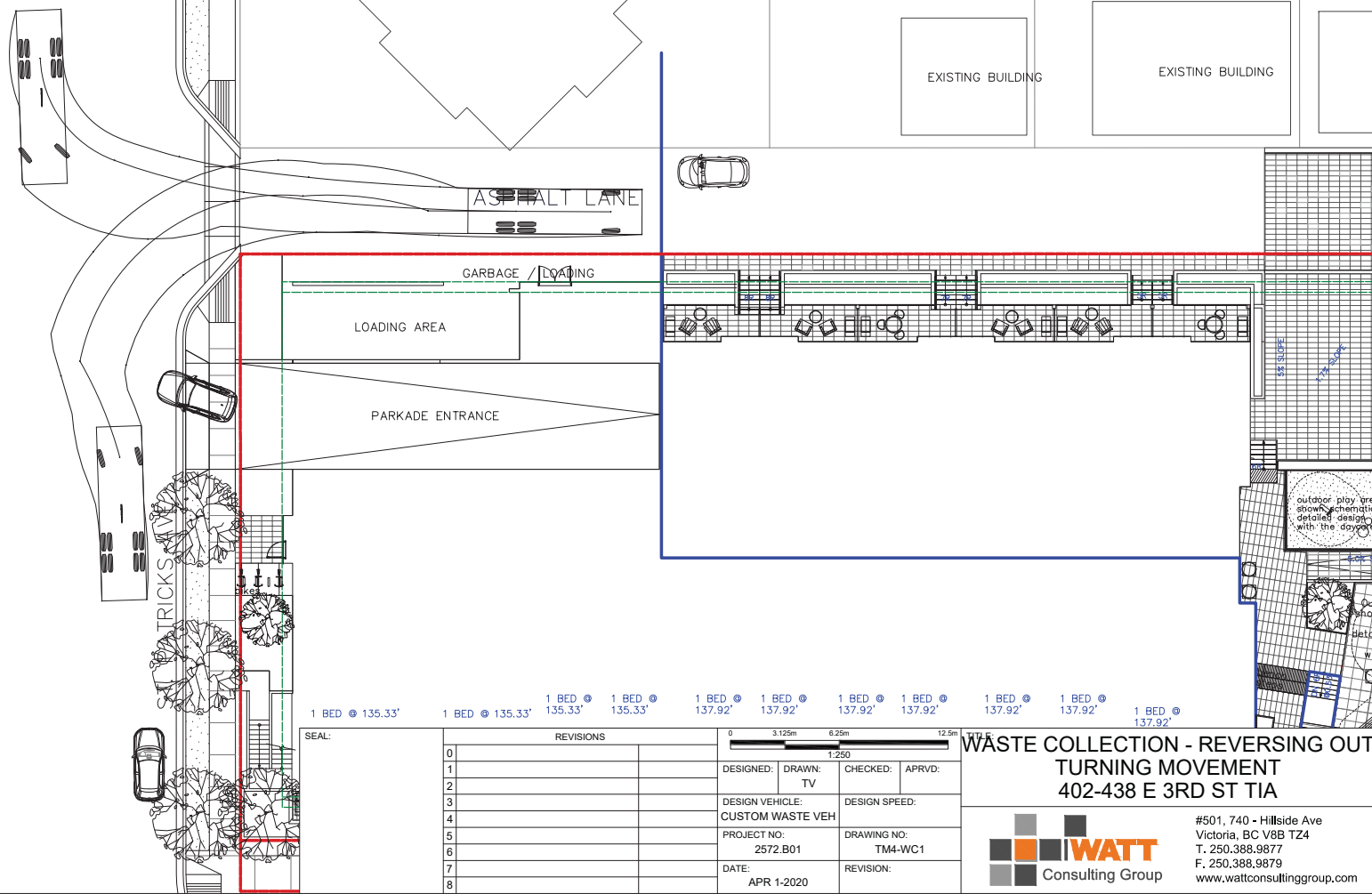
These Design Documents are prepared solely for the use by the party with whom the Design Professional has entered into a contract, and there are no representations of any kind made by the Design Professional to any party with whom the Design Professional has not entered into contract.



Garbage Truck — Front Loading

meters

Width : 2.58  
Track : 2.44  
Lock to Lock Time : 6.0  
Steering Angle : 27.4



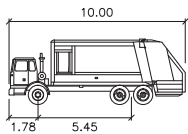
1 BED @ 135.33'	1 BED @ 135.33'	1 BED @ 135.33'	1 BED @ 135.33'	1 BED @ 137.92'	1 BED @ 137.92'	1 BED @ 137.92'	1 BED @ 137.92'	1 BED @ 137.92'	1 BED @ 137.92'	1 BED @ 137.92'
SEAL:	REVISIONS				DESIGNED: TV		CHECKED: APRVD:		DESIGN SPEED:	
0					DESIGN VEHICLE:		DRAWING NO:		REVISION:	
1					CUSTOM WASTE VEH		TM4-WC1			
2					PROJECT NO:					
3					2572.B01					
4					DATE:					
5					APR 1-2020					
6										
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8										

**WASTE COLLECTION - REVERSING OUT  
TURNING MOVEMENT**  
**402-438 E 3RD ST TIA**

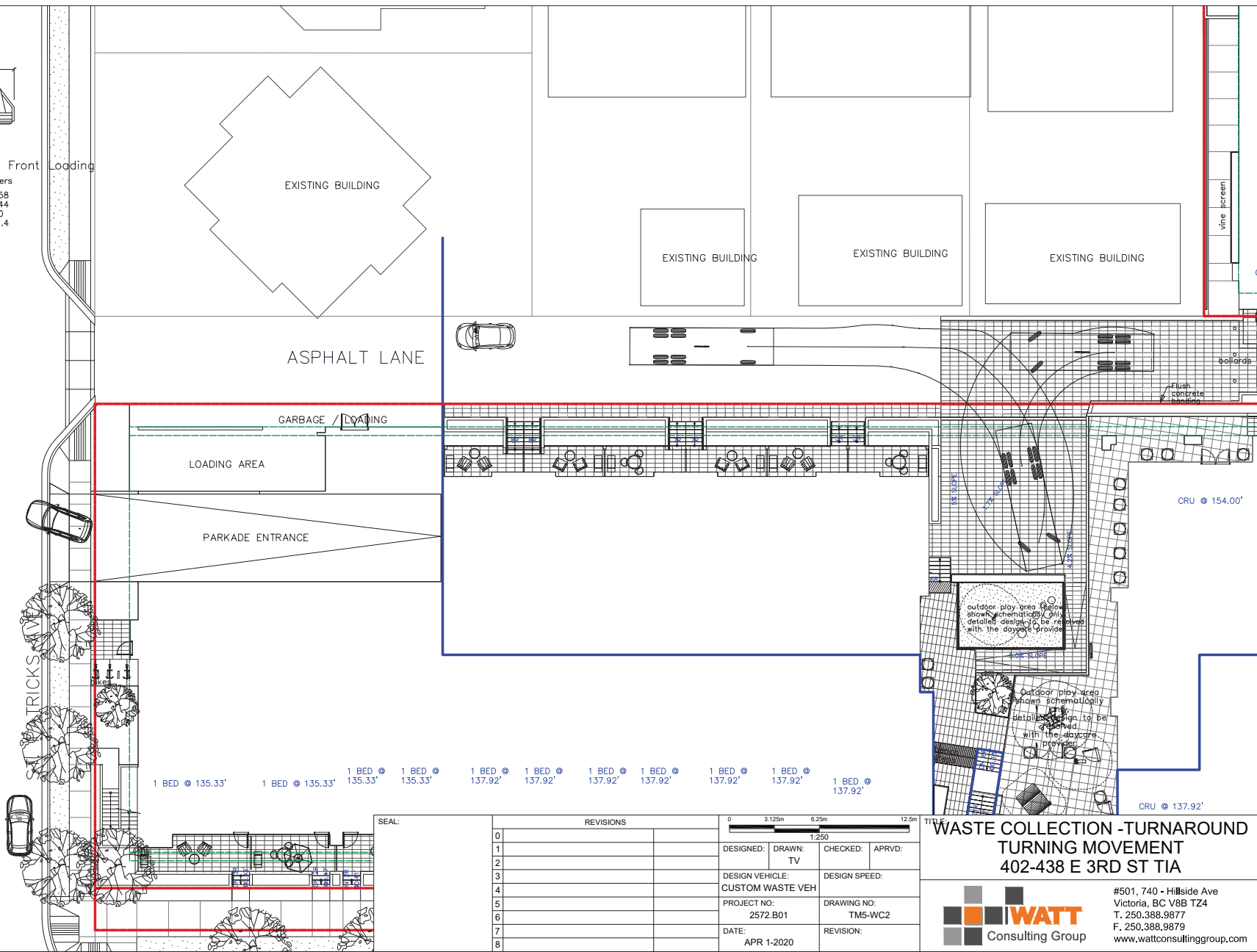
 **WATT**  
Consulting Group

#501, 740 - Hillside Ave  
Victoria, BC V8B T24  
T. 250.388.9877  
F. 250.388.9879  
www.wattconsultinggroup.com

PROJECT: V:\Project Files\2572 - 402-438 E 3rd St TIA - North Vancouver\5 - Design\Sheet Path - 2020-03-31 - Access and Loading\Sheet Path - 2020-03-31 - Access and Loading.dwg  
PLOT DATE: 4/1/2020 12:27 PM  
PLOTTER: B11 Forme, Velimex  
These Design Documents are prepared solely for the use by the party with whom the Design Professional has entered into a contract, and there are no representations of any kind made by the Design Professional to any party with whom the Design Professional has not entered into contract.



Garbage Truck - Front Loading  
meters  
Width : 2.58  
Track : 2.44  
Lock to Lock Time : 6.0  
Steering Angle : 27.4



SEAL:

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DESIGNED:	DRAWN:	CHECKED:	APRVD:
DESIGN VEHICLE:	TV	DESIGN SPEED:	
PROJECT NO:	2572.B01	DRAWING NO:	TM5-WC2
DATE:	APR 1-2020	REVISION:	

## WASTE COLLECTION -TURNAROUND TURNING MOVEMENT 402-438 E 3RD ST TIA

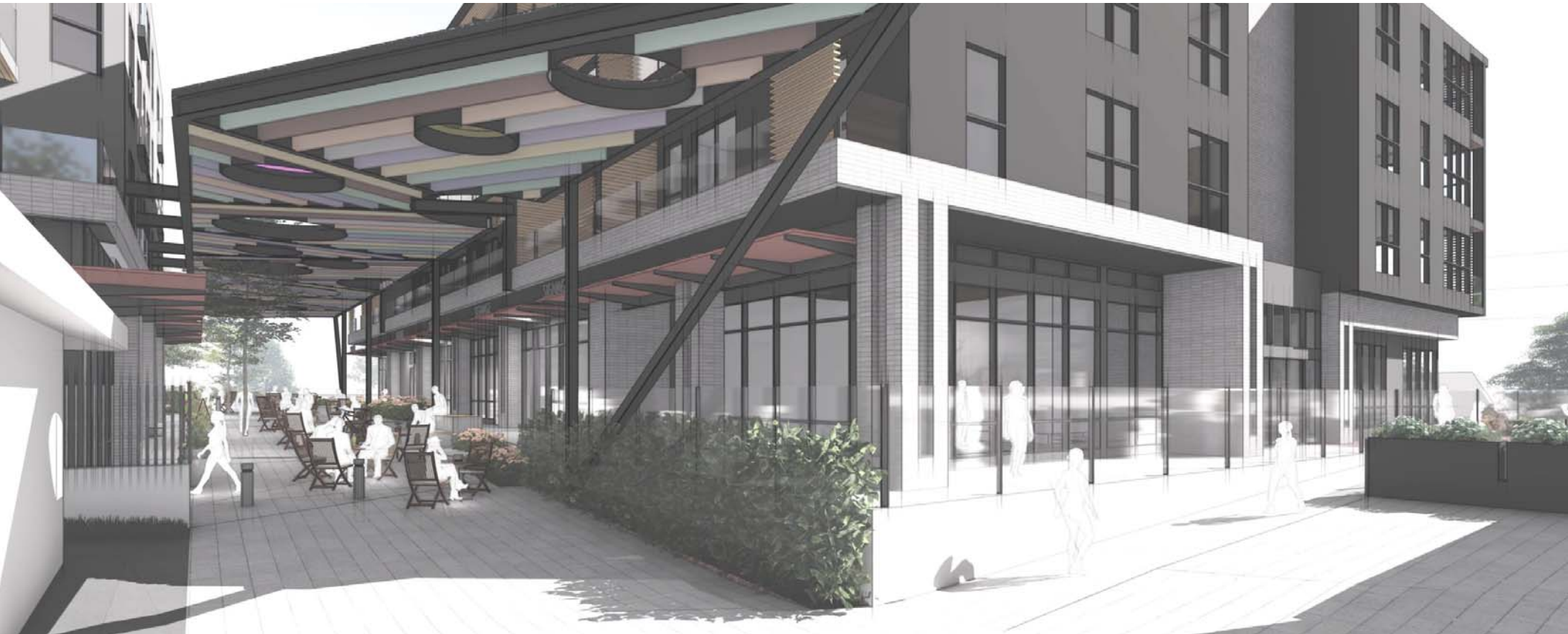


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www.wattconsultinggroup.com









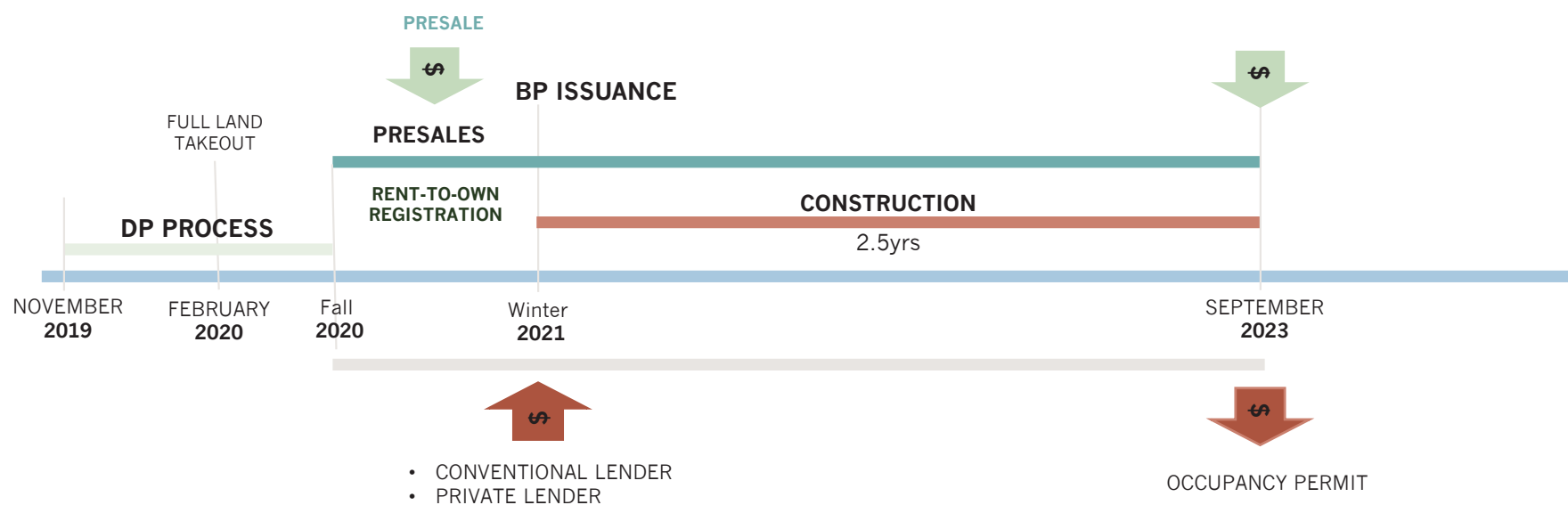
# AHOP & RENT-TO-OWN

## CASCADIA GREEN DEVELOPMENT

PILOT PROJECT

EAST 3<sup>RD</sup> NORTH  
VANCOUVER

# PROGRAM PROCESS



Total of 28 units will be allocated to RTO & AHOP

**9 Units Affordable Home Ownership Program**

**19 Units Rent to Own**



## Affordable Home Ownership Program

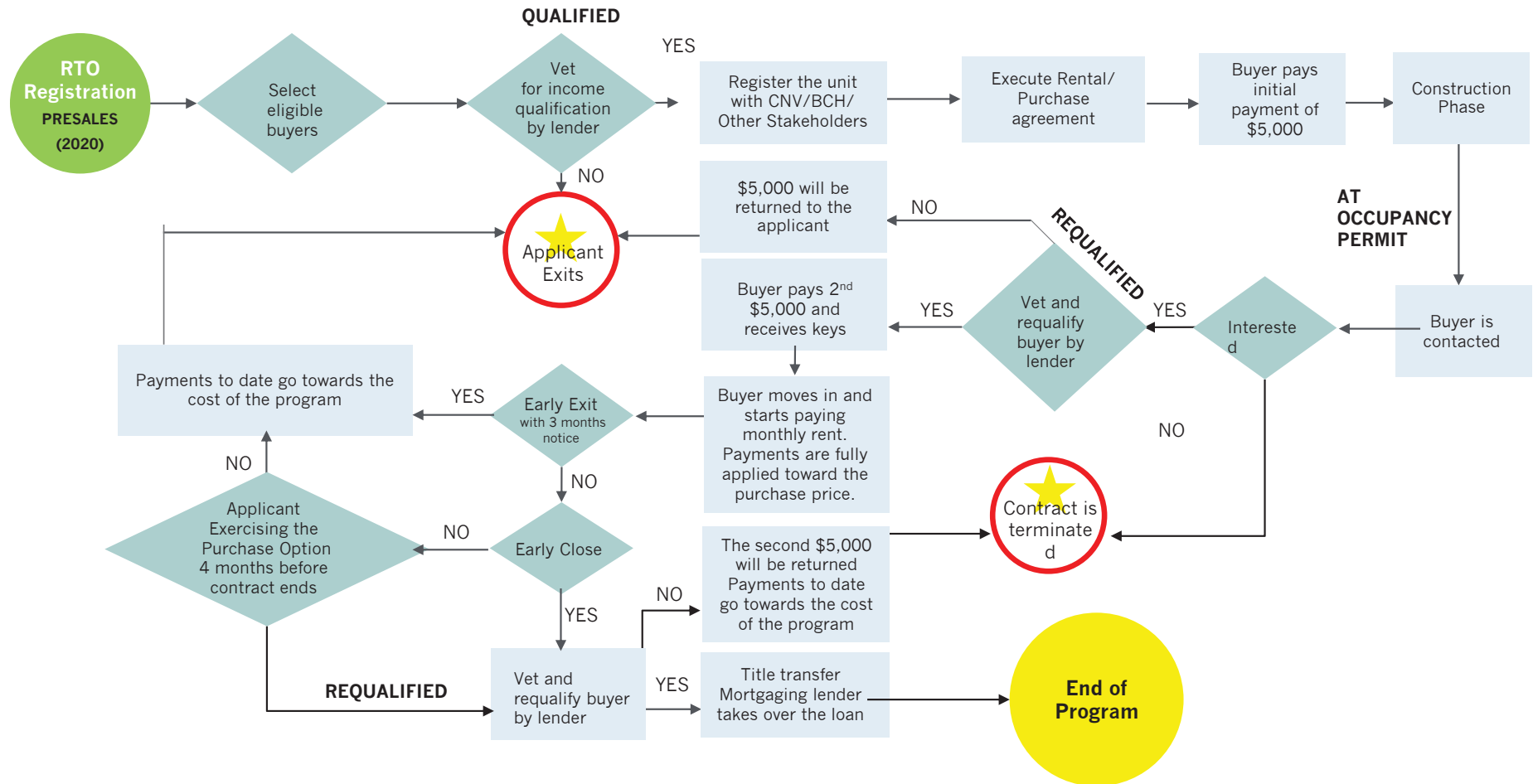
### Unit Breakdown

Unit Type	Average Unit Area	Number of Units
1-bedroom (AHOP)	540	3
2-bedroom (AHOP)	794	4
3-bedroom (AHOP)	1059	2
Total Number of Units		9

## Rent-To-Own Unit Breakdown

Unit Type	Average Unit Area	Number of Units
1-bedroom (RTO)	628	11
2-bedroom (RTO)	915	4
3-bedroom (RTO)	1,302	4
Total Number of Units		19

# RTO BUYER'S JOURNEY



## **OFF-SITE SERVICING REQUIREMENTS**

**402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue**

### **Information for Council Report**

The applicant has provided design drawings for off-site works and services as required by the Subdivision and Development Control Bylaw.

In addition to standard frontage upgrades and improvements to the public realm, the off-site works will include:

- Install sidewalk, curb and gutter, and paving to CNV Standard on east half of St. Davids Avenue.
- Full depth asphalt replacement of north half of the Lane adjacent to site complete with CNV standard lane throat and pedestrian crossing. Lane design to meet CNV Living Laneway Design Guidelines.
- Install traffic signal at the intersection of East 3<sup>rd</sup> Street and St. Patricks Avenue, including required civil works at intersection corners. Mill and pave full intersection complete with road markings.
- Install intersection improvements at East 4<sup>th</sup> Street and St. Davids Avenue including raised intersection, traffic diverter, sidewalk and curb and gutter at all corners, full depth asphalt replacement, Greenway connection, and regulatory signage and pavement markings.
- Provide \$20,000.00 contribution for local area pedestrian network and bicycle infrastructure improvements.
- Construct Greenway connection to NW corner of East 4<sup>th</sup> Street and St. Davids Avenue.
- Undergrounding of overhead hydro lines within the laneway.





## REQUIRED LEGAL AGREEMENTS

**402-438 East 3<sup>rd</sup> Street and 341-343 St. David's Avenue**

### Information for Council Report

In order to secure the obligations of the owner for the development as presented to Council to the satisfaction of staff, the following legal agreements shall be settled, executed and returned by the applicant to the satisfaction of the Director of Planning and the City Solicitor at the sole cost and expense of the applicant prior to final adoption of the proposed bylaws:

1. Shoring, Crane Swing, and Staging License Agreement (unregistered)
2. Flooding Covenant (unregistered)
3. Standard Good Neighbour Agreement
4. Encroachment Agreement for the structure(s) over the lane which will include an easement and a statutory right of way over those lots in favour of the City to provide access to the public and for maintenance and inspection purposes and a Section 219 Covenant.
5. Maintenance Agreement, including a Section 219 Covenant in favour of the City, to ensure regular maintenance and standards for the lane.
6. Statutory Rights-of-Way to secure public access to the breezeway, which is to improve permeability through the midblock and to secure access to private lands at the intersection of the lane and St. Davids Avenue as required.
7. Development Covenant – to secure form, character and details of the proposed development.
8. A loading management plan – to schedule deliveries and ensures functionality of on-site loading for commercial tenants and to restrict the maximum size of vehicles to the site.
9. Project partnering agreement among Cascadia Green Development, the City and BC Housing to secure the Affordable Home Ownership Program (AHOP) in collaboration with BC Housing and Cascadia Green Development.

Note to applicant: This requirement may be waived by the Director of Planning if the AHOP program is not pursued and a cash payment in lieu is made by the owner.

10. Public Art Agreement – to secure the provision and access to public art, including a Statutory Right of Way in favour of the City.
11. Community Energy Covenant – to secure the provision and standards of district energy services.
12. Childcare Build to Suit Covenant and Purchase and Sale Agreement – to secure the construction and delivery of the childcare facility and ensure the childcare facility meets that standards required of a City owned facility.

Note to applicant: This requirement may be waived by the Director of Planning if the childcare facility is not pursued and a cash payment in lieu is made by the owner.

13. If applicable, a covenant to secure cash community benefits payment deferment until BP.
14. Servicing Agreement to secure the on-site and off-site works set out in Attachment 6 necessary or incidental to the servicing of the site so that they are designed, constructed and installed at no cost to the City and all necessary rights of way for the services are provided, with security to be provided by the applicant for the services.

Promptly following adoption of the bylaws, and unless otherwise noted, the preceding agreements are to be fully registered in the Land Title Office, with priority over such other liens, charges and encumbrances affecting the subject site as is considered advisable by the City Solicitor at no cost to the City. The preceding agreements shall provide security to the City for the obligations of the owner, including indemnities, warranties, rent or equitable charges, letters of credit and withholding of permits as deemed necessary by and in a form satisfactory to the City Solicitor. The timing of all required payments and delivery of forms of security if any, shall be determined by the appropriate City official having responsibility for each particular agreement.

## 402-438 E 3<sup>rd</sup> Street & 341-343 St Davids Avenue Development Application

### Development Information Session Summary Report

**Event Date:** November 19, 2019  
**Time:** 6:30pm – 8:30pm  
**Location:** Harbourview Room, John Braithwaite Community Centre, 145 West 1<sup>st</sup> Street  
**Attendance:** 92 members of the public signed in, and approximately 100 attended.  
**Comments:** 85 comment sheets and emails: 62 in support and 23 in opposition.

**Meeting Purpose:**

- 1) To present development proposal materials to the community
- 2) To provide an opportunity for the community to ask questions about the proposal
- 3) To provide an opportunity for the community to comment on the proposal

**Notification:**

In accordance with City of North Vancouver policies:

Invitation Brochures

The City requires invitations to be sent to all households and businesses within 40m of the site. Cascadia Green delivered 364 invitations to all residents and businesses within 100m of the site, more than doubling the minimum notification radius. Appendix A includes a copy of this invitation and a map of the distribution area.

Newspaper Ad

A newspaper ad was placed in the North Shore News on Wednesday, November 13, 2019 and Friday, November 15, 2019. A copy of the ad is included in Appendix A.

Notification Signs

A notification sign was installed on the property on Wednesday, October 30, 2019 providing three weeks' notice to neighbours of the meeting. The sign was posted at the corner of 3<sup>rd</sup> Street and St Davids Avenue. A photograph of the installed sign is provided in Appendix A.

**Attendance:**

92 members of the public signed in for the meeting, and approximately 100 attended. A copy of the sign-in sheets is included in Appendix B.

The following City representatives and project team members were in attendance:

City of North Vancouver:

- Councillor Don Bell (arrived part-way through the meeting)
- Mike Friesen, Planner



**Project Team:**

- Farzad Mazarei, CEO, Cascadia Green Development
- Steven Petersson, Director of Development, Cascadia Green Development
- Shirazeh Dabiri, Project Coordinator, Cascadia Green Development
- Shamus Sachs, Architect, Integra Architecture
- Victor Ngo, Transportation Planner, Watt Consulting
- Michael Patterson, Landscape Architect, Perry & Associates
- Katrina May, Facilitator, Katrina May Consulting

**Overview:**

The meeting began with an Open House. Meeting participants browsed the display boards and engaged directly with the project team. Many participants arrived early in the evening and expressed eagerness to begin the presentation and dialogue. Consequently, the Open House ended at approximately 6:45pm to allow more time for a presentation and facilitated dialogue.

After the Open House, the applicant provided a short presentation of the proposal, followed by a question and answer period. During the applicant presentation and question and answer period, a facilitator noted questions and comments on a flip chart for all to see in order to ensure a transparent and fair documentation of the process.

The participants were invited to submit written comments to the applicant, facilitator or to the municipal planner. The comment period remained open until Friday, November 22 to allow people an opportunity to submit comments for a time after the meeting was over. 85 comment sheets were submitted: 23 expressed opposition to the proposal, and 62 expressed support. Participants are welcome to submit comments to the applicant or City after the comment period is over, but these late submissions are not summarized in this report.

There were questions and discussion regarding:

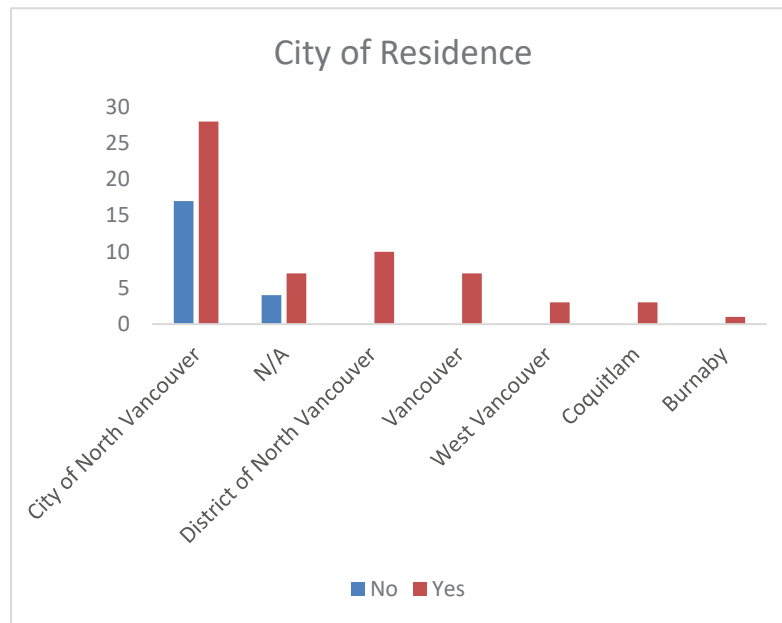
- the proposed Rent-to-Own program
- concern about height, massing and shadow impacts, particularly on 341 St Davids Avenue
- the desirability for a pedestrian and transit-oriented mixed-use neighbourhood centre
- concern about extending commercial uses and a daycare to 4<sup>th</sup> Street
- traffic impacts, the proposed parking supply, and how the proposal addresses transportation needs through providing land for a bus lane and bike lane
- green building standards and accessibility
- feasibility and land ownership.

While several vocal critics attended the meeting, the comment sheets indicate that the proposal was supported by most participants.

- 43 respondents praised the project for providing relatively affordable housing.
- 19 respondents criticized the proposed height on our north building at 341 St Davids. 3 respondents supported it.
- 15 respondents criticized the proposed height of our east building on 3rd Street (proposed 5 storeys vs 4 in the OCP).
- 17 respondents praised our design with regard to neighbourhood character and design. 5 respondents were critical of the project's impact on neighbourhood character.
- 12 respondents (including 3 opponents) praised the pedestrian-oriented design.
- 18 respondents expressed a concern about traffic impacts.
- 7 respondents expressed concern for lack of capacity in local schools to accommodate new children.
- 23 respondents praised the proposed mix of neighbourhood retail and restaurants. This was opposed by two.
- 6 respondents who expressed opposition to the project supported commercial uses on E 3rd Street. 6 opponents criticized commercial uses on St Davids.

### Who Participated at the Meeting?

Approximately 100 people attended the meeting, and 85 submitted comment sheets. Based on the comment sheets, we found that the largest group of participants live in the City of North Vancouver. The majority of participants live on the North Shore. Through discussion with some of the respondents who live outside of the North Shore, we found that some were former City of North Vancouver residents who wished to return, and some work in the City of North Vancouver and would like to live closer to work. This means that most of the participants were North Shore residents or former North Shore residents or North Shore workers.



## Conclusion

The purpose of this Development Information Session was to present to the community the proposed rezoning application, and to provide them with an opportunity to ask clarifying questions and comment on the proposal.

Notification requirements were met. 364 invitations were distributed to the surrounding community, and 92 people signed in at the meeting. Two newspaper ads notified the community of the meeting the week before the event. A sign was posted on the property three weeks before the event.

85 comment forms were submitted: 23 expressed opposition, and 62 expressed support.

Supporters of the project were enthusiastic about the proposed rent-to-own program, and opportunities for a pedestrian and transit-oriented village commercial centre.

While this Development Information Session demonstrated significant community support for the proposal, the Cascadia Green team also heard concerns from neighbours. The Cascadia Green team identified several opportunities to respond to public feedback. This will be reflected in the next design iteration, after receiving technical comments from City staff. The Cascadia Green team found that:

- It was challenging to answer questions about height on a complex project on a slope with a cross-fall in a succinct manner, because measuring height at different locations yields different measures of height. In addition to evaluating the proposed building heights, Cascadia Green will work to provide drawings that more clearly express existing heights, heights encouraged under the Moodyville Design Guidelines, and heights proposed by this application.
- There is a need to reduce building massing on 341 St Davids Avenue.
- There is a need to respond to concerns about shadow impacts.
- The location of the daycare needs to be reconsidered, if it is to remain part of this application, to reduce impacts to residential neighbours.
- The proposal for live/work units north of the lane on St Davids Avenue could be reconsidered to reduce impacts of commercial uses on residential areas further north.

Participants were engaged through several methods:

- browsing boards
- talking to the project team and CNV Planner
- watching a presentation
- participating in a facilitated question and answer period
- submitting written comments.

The meeting length and format was sufficient to provide all participants an opportunity to learn more, ask questions, and make the comments they wished to provide that evening. Participants asked the development team a variety of questions, mostly related to height, shadows, density, green building, rent-to-own, parking and traffic. The community was given ample opportunity to express their views of the proposal. Cascadia Green looks forward to presenting our next design iteration at our upcoming Town Hall meeting in 2020.



## Appendix A: Notification

### Newspaper Ad

## Developer's Information Session

Cascadia Green Development is hosting an information session. Interested members of the public are invited to learn more about our application to amend the OCP and rezone 402-438 E 3rd St & 341-343 St David's Ave, which allows for the development of a mixed-use commercial/residential project featuring a daycare, 181 residential units, 16 commercial and 4 office units.

You are invited to this session to learn more about the project, and our rent-to-own program, and to provide feedback.

**Location:**

Harbourview Room,  
John Braithwaite Community Centre,  
145 West 1st Street

**Date:** Tue, November 19, 2019**Time:** 6:30pm - 8:30pm**Steven Petersson**

Director of Development  
Cascadia Green Development  
604-813-6720

[steven@cascadiagreendev.com](mailto:steven@cascadiagreendev.com)

**Community Development Contact:**

Mike Friesen, City of North Vancouver Planner 604-990-4206 [mfriesen@cnv.org](mailto:mfriesen@cnv.org)

This meeting has been required by the City of North Vancouver as part of the rezoning process.

A30 |

## REMEMBRANCES

### OBITUARIES



**VESELY, Marilyn (nee Abernethy)**

Marilyn passed away peacefully on November 5, 2019 at Lynn Valley Care Centre at age 97, after living out her final years with vascular dementia. She was born on September 4, 1922, in Vancouver and attended Maple Secondary School. After graduating from the University of British Columbia in Education with a focus on Fine Arts, Marilyn worked as an elementary school teacher in the public system for over 30 years, primarily in North Vancouver, where she settled and raised her family. She was a dedicated educator who influenced and inspired generations of students, particularly with her passion for music and art. Marilyn was an avid singer in her younger years and a talented singer, guitar player and visual artist throughout her life.

Predeceased by her brother, Robert Abernethy, Marilyn is survived and will be missed by her sister Anne Rothberg; her husband of 68 years, Miro Vesely; her son, Mario Vesely; and Miro's wife Julie and daughter Gillian. She will also be missed by her friends, cousins, and members of the wider Abernethy family. The family wishes to express their sincere gratitude to all the staff at the Lynn Valley Care Centre for the excellent care they showed to Marilyn during her years there.

There will be a drop-in reception in remembrance of Marilyn's life between 2:30pm and 4:30pm on Tuesday, November 19, 2019, at First Memorial Basil Chapel, 1505 Lilac Road, North Vancouver.



### LEGAL

### LEGAL/PUBLIC NOTICES

#### Developer's Information Session

Cascadia Green Development is hosting an information session. Interested members of the public are invited to learn more about our application to amend the OCP and rezoned 402-438 E 3<sup>rd</sup> St & 341-343 St David's Ave, which allows for the development of a mixed-use commercial/residential project featuring a daycare, 181 residential units, 16 commercial and 4 office units. You are invited to this session to learn more about the project, and our rent-to-own program, and to provide feedback.

**Locations:**  
345 West 3rd Street  
Harbourview Room,  
John Braithwaite Community Centre,  
Dates: Tue, November 19, 2019  
Time: 6:30pm - 8:30pm

**Steven Peterson**  
Director of Development  
Cascadia Green Development  
604-613-6720  
steven@cascadiagreen.com



**Community Development Contact:**  
Mika Hreben, City of North Vancouver Planner 604-990-4206  
mhreben@city.nv.ca  
This meeting has been required by the City of North Vancouver as part of the rezoning process.

### IN MEMORIAM



### EMPLOYMENT

#### RESTAURANT/HOTEL

**C-LOVERS**  
A FINE DINE-OUT CAFE  
Apply with resume and  
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#### SALES/AGENTS

**Sales Account Manager**  
Attention customer service  
gurus aiming to kickstart a  
successful sales career.  
Check out our posting to  
learn more and apply:  
[www.outbackbuilding.com/about-us/join-our-team](http://www.outbackbuilding.com/about-us/join-our-team)  
/sales-account-manager

### GENERAL EMPLOYMENT

## BC LIQUORSTORES

**2019**  
BC's Top Employers  
**Sales Associates**  
Positions Available at Westview,  
Lynn Valley, and Park Royal!

We are dedicated to the highest quality of customer service, delivered with friendliness, individual pride, initiative, and retail passion! If you fit this description and you are prepared to work in a fast paced environment, we encourage you to apply to become a part of BC Liquor Stores.

We are accepting applications for auxiliary sales associate positions in our Liquor Stores.

To be eligible, applicants must meet the following qualification requirements:

- o Be at least 19 years of age
- o Be able to work shift work and weekends
- o Be able to perform physically demanding work, including lifting 20-25 kg boxes
- o Have a valid Serving it Right Certificate

#### Rate of Pay:

Seasonal Sales Associate - \$17.37 per hour  
Auxiliary Sales Associate - \$18.69 per hour

For exciting and challenging retail Seasonal and Auxiliary opportunities, please apply in person at the following locations:

770 - 2601 Westview Drive, North Vancouver - 604-981-0026

15 - 1189 Lynn Valley Rd, North Vancouver - 604-981-0014

785 Park Royal North, West Vancouver - 604-981-0011

#### Or online at:

<http://bcliquorstores.prevueaps.ca/pages/openings/>

nsnews.com north shore news WEDNESDAY, NOVEMBER 13, 2019

## COMMUNITY

### FOUND

**Found: Walking Crane**  
Walking crane found around noon on Thursday, October 31st, on a bench in front of Pat Smart, Park Royal North. Please contact to identify.  
604-864-6536

## BUSINESS SERVICES

### BUSINESS OPPORTUNITIES

**DAVISON**  
ATTENTION INVENTORS!  
Ideas wanted!  
Call Davison today!  
1.800.718.2909  
or visit us at  
[inventing.davison.com/BC](http://inventing.davison.com/BC)  
Free inventor's guide!

**HEALTH & BEAUTY**  
GET UP TO \$50,000 from the Government of Canada. Do you or someone you know have any of these Conditions? ADHD, Anxiety, Arthritis, Asthma, Cancer, COPD, Depression, Diabetes, Difficulty Walking, Menopause, Muscle Spasms, Overweight, Trouble Dressing, and Hundreds more. ALL Ages & Medical Conditions Qualify. Have a child under 18 instantly receive more money. CALL BRITISH COLUMBIA BENEFITS 1-800-211-3050 OR Send a Text Message with Your Name and Mailing Address to (604) 739-5500 For Your FREE benefits package.

### PERSONALS

**GENTLEMEN** Attractive, discreet European lady offers companionship. 604-455-0775

### HEALTH & BEAUTY

**Wey's Rehabilitation Services**  
Serving North Vancouver for 16 years!  
10am - 5pm  
604.986.8650  
1009 Marine Drive  
(by Kelco) parking at rear

## MARKETPLACE

### FREE

**FREE Fridge Freezer**  
Chest style, (Kamron) 23.5" wide 51.5" length, 64" high, call 604-690-4562 must be able to take away.

**FREE FURNITURE**, book shelves, chest of drawers, chairs, odds and ends. 604-895-8803

### WANTED

Refused instruments, weapons or jewelry. Please call 604-790-2237

Old Books Wanted, direct Photos, Postcards, Letters, Paintings, no text books or encyclopedias. I pay cash. 604-737-0630

**Grow Your Business**  
Call 604-630-3300 to place your ad

## CHRISTMAS CORNER

### CRAFT FAIRS/BAZAARS

**2019 Swedish Christmas Fair**  
November 16 & 17  
11am-4pm  
**Traditional Swedish Goods & Current Desirable Items:**  
for Family, Home, Celebration & Gift Giving  
SCANDINAVIAN COMMUNITY CENTRE  
6540 Thomas St., Burnaby  
Over 30 local vendors, live entertainment and Swedish Gålle with open sandwiches, Swedish pastries & cookies, Christmas porridge and Glogg. No ATM onsite.  
**FREE ADMISSION—FREE PARKING**  
[www.swedishcultural.society.ca](http://www.swedishcultural.society.ca)

**Great Gifts**  
Handmade crafts & fine artwork by 39 artists  
Nov 15 to Dec 15  
Snack preview Fri, Nov 15 4 - 6pm  
Nov 16 - Dec 15  
Tues - Sat noon - 5pm  
Ferry Building Gallery - 1000 Argyle Ave, West Van  
[ferrybuildinggallery.ca](http://ferrybuildinggallery.ca)

**Annual Christmas Craft Fair**  
November 16 & 17, 2019  
10:00am - 4:00pm  
Chief Joe Mollen Centre  
1000 West 10th Ave, North Vancouver  
• RESPONDING VENDORS  
• GET YOUR CHRISTMAS SHOPPING DONE EARLY  
• SUPPORT FOR LOCAL ARTISTS & HANDMADE

**CHRISTMAS LIGHTS & TREES**  
CUTTERS, Window Cleaning, Christmas lights, roof decorations & general repairs. Show me what I can do for you!  
Call 604-666-6666



FRIDAY, NOVEMBER 15, 2019 northshorenews nsnews.com

A41

## REMEMBRANCES

### OBITUARIES

#### SCOTT, Gilbert (Gill) Oliver

Blessings for the life of Gilbert (Gill) Oliver Scott who passed peacefully on November 8, 2019. He was predeceased by his loving wife of 63 years, Margaret (Marge) Ellen Scott. He is survived by daughters Katherine Tuoman (Elkott), Carol Poykary (Tim) and Mokie Heino (Lyny); by sons Walter Scott (Elizabeth) and Vern Staples (Lori), and by 14 grandchildren and 21 great-grandchildren. He is also survived by his wife's sister, Rita, and by many spouses of his brothers and sister, and their families.

Gill worked for many years at Burrard Dry dock. After retirement, he and Marge travelled extensively in their motorhome.

The family wishes to thank Dr. Haef and all the caring staff at Berkeley Care Centre, Burnaby Terrace East.

Celebration of life is on November 21, 2019, 2:00 p.m., at Basil Chapel, 1505 Lilac Street, North Vancouver. Reception following. Donations in lieu of flowers may be made to the Alzheimer Society of BC.

**Dignity**  
Funeral Services

### FUNERAL SERVICES

**McKenzie**  
FUNERAL SERVICES

*Our Family Serving Yours*

604-926-5121  
200-100 Park Royal South, West Vancouver  
mckenziefuneralservices.com

TAKING CARE OF EACH OTHER  
is what community is all about.

### HOLLYBURN FUNERAL HOME

1807 Marine Drive, West Vancouver

Thank you for continuing to place your trust in us now and always.

Proudly serving the North Shore for over 80 years

604-922-1221 hollyburnfunerals.com

**Dignity**

Dignity Memorial is a division of Service Corporation International (Cranston, U.S.A.)

### EXECUTOR SERVICES

**Westcoast Wills & Estates**

**Probate made easy.**

Let our experienced lawyers help you.

604-210-2211 | westcoastwills.com

*\*Law corporation*



Celebrate the lives of loved ones  
with your stories, photographs and tributes  
legacy.com/obituaries/nsnews

## LEGAL

### LEGAL/PUBLIC NOTICES

#### Developer's Information Session

Cascadia Green Development is hosting an information session. Interested members of the public are invited to learn more about our application to amend the OCP and rezone 402-438 E 3rd St & 341-343 St Davids Ave, which allow for the development of a mixed-use commercial/residential project featuring a daycare, 181 residential units, 16 commercial and 4 office units.

You are invited to this session to learn more about the project, and our rent-to-own program, and to provide feedback.

Location:  
145 West 1st Street  
Horseshoe Plaza  
John Brinkwater Community Centre,  
Deter: Tue, November 19, 2019  
Time: 6:30pm - 8:30pm

Steven Peterson  
Director of Development  
Cascadia Green Development  
604-813-4770  
steven@cascadiagreen.com



Community Development Contact:  
Mia Fraser, City of North Vancouver Planner 604-990-4206  
mfraser@cnv.org  
This meeting has been required by the City of North Vancouver as part of the rezoning process.

#### By Virtue of the Warehouseman's Lien Act

BigSteelBox Corporation  
at 880 Laughhead Hwy, Port Coquitlam, BC, Canada  
claims a PPSA Warehouse Lien against  
Wendy Montgomery of Brackendale, BC  
for arrears of container rent amounting to  
\$2,821.95 plus any additional costs of storage  
that accrue. If not paid in full, the contents of  
furniture and miscellaneous items will be sold online  
auction via: bid4Storage.com on November 20, 2019.

#### WAREHOUSE LIEN ACT

Warehouseman's Lien Act whereas Hendrik Swensvold is indebted to Seavaults Landing Inc. for storage on a 29' Columbia Seaboard, Registration #: BC5382229031, named "Earl Grey". Notice is hereby given that on the 25th day of November, 2019 or thereafter, the boat will be sold at 6409 Bay Street, West Vancouver, BC. For more information call Accurate Effective Bailiffs Ltd. at (604) 626-3737.

#### WAREHOUSEMAN'S LIEN ACT

WAREHOUSEMAN'S LIEN: HELPS Richard Ian is indebted to Mitchell's Towing for storage and towing on a 2012 Ford Box Trailer VIN: 5WABBB0811C4006800. A lien is claimed under the Act. There is presently an amount due and owing of \$1807.22 plus any additional costs of storage, seizure and sale that may accrue.

Notice is hereby given that on December 4, 2019 or thereafter, the said vehicle will be sold. The vehicle is currently stored at Mitchell's Towing Ltd, 1255 Welsh Street, North Vancouver, BC, V7P1E4. The vehicle was placed in storage on October 9, 2019. For more info call Mitchell's Towing Ltd at 604-962-0115. www.MitchellsTowing.ca

#### WAREHOUSEMAN'S LIEN ACT

WAREHOUSEMAN'S LIEN: WANG, Luyi is indebted to Mitchell's Towing for storage and towing on a 2007 Volkswagen Golf VIN: 9WML41674009682. A lien is claimed under the Act. There is presently an amount due and owing of \$4,902.03 plus any additional costs of storage, seizure and sale that may accrue.

Notice is hereby given that on December 4, 2019 or thereafter, the said vehicle will be sold. The vehicle is currently stored at Mitchell's Towing Ltd, 1255 Welsh Street, North Vancouver, BC, V7P1E4. The vehicle was placed in storage on August 26, 2019. For more info call Mitchell's Towing Ltd at 604-962-0115. www.MitchellsTowing.ca

**Hot Spot  
For Sale**  
604.630.3300



## EMPLOYMENT

### GENERAL EMPLOYMENT

**NEED EXTRA INCOME??**  
Earn extra cash to supplement your current income or pay off your bills. Now hiring delivery contractors for the day, province and nation all Post in the West Vancouver area. Must have reliable vehicle & be available from 8am - 6pm daily. Earn up to \$800/week. Call to find the route closest to you. 778-669-4400

### RESTAURANT/HOTEL

**C-LOVERS**  
Serving 100 customers. Apply with resume at 1900 Fair Barton Ave.

## EDUCATION

**Education Reimagined**  
Creating the Schools Our Children Need

A FREE 8-10 PM Presentation For Parents and Educators

Monday, Nov 25th  
Glenogil Golf Clubhouse  
6190 Marine Drive West  
7:00-8:30 pm

Speakers:

- Neil Spence, Ph.D., Author
- Lucia Clarke, Author
- Judy Denison, Principal - Burnaby School

Registration: <https://www.burnaby.ca/parents/25th-edition-education-reimagined>

## COMMUNITY

### ANNOUNCEMENTS

**BAHAI COMMUNITY DEVOTION**  
Gathering in a study, new 7th at 10:30 am in the East Vash had at West Vancouver Memorial Library. Everyone Welcome! "So powerful is the light of unity that it can burnish the whole earth" - Baha'is

### FOUND

**Found: Walking Cane**  
Walking cane found around noon on Thursday, October 31st, on a bench in front of Pet Smart, Park Royal North. Please contact to identify. 604-264-6535

**Grow Your Business**  
Call 604-630-3300

## MARKETPLACE

### FREE

**FREE PRICED PRICED**  
Great style, (6mm x 25.5" wide 31.5" length, 34" high, call 604-420-4452 must be able to take away.

### WANTED

Mutual Investments  
Planning or business help  
Cash: 604-760-2337

## BUSINESS SERVICES

### HEALTH & BEAUTY

**Lily's Rejuvenation Massage**  
Serving North Vancouver for 16 years!  
10am - 9pm  
604.986.8650  
1050 Marine Drive  
(by McKay) parking at rear

## CLASSIFIEDS Build Results

## RENTALS

### APARTMENTS/CONDO'S FOR RENT

**Beautiful Waterfront 1 Bedroom**  
\$2,700/month  
Spacious, high quality, newly renovated suite on the new island. Very large balcony. Quiet, well-maintained building. Full-time manager on site. Available from December 1. 604-621-6682

**THE BOWENVIEW Studio Apt.**  
530 Glen Ave, Ocean View, West Vancouver. No pets, n/s. \$1200. 604-628-6741

### SUITES FOR RENT

**1 BR+ Den, ground level, Upper Lonsdale.**  
Available. Own entry, patio, incl ut (\$750/month). No smoking, no pets. 604-665-1142 604-615-2149

**Basement suite central Lonsdale, Grand Blvd.**  
2 bdrm, \$700 + utilities. Bright clean walk-out. Basement suite with patio, storage shed, laundry. Outside for single daytime worker. 604-677-4018 please leave message.

To advertise call  
604-630-3300

### SUITES FOR RENT

**Central Lonsdale**  
2 BDRM, 2 bathroom, second floor, incl fridge, gas stove, hot water, 2 parking, \$460/1st Lien rent. Avail Dec 1st, no pets, n/s. \$2,500/month 604.925.3594 for appt

### HOUSES FOR RENT

**CENTRAL LONSDALE**  
3 Bedroom House, recreation room, vaulted, 4 appliances, dropce and well to well. Clean & bright, working people, n/s. \$1,225. 995-852-7372

### FURN OUCH HOUSE

2bed/2bath, N/S, n/s, \$800 includes everything. Grand Blvd 604.612-2715

### HOUSES FOR RENT

**BRIGHT DUNDARVIS 3br**  
house, 2nd and 3rd floors. \$1800 Call 604-787-7338

**UPPER LONSDALE, 3 BR**  
Home, 2.5 Bath, Full Bath, OCEAN VIEW, Avail Nov 2020. 604-985-6496

### FURNISHED RENTALS

**LONSDALE 600 - Furn Ac-**  
com. 2 bdrm, 1.5 Bath. Start at \$1300. 604-723-7820 or visit www.homeswayhmo.com

**342 E. Glenhead, N/S 2nd**  
A beautiful view of Burrard Inlet, 370 sqft, Grand WC, \$765. Number for info. 604-625-4537

## AUTOMOTIVE

### SPORTS & IMPORTS

**1991 Merc Benz 500SL Convertible**, auto, mint condition, collector's item. 119,500 kms. \$12,500. Come see and make an offer. 604-671-3779

**402-438 E 3<sup>rd</sup> Street & 341-343 St Davids Avenue Development Application  
Development Information Session Summary Report**

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Notification Sign: Installed October 30, 2019





## 402-438 E 3<sup>rd</sup> Street & 341-343 St Davids Avenue Development Application Development Information Session Summary Report

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### Notification Flyers



The City of North Vancouver has received an OCP amendment and rezoning application from Cascadia Green Development for 402-438 E 3rd St & 341-343 St David's Ave. which allows for the development of a mixed-use commercial/residential project featuring a daycare, 181 residential units, 16 commercial and 4 office units. Access to underground parking is proposed from St Patricks Street.

Cascadia Green Development is hosting an information session. Interested members of the public are invited to attend this session for an opportunity to review the proposal, learn about our rent-to-own program, and to offer comments.

**Applicant Contact:**

**Steven Petersson**

Director of Development  
Cascadia Green Development  
604-813-6720  
steven@cascadiagreendev.com

**Community Development Contact:**

**Mike Friesen**

Planning and Development  
City of North Vancouver  
604-990-4206  
mfriesen@cnv.org

### Development Information Session

Official Community Plan and Zoning bylaw Amendment  
for Mixed Use Commercial - Residential Building  
402-438 E 3rd St & 341-343 St. David's Ave, North  
Vancouver, BC.

**Date:** Tue, November 19, 2019

**Time:** 6:30pm - 8:30pm

**Location:** Harbourview Room,  
John Braithwaite Community Centre,  
145 West 1st Street

## 402-438 E 3<sup>rd</sup> Street & 341-343 St Davids Avenue Development Application Development Information Session Summary Report

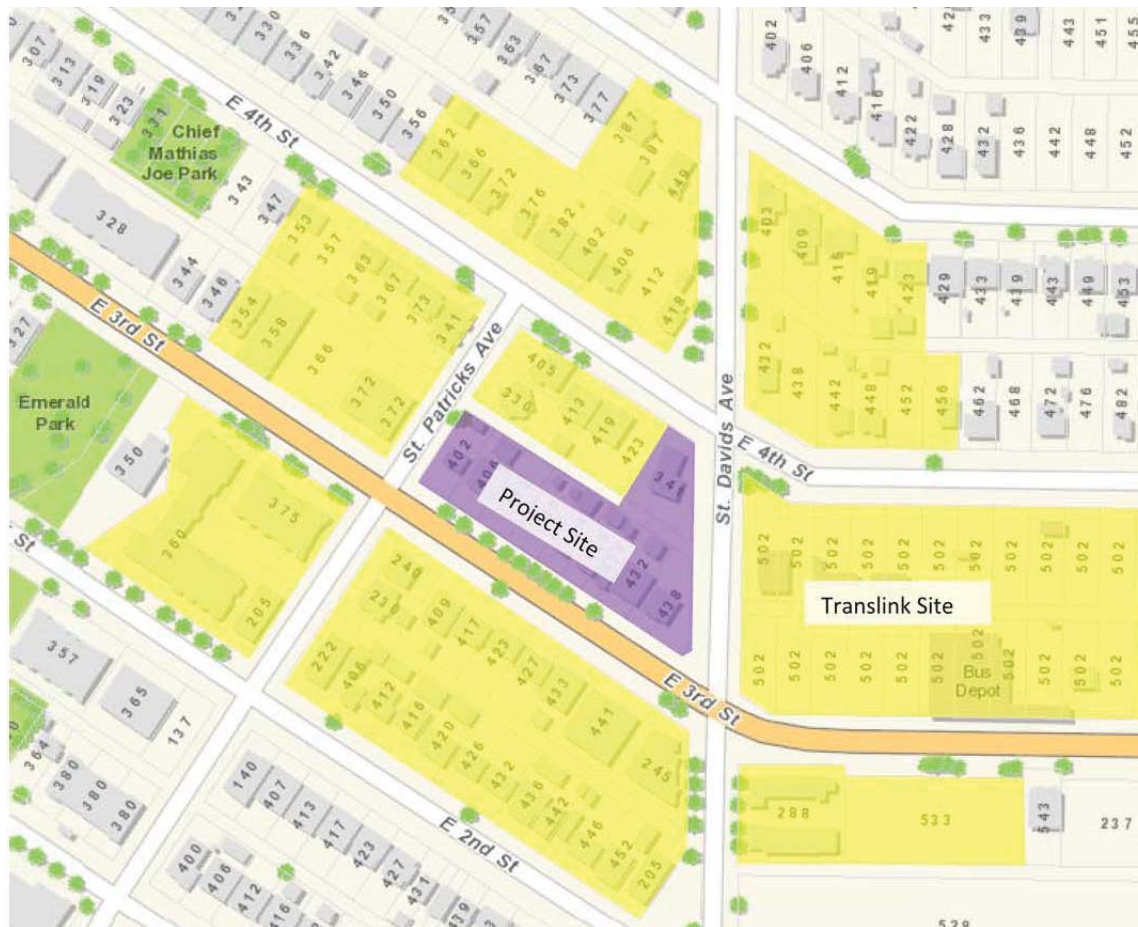
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### Notification Area Map

Cascadia Green exceeded the 40m notification radius required by the City, and notified all businesses and residents within 100m of the site.

**Purple** = subject site (residents and businesses were notified)

**Yellow** = notified properties, 100m radius



**ROCKANDEL&ASSOCIATES**

*Building Success Through Process Facilitation  
Organizational & Public Engagement*

**VIRTUAL TOWN HALL REPORT**

**To:** Mike Friesen, Planning and Development, City of North Vancouver  
E: mfriesen@cnv.org T: 604-990-4206

**CC:** Steven Petersson, Director of Development, Cascadia Green Development  
E: steven@cascadiagreendev.com T: 604-813-6720

**From:** Catherine Rockandel, IAF Certified Professional Facilitator  
Rockandel & Associates Tel: 1-604-898-4614 E: cat@growpartnerships.com

**Re:** 402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver

**Date:** August 25, 2020

**Event Date:** Tuesday, July 14, 2020  
**Time:** 7:00 PM – 8:30 PM  
**Location:** Due to COVID 19 restrictions the Town Hall was held virtually  
**Attendees:** Two Hundred (200) members registered for the Virtual Town Hall  
One Hundred and Forty-Two participants attended Zoom Meeting  
providing 316 comments.

The following project team members, and City of North Vancouver staff and a Councillor were in attendance.

**City of North Vancouver**

Mike Friesen, Planning, City of North Vancouver  
Matthew Holm, Manager of Development Services (Engineering)  
Councillor, Don Bell

**Developer and Project Consultants**

Steven Petersson, Director of Development, Cascadia Green Development  
Victor Ngo, Traffic Engineering, Watt Consulting Group  
Farzad Mazarei, CEO, Cascadia Green Development  
Mania Hormozi, Senior Development Manager, BC Housing  
Jason McDougall, Landscape Architect, Perry & Associates  
Shamus Sachs, Architect, Integra Architecture

**Independent Moderator**

Catherine Rockandel, Rockandel & Associates

Virtual Town Hall  
402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver  
July 14, 2020

## **Notification**

### Town Hall Invitation Flyers

The community was notified of the Town Hall by Invitation Flyers. These were distributed within 100m of the site. See invitation and notification map in Appendix 1 and 2.

### Site Signs

Three (3) Town Hall site signs were erected on the site notifying the community of the meeting location at 4<sup>th</sup> and St. Patricks; 3<sup>rd</sup> and St. Patricks; and East 3<sup>rd</sup> and St. Davids. The sign that was erected several days after the first two signs was located at St Patricks and East 3<sup>rd</sup>. Originally it was anticipated that the sign located at St Davids and East 3<sup>rd</sup> would provide adequate notification, but based on community feedback and subsequent review it was determined that it was challenging for eastbound drivers to reasonably perceive the sign. Photos of the site signs are located in the Appendix 5.

### Newspaper Advertisement

Ads ran in the North Shore news on Wednesday, July 1, 2020 and Wednesday, July 8. See newspaper sample in Appendix 3 and 4.

## **Public Feedback**

### Pre-Virtual Town Hall Input – Appendix 7

Cascadia Green hosted a Virtual Open House prior to the Virtual Town Hall from June 30 to July 14<sup>th</sup>, 2020 public input was received via email and website submissions. This input is summarized in 1 Pre-Meeting Feedback section of Appendix 7 attached.

### Post Virtual Town Hall Input – Appendix 7

Following the virtual Town Hall on July 14, 2020 the Open House and public comment period remained open for two weeks until July 28, 2020. This input is summarized in 2 Post Virtual Town Hall Feedback section of Appendix 7 attached.

In addition to a written submission, a sketch was provided by neighbours Jeff Keate, Architect and Leicha Bragg. This is being responded to by Cascadia Green's architect and is contained in Appendix 6.

Responses to pre and post virtual Town Hall questions will also be posted on Cascadia Green's website.

## **PRESENTATION SUMMARY**

Cascadia Green is proposing a development at 402-438 East 3rd Street and 341-343 St Davids Avenue. The proposal features 175 residential units, a daycare, neighbourhood commercial space and office units. The development also includes a Rent-To-Own and Affordable Home Ownership Program.



## Virtual Town Hall

402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver

July 14, 2020

The purpose of the Town Hall is to communicate updated project details, listen to questions and comments provided by the public, and respond to them; and to have a third-party facilitator document the process and submit a summary report to the City.

### ***Virtual Town Hall Overview***

In a face to face Town Hall with each person provided with an approximate two (2) minute speaking opportunity, and allowing for one (1) minute developer response, usually a maximum of 30 people can have their voices heard.

A virtual Town Hall allows more comments to be captured via the Q&A response. However, the downside is that some individuals use online forums to post derogatory comments or comments that make a negative inference. The moderator asked people to focus on issues not people, to be respectful and not negatively characterize individuals or groups. However, not all people follow guidelines or requests.

In addition, the speed at which the comments are posted makes it difficult for the moderator to identify and respond to subtle hidden inferences particularly when they are reading input for authentic questions for the developer to respond to. For this reason, derogatory comments posted in the chat are not included in this summary report.

In summary, the public comments that were not supportive indicated they were concerned about:

- Height of buildings and exceedance of OCP
- Increased density ie: MAX density of the north building
- 32000 feet of commercial and concerns about not enough parking for commercial.
- Reduced parking stall ratio
- Size and design of building do not fit with neighbourhood character and design
- Daycare on a busy street and health impacts for children
- Access from the lane to garage would hinder the several townhouses facing the lane
- Commercial lane sets a precedent for every other lane in CNV there will be conflict in vehicle access
- Shadows create a triangle around existing homes which won't have any sunlight to their living space during the winter months
- Concern that some virtual public meeting participants did not live in the immediate neighbourhood

Some individuals that were opposed also said that they:

- support some commercial development in this area and a 4 storey building on third street

In summary, the majority of supportive public comments indicated support because of:

- Rent-to-Own and Affordable Home Ownership program. They indicated that these programs are opportunities for young people to start a household, transition from rental, and be able to own a home.

## Virtual Town Hall

402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver

July 14, 2020

- Others indicated that more commercial space is necessary for lower Lonsdale compared to all the residential units
- Several people mentioned live work spaces

### Participation Analysis

In reviewing the comments submitted during the Virtual Town Hall, there were twelve (12) registrants that self-identified as neighbours (defined by them as living directly adjacent the proposed development and thus disproportionately impacted) opposed to the development.

Based on the comments submitted in the virtual Town Hall, some supporters declared that they lived directly adjacent the proposed development, while others self-identified that they lived in the City of North Vancouver. Others did not disclose their location.

During the virtual Town Hall several neighbours commented on process transparency related to previous Developer Information sessions. For this reason, the moderator asked the developer to provide all input submitted on line before and in the two-week period after the Town Hall meeting. A summary of the documentation provided by the developer is included in the Appendix.


## Virtual Town Hall

402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver

July 14, 2020

## APPENDIX (Materials Provided by Developer)

### 1. Appendix: Invitation Flyers



Cascadia Green Development is hosting a Virtual Town Hall for its application to rezone & amend the OCP to redevelop 402-438 E 3rd St & 341-343 St David's Ave. The proposal features 175 residential units, a daycare, neighbourhood commercial space, and office units.

This Virtual Town Hall is an opportunity to review the proposal, learn about proposed Rent-to-Own and Affordable Home Ownership Programs, ask questions, and to offer comments. **Pre-registration required.** Submitting questions and comments, by phone, email or web registration, is encouraged.

For more information & registration:  
<https://e3rd.cascadiagreendev.com/>

<b>Applicant Contact:</b> <b>Steven Petersson</b> Director of Development Cascadia Green Development 604-813-6720 <a href="mailto:steven@cascadiagreendev.com">steven@cascadiagreendev.com</a>	<b>Community Development Contact:</b> <b>Mike Friesen</b> Planning and Development City of North Vancouver 604-960-4208 <a href="mailto:mfrisen@cnv.org">mfrisen@cnv.org</a>
---	---

address here

**Virtual Town Hall**

Rezoning Application for Mixed Use Commercial - Residential Building 402-438 E 3rd St & 341-343 St David's Ave, North Vancouver, BC.

**Date:** Tuesday, July 14, 2020  
**Time:** 7pm - 8:30pm

**Location:** Virtual Meeting

For more information and registration:  
<https://e3rd.cascadiagreendev.com/>

### 2. Appendix: DIS 100m Notification Map



## Virtual Town Hall

402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver

July 14, 2020

### 3. Appendix: North Shore News July 1 Ad Proof

WEDNESDAY, JULY 1, 2020 northshorenews nsnews.com

NEIGHBOURHOODS | A47

#### CANYON HEIGHTS

## Musical performance celebrates grads

Students bid farewell to high school through song

ANDY PREST  
aprest@nsnews.com

There was no big prom dance or grad ceremony this year, but the graduating class from North Vancouver's Ecole Handsworth Secondary still came together in a truly meaningful way to say goodbye to high school.

Graduating Grade 12 student Megan Hingson, a violinist and budding filmmaker, led a team that put together a powerful performance of the song "A Million Dreams" from the musical *The Greatest Showman*.

The idea for a physically distanced musical tribute to the grad class emerged from a virtual meeting between Hingson and Handsworth band teacher David Bradshaw, who acted as the project's producer.

In late May, Hingson



Ecole Handsworth Secondary graduating student Megan Hingson performs alongside pianist Salome Zheng. Hingson served as director and violinist for a rendition of "A Million Dreams" performed by 65 students from the North Vancouver high school. SCREENGRAB DAYDREAM PICTURE/YOUTUBE

brought in two of her filmmaking friends, Felix Soong and Eamon Ma, and they got to work at picking out parts for any interested music students and bringing them in one at a time to record them performing in the school's music room.

Soloists Katrina Becker-Gedge, Aidan Chubb and Sophie St George, piano

player Salome Zheng, and Hingson on the violin were all featured along with numerous students from the school's band, strings and choir programs. Dancers Claire Bates and Makena Petrie added dramatic flair to the film.

In all, 65 students in grades 8 through 12 took part, although an emphasis

was placed on featuring the grads.

When all the video footage was recorded, the three film students went to work editing it all together.

"We filmed for five days, from early in the morning until the evening, but despite the long process it was nice to connect with the music students one last time before we graduated," Hingson said in a note to the North Shore News.

"It was an amazing experience for us as filmmakers, and also for myself as a musician. I am happy that the music students at Handsworth, especially the graduating students, had a chance to come together to create music one last time before graduating from high school."

Hingson said that although her grad year did not go as planned, she and her classmates still had a unique and memorable graduation.

"Because of the COVID-19 pandemic, we had the opportunity to create this music video, which allowed us to share our talents as a school and connect through the joy of music. I think that, despite

the circumstances, the class of 2020 has received endless encouragement and support from the community, and will

surely be remembered." Visit [nsnews.com](http://nsnews.com) and click on this story to see the video.

### Kiwanis North Shore Housing Society

*Below market, independent housing, for low income seniors. Studio, Bach & One Bedroom.*



Contact

[info@kiwanisnorthshorehousing.org](mailto:info@kiwanisnorthshorehousing.org)

#### Virtual Town Hall

Cascadia Green Development is hosting a Virtual Town Hall for its application to rezone & amend the OCP to redevelop 402-438 E 3rd St & 341-343 St Davids Avenue. The proposal features 175 residential units, a daycare, neighbourhood commercial space, and office units.

This Virtual Town Hall is an opportunity to review the proposal, learn about proposed Rent-to-Own and Affordable Home Ownership Programs, ask questions and to offer comments. Pre-registration required. Submitting questions and comments, by phone, email or web registration, is encouraged.

##### Registration & Information:

<https://e3rd.cascadiagreendev.com/>

Date: Tuesday, July 14, 2020

Time: 7pm - 8:30pm

Steven Petersson

Director of Development

Cascadia Green Development

604-813-6720

[steven@cascadiagreendev.com](mailto:steven@cascadiagreendev.com)



##### Community Development Contact:

Mike Friesen,  
City of North Vancouver

604-990-4206  
[mfriesen@cnv.org](mailto:mfriesen@cnv.org)

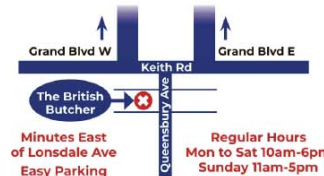
This meeting has been required by the City of North Vancouver as part of the rezoning and OCP amendment process.



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## Virtual Town Hall

402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver

July 14, 2020

### 4. Appendix: North Shore News July 8 Ad Proof

A20 | NEWS

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nsnews.com north shore news WEDNESDAY, JULY 8, 2020

## Shipping container to be used for public space

JANE SEYD  
[jseyd@nsnews.com](mailto:jseyd@nsnews.com)

The City of North Vancouver plans to turn a former shipping container into a new enclosed seating and public "patio" space, where customers of local businesses can eat their takeout food protected from the elements.

Council voted recently to put \$20,000 towards converting the 40-foot container – currently stored in the Centennial Theatre parking lot – into a covered "parklet" for use in Central Lonsdale. The idea is to convert the container into an outside seating area with lighting and a roof that will fit into curbside parking zones. The "parklet" will provide a public place to sit for customers of businesses that can't expand patios into the public realm, according to staff, who hope it will be in place this month.

The container was originally bought by the city for \$200 in August last year. The \$20,000 would be used to transport the container into place as well as come up with designs, and add lighting, a



The City of North Vancouver is going ahead with a project to turn shipping containers into outdoor public spaces. PHOTO: CNW

floor and outside furniture. Total cost of the project is \$35,000. Staff are also looking at the possibility of sponsorship to finish the job.

Council was enthused about the project, with Coun. Angela Girard describing it as a "great low budget option" for providing outside space.

But they also had questions. Girard asked who would clean the structure and whether it would be closed at night.

Staff member Larry Orr said the city will maintain the structure and won't close it at night. The sides of the structure will also be open, he added.

Girard also asked whether

there were concerns about people sleeping in the container. "It's something we'll have to monitor over time," said Orr. "This is all new for us."

Coun. Holly Back also asked whether there are concerns about people stealing the furniture. Orr said the city has other outside furniture in the public civic plaza that is not chained down and "I don't believe we've ever lost a piece of furniture."

No decisions have been made yet on the location for the first parklet.

Orr said the city hopes to expand the project to include more outside spaces created from containers.

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Virtual Town Hall

402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver

July 14, 2020

**5. Appendix: Site Signs 4<sup>th</sup> and St. Patricks; 3<sup>rd</sup> and St. Patricks; and 3<sup>rd</sup> and St. Davids**



Virtual Town Hall

402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver

July 14, 2020



**6. Appendix: Jeff Keate canopy drawing submission – page one**



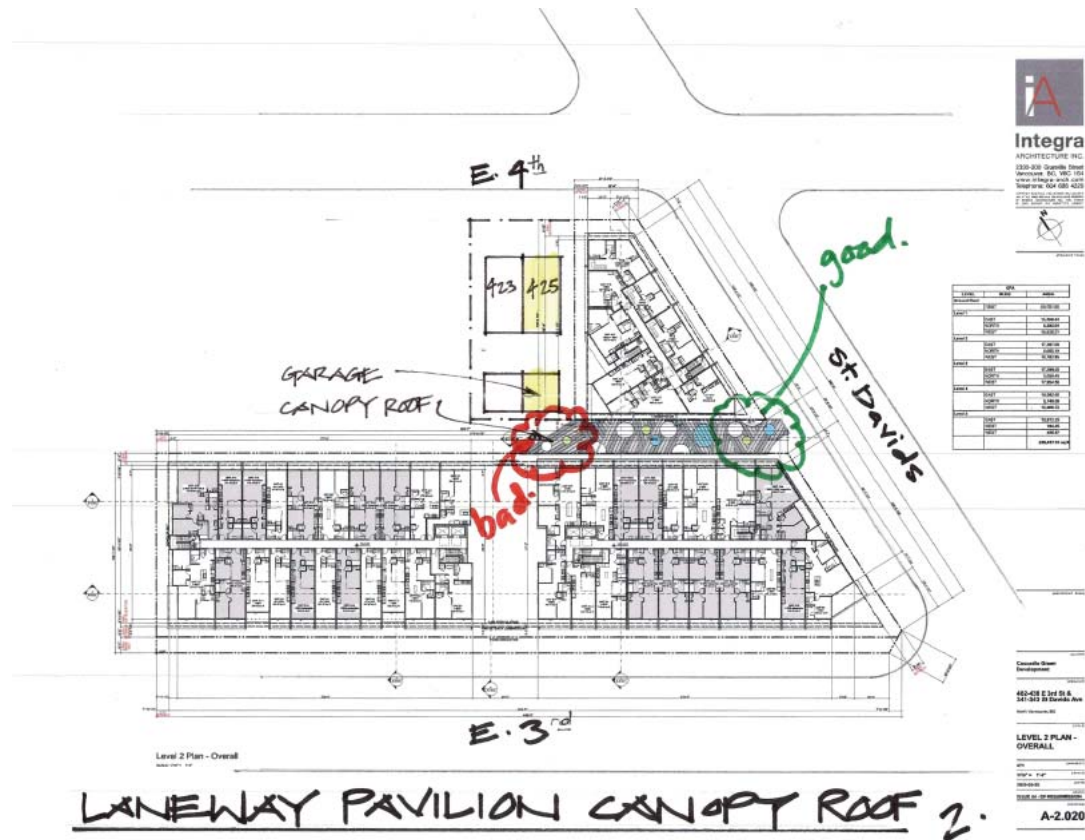
LANEWAY PAVILION CANOPY ROOF.

1.



Virtual Town Hall  
402-438 East 3rd Street and 341-343 St Davids Avenue, North Vancouver  
July 14, 2020

## Appendix: Jeff Keate canopy drawing submission – page two



## 7. Appendix: Virtual Town Hall Summary Statistics



# Virtual Town Hall Summary Statistics

The purpose of this document is to summarize some statistics from the Virtual Town Hall. The statistics are divided into two categories:

- Pre-Town Hall Feedback
- Post Town Hall Feedback

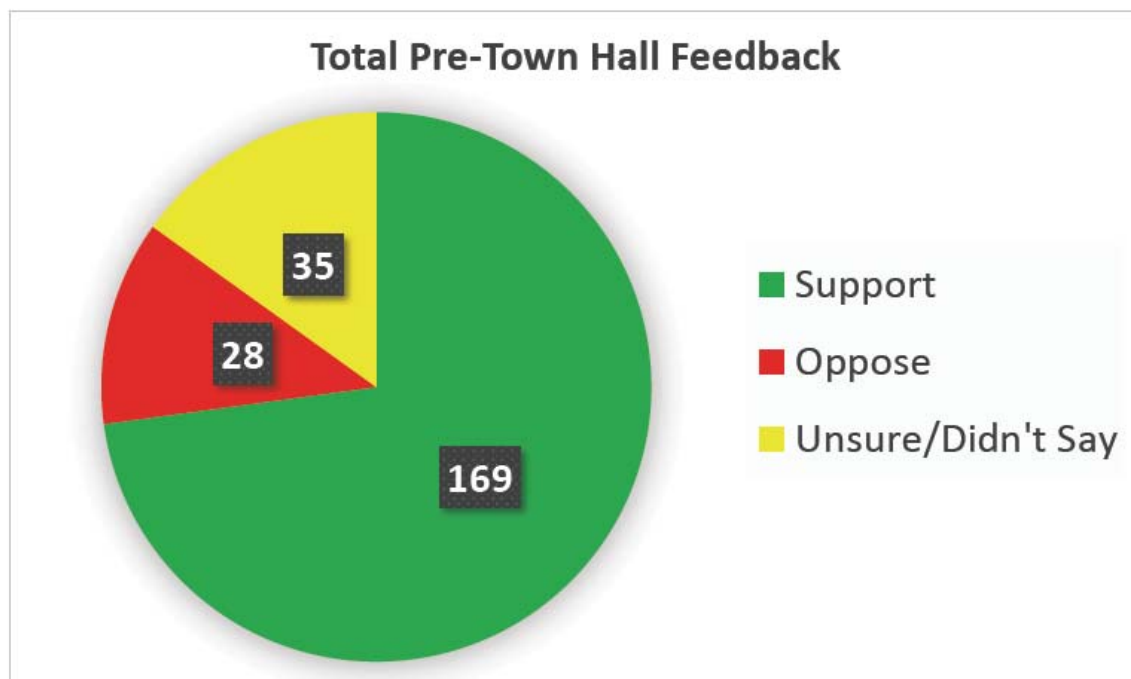
Most participants put their efforts into providing thoughtful comments and questions prior to the Town Hall. 232 submissions were made prior to the Virtual Town Hall, and 18 submissions were made after the Virtual Town Hall. More attention has been given to summarizing the pre-Town Hall submissions because there are so many of them.

## 1 Pre-Meeting Feedback

This includes feedback received two weeks prior to the Virtual Town Hall, from June 30 – July 14. Most of the feedback was received via the Virtual Town Hall registration process, and a smaller sub-set was submitted via email.

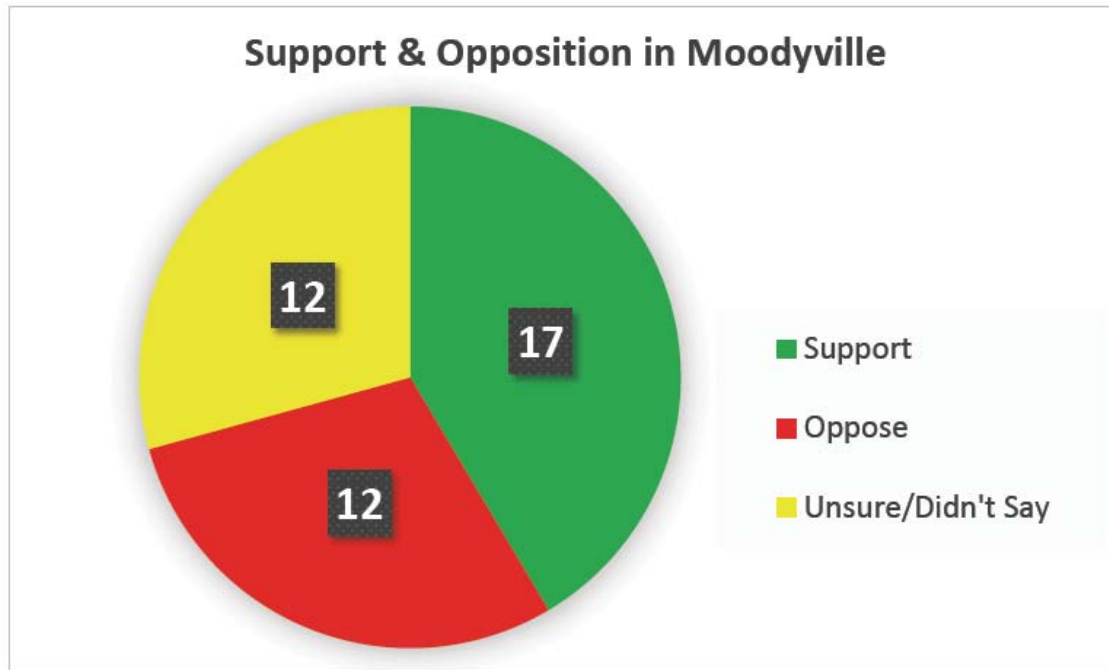
People were registered as “in favour” or “opposed” only if they checked the “in favour” or “opposed” field on the registration page of the Virtual Town Hall web site.

### 1.1 Support and Opposition Summary



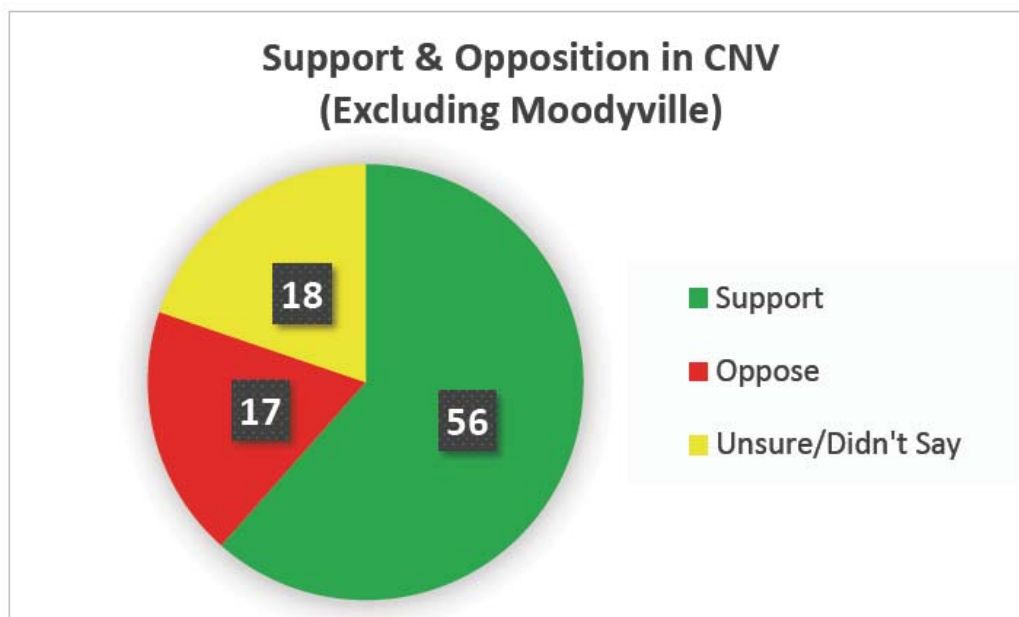
### 1.2 Support and Opposition Within Moodyville

The intent of this analysis was to identify preferences of those living nearby. For the purpose of this study, "Moodyville" is defined as: East of St Georges Ave, South of Keith Road, West of Lynn Creek.



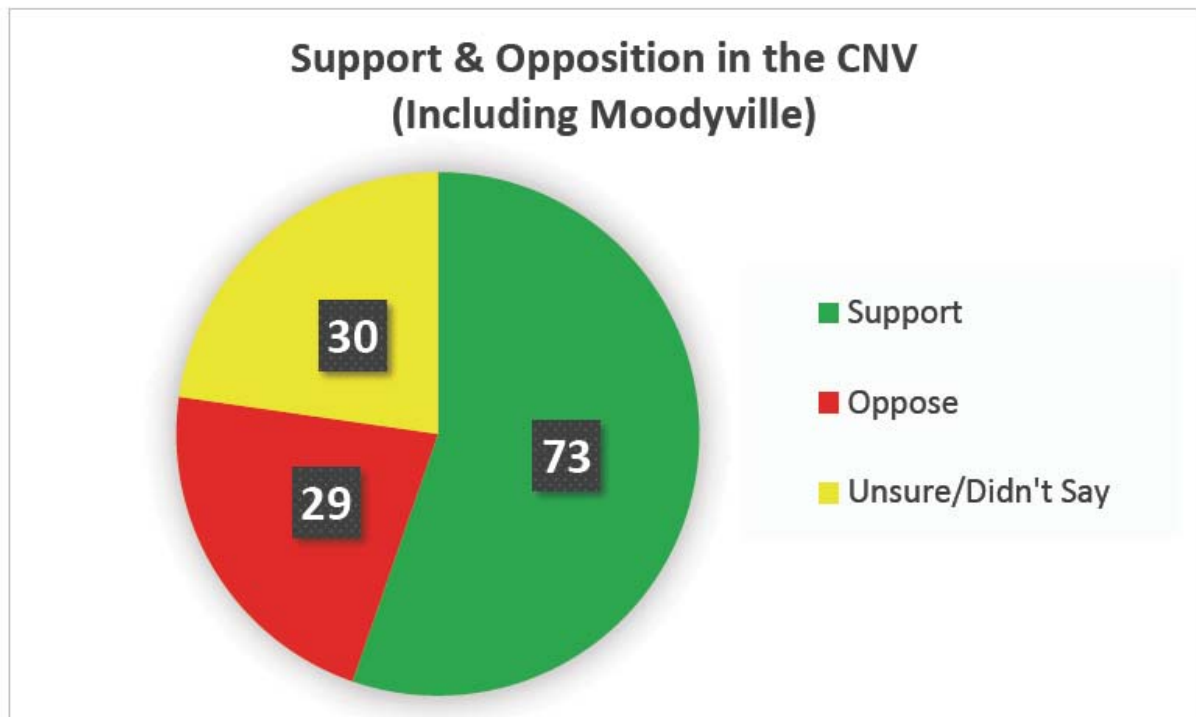
### 1.3 Support and Opposition Within CNV (but outside of Moodyville)

How did people from the CNV, but outside of Moodyville, respond?



#### 1.4 Support and Opposition in CNV (including Moodyville)

How did all respondents from the CNV, including Moodyville, respond?



#### 1.5 Outside of the City of North Vancouver

95 respondents live outside the City of North Vancouver. Why did they participate?

45 respondents live off the North Shore, in Greater Vancouver:

- many of these were motivated by affordable housing: 36 said they were interested in the Rent to Own and Affordable Home Ownership Program
- 14 said they worked in North Vancouver, and wanted to live closer to work and reduce their commute
- 5 said that they wanted to live closer to their family and friends, who already live in North Vancouver.

37 respondents live in the District of North Vancouver:

- Most of them (26) said they were interested in the Rent to Own and Affordable Home Ownership Program

13 respondents were from the District of West Vancouver:

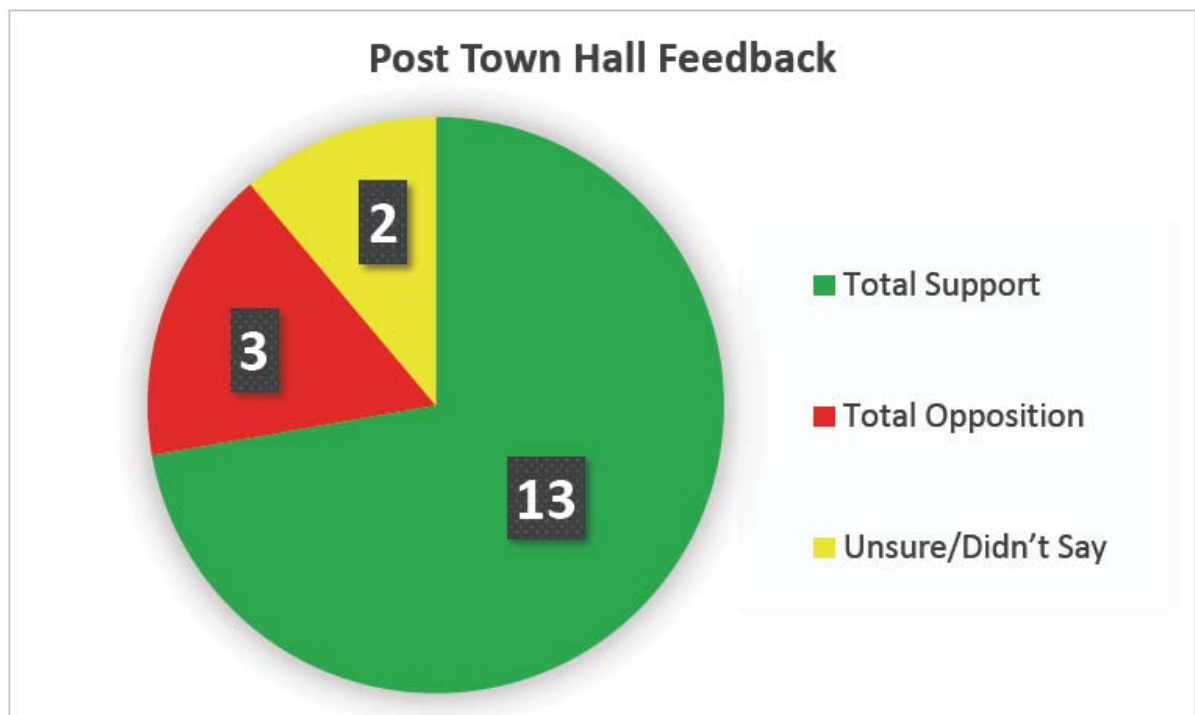
- 7 said they were interested in the Rent to Own and Affordable Home Ownership Program.

## 2 Post Virtual Town Hall Feedback

A two-week comment period was observed after the Virtual Town Hall. Any submissions received from the end of the Town Hall on July 14 until the end of day on July 28 were included in this report. 15 submissions were made via the Virtual Town Hall web site, and three were submitted via email.

### 2.1 Support and Opposition Summary

If respondents explicitly indicated support or opposition in their email, this was recorded.



## 3 Key Concerns

Key concerns raised by respondents through the Town Hall process included:

- OCP amendment application
- North and East building height
- Massing and density
- Shadow impacts
- Commercial lane/closing east part of lane
- Traffic
- Loading
- Construction impacts
- Noise



**Rezoning and Official Community Plan Amendment Application: 402-438 East 3rd Street And 341-343 St. Davids Avenue – Summary of Proposed OCP and Zoning Bylaw Amendments**

*Summary of Proposed Changes to the Official Community Plan*

Consideration	Properties	Current OCP	Proposed OCP
Land Use Designation	424, 426, 428 & 432 East 3 <sup>rd</sup> Street; 341-343 St. Davids Avenue	Residential Level 5  Residential Level 2	All properties: Mixed-Use Level 2
No Change to Land Use Designation	438 East 3 <sup>rd</sup> Street 402, 406, 412, 418 East 3 <sup>rd</sup> Street	Mixed Use 2  Residential Level 5	(no change)
OCP Maximum Height (Schedule A)	424, 426, 428, 432 & 438 East 3 <sup>rd</sup> Street	Maximum height of 4 storeys	Maximum height of 5 storeys

*Summary of Proposed Changes to the Zoning By-law*

Consideration	Base Zone Requirement	Proposed Regulation
	<b>C-2</b>	<b>CD-730</b>
Number of Buildings	One per lot	Three Buildings: North Building, East Building, West Building
Uses	Retail Service Group 1 Accessory Apartment Use Accessory Arcade Use Tourist Accommodation Off-Street Parking Off-Site Parking	Building-specific (see Proposed Bylaw)
Density	Maximum of 2.3 FSR	Up to 2.48 FSR with the provision of Adaptable Units and Amenity contributions
Height	Maximum building height of 12.192 metres (40 feet)	North Building: up to 4 storeys / 14.8 metres East Building: up to 5 storeys / 19 metres West Building: up to 4 storeys / 14.6 metres
Lot Coverage	Up to 70%	Up to 65%
Siting (Setbacks)	Minimum of 20 feet from a lane	As per Schedule 145
Special Conditions for Buildings Adjoining Residential Zones	Various height, siting, window and landscaping requirements	Sections 608 and 609 waived.
Parking	Minimum of 257 Parking Spaces	223 Parking Spaces, including 162 residential, 61 commercial, with one space being for car share
Loading Spaces	Minimum of one per Building	Minimum of 2 Loading Spaces for the site
Exterior finishes	No requirement.	All exterior finishes design, and landscaping shall be approved by the Advisory Design Panel.

<b>Consideration</b>	<b>Moodyville Development Permit Guidelines</b>
Conditions for Exemption from DP	Adding an exemption for properties that undergo a Rezoning/OCP Amendment process.

**Rezoning and Official Community Plan Amendment Application: 402-438 East 3rd Street And 341-343 St. Davids Avenue – Policy Review**

<b>Metro 2040</b>	
<p><i>Goal 1</i> Create a Compact Urban Area</p>	<p>Intensifying this site with new development that provides a variety of uses is consistent with the planned vision for the surrounding neighbourhood, and that builds upon and enhances transportation infrastructure will support the highest and best use of the land promoting a compact urban area.</p>
<p><i>Goal 2</i> Support a Sustainable Economy</p>	<p>The inclusion of commercial units will support the development of a neighbourhood commercial centre for the growing Moodyville neighbourhood and local economic development. The inclusion of a range of housing types to address a variety of household sizes and incomes on this site promotes housing that supports a diversity of income levels and ensure people live close to where they work.</p>
<p><i>Goal 4</i> Develop Complete Communities</p>	<p>The proposed development provides housing for a range of household types. The inclusion of commercial units and childcare will provide amenities for a growing Moodyville neighbourhood.</p>
<p><i>Goal 5</i> Support Sustainable Transportation Choices</p>	<p>Intensification of this site will support existing and future transit investments along East 3<sup>rd</sup> Street and will improve two all ages and abilities bike facilities along East 3<sup>rd</sup> Street and St. Davids Avenue. The proposed uses will provide commercial and social amenities within walking distance of hundreds of new homes in the Moodyville neighbourhood and is located approximately 200m from a RapidBus stop. The site is well situated to provide the occupants and visitors with a variety of transportation choices accessing destinations across the North Shore and the greater region.</p>

<b>Official Community Plan</b>	
<p><b><u>Land Use: Housing, Population and Employment</u></b></p> <p><i>Goal 1.1</i> Develop a compact, complete community that meets the needs of its diverse residents and businesses.</p> <p><i>Goal 1.2</i> Plan with a long-term perspective to address the challenges associated with climate change.</p>	<p>The proposed development:</p> <ul style="list-style-type: none"> <li>• introduces commercial uses, jobs, and childcare to the Moodyville neighbourhood;</li> <li>• Is located adjacent to the frequent transit network and enhances active transportation infrastructure;</li> <li>• Provides an energy efficient building and expands resilient and active transportation focused infrastructure;</li> <li>• Mitigates transition to adjacent lower density development through building</li> </ul>

<p><i>Goal 1.3</i> Enhance the distinctive sense of place and livability of the City through high quality design and maintenance of urban form.</p> <p><i>Goal 1.4</i> Enhance the quality of life through the provision of amenities.</p> <p><i>Goal 1.5</i> Pursue attainable housing that meets the needs of its diverse community</p>	<p>shape and reduction of height to two storeys as development approaches East 4<sup>th</sup> Street;</p> <ul style="list-style-type: none"> <li>• Locates commercial and childcare uses in a way that respects the residential character of East 4<sup>th</sup> Street;</li> <li>• Activates the City lane with a place-making opportunity to create an all-weather outdoor commercial space and community node in the City-owned lane;</li> <li>• Focuses on creating pedestrian and active transportation opportunities separated from traffic;</li> <li>• Proposes a childcare facility to support families with children;</li> <li>• Introduces active-design principles to support walking and indoor and outdoor socialization among residents and community members;</li> <li>• Presents a variety of housing types, significant accessible units and different bedroom numbers to support a range of household sizes;</li> <li>• Introduces new housing programmes – the Affordable Home Ownership Program and rent-to-own program – to make homes available to a greater range of household incomes.</li> </ul>
<p><b><u>Transportation, Mobility, and Access</u></b></p> <p><i>Goal 2.1</i> Prioritize walking, cycling, transit and goods movements over single-occupancy vehicles.</p> <p><i>Goal 2.2</i> Integrate Land Use and Transportation Planning to reduce the need for car travel.</p> <p><i>Goal 2.3</i> Support a safe, accessible, resilient, and affordable transportation system.</p>	<p>The proposed development:</p> <ul style="list-style-type: none"> <li>• Introduces improvements to the active transportation network, including new all ages and abilities cycling facilities, improved intersections, improved pedestrian connections and activation of the lane;</li> <li>• Proposes public art in prominent locations on the site;</li> <li>• Road dedication and intersection upgrades along East 3<sup>rd</sup> Street supports transit priority improvements;</li> <li>• Introduces commercial uses to support the development of a neighbourhood centre in a growing residential neighbourhood;</li> <li>• Provides employment opportunities (commercial retail, office, and live-work) in what has been a traditional residential neighbourhood;</li> </ul>



	<ul style="list-style-type: none"> <li>• Intensifies an existing RapidBus and future rapid transit corridor;</li> <li>• A car share vehicle will be secured as a part of the development;</li> <li>• Prioritizes public realm, pedestrian and cycling connections in the City's lane.</li> </ul>
<p><b><u>Community Well-Being</u></b></p> <p><i>Goal 3.3</i> Support community resilience and increase the capacity to recover from emergencies and disasters</p> <p><i>Goal 3.4</i> Increase access to nutritious, safe, healthy, local food and opportunities for residents to grow their own food</p> <p><i>Goal 3.5</i> Support the independence and well-being of older City residents</p>	<p>The proposed development:</p> <ul style="list-style-type: none"> <li>• Introduces opportunities for informal neighbourhood connections through provision of commercial amenities and childcare services;</li> <li>• Provides community gardens for the residents of the development;</li> <li>• Provides adaptable units, appropriate for down-sizing seniors or individuals of different abilities;</li> <li>• Proximity to frequent transit network and the provision of local commercial amenities will serve individuals with lower mobility.</li> </ul>
<p><b><u>Natural Environment, Energy &amp; Climate</u></b></p> <p><i>Goal 4.1</i> Develop, promote, and implement strategies to mitigate and adapt to climate change.</p> <p><i>Goal 4.2</i> Measure, maintain and improve long-term ecosystem health.</p> <p><i>Goal 4.3</i> Engage the community to promote more sustainable behaviors.</p>	<p>The proposed development:</p> <ul style="list-style-type: none"> <li>• Proposes an efficient building design, achieving BC Building Code Step Code ratings of Step 3 of 4 for the residential use, and Step 2 of 3 for the commercial use;</li> <li>• Connects to the Lonsdale Energy Corporation district energy system;</li> <li>• Removes all on-site trees, including 13 trees of 30' in height or greater, but replaces 49 trees designed to mature to significant trees;</li> <li>• Reduces ratio of permeable surfaces, mitigating impact through integration of vegetation to the building and site and provision of on-site stormwater management;</li> <li>• Balances negative impact of local environment (i.e. removal of trees, reduction of permeable surfaces) with larger strategic improvements (i.e. population in proximity to RapidBus, provision of commercial development to mitigate vehicle trips);</li> <li>• New vegetation focuses on species that are native, non-invasive and/or drought tolerant;</li> </ul>

	<ul style="list-style-type: none"> <li>Ties in to local and regional transit network and active transportation infrastructure to reduce reliance on single-occupancy vehicles.</li> </ul>
<p><b><u>Parks, Recreation &amp; Open Space and Arts, Culture &amp; Heritage</u></b></p> <p><i>Goal 5.1</i> Expand the integrated system of parks and greenways throughout the City as articulated in the Parks Master Plan</p> <p><i>Goal 5.2</i> Support, enhance and maintain recreation as a vital aspect of a healthy community</p> <p><i>Goal 5.3</i> Provide a variety of public spaces for community engagement and stewardship</p> <p><i>Goal 6.1</i> Support a wide range of arts and cultural activities</p> <p><i>Goal 6.4</i> Respect the City's history by maintaining and enhancing connections to the past</p>	<p>The proposed development:</p> <ul style="list-style-type: none"> <li>Provides the St. Davids Greenway along its eastern frontage to support connection of Moodyville Park and the Spirit Trail to the Green Necklace at Keith Road;</li> <li>Connects the proposed greenway to commercial uses on its site;</li> <li>Use public art to support activation of the public realm;</li> <li>Provide public art that will explore the heritage of the Moodyville including the area's significance to First Nation communities;</li> <li>Activate the lane to support the creation of a vibrant community node that is supported by active transportation infrastructure, RapidBus, and commercial amenities;</li> <li>Work with the City's Arts and Heritage committees to determine public art appropriate for the significance of the area;</li> <li>Remove two Heritage B designated dwellings – buildings will be advertised for relocation prior to demolition.</li> </ul>
<p><b><u>Economic Development</u></b></p> <p><i>Goal 7.1</i> Diversify the local economy to contribute to a complete community</p> <p><i>Goal 7.2</i> Create an attractive environment for economic development</p>	<p>The proposed development:</p> <ul style="list-style-type: none"> <li>Supports the provision of additional jobs in the City;</li> <li>Includes housing opportunities for middle-income earning families, potentially allowing individuals to live closer to their jobs on the North Shore;</li> <li>Includes an OCP amendment that would result in a net decrease in residential floor area and a net increase in commercial floor area;</li> <li>Balances commercial parking with transportation demand management including shared visitor (residential) and commercial parking spaces, bicycle end of trip facilities, and proximity to RapidBus stops.</li> </ul>
<b>Housing Action Plan</b>	

**Rezoning and Official Community Plan Amendment Application: 402-438 East 3rd Street And 341-343 St. Davids Avenue – Policy Review**

<p><i>Action #4 Family Friendly Housing</i> To increase the number of three or more bedroom units appropriate for larger and/or extended families within new multi-unit residential developments.</p>	<p>Eighteen percent (31 total) of the proposed development's units contain 3 bedrooms. This is nearly double the City's recommended minimum (10%).</p>
<p><i>Action #10 Partnerships</i> To foster relationship building with organizations of various sectors to collectively facilitate and implement the initiatives and actions of the Housing Action Plan.</p>	<p>The City is partnering with BC Housing to delivery Affordable Home Ownership Program units to middle-income families, and supporting a pilot program concerning a Rent-to-Own program by the project proponent.</p>
<p><b>Sustainable Development Guidelines</b></p>	
<p><i>Natural Systems</i> The ability of natural systems, both global and local, to support life. Parks and green spaces help regulate the climate, clean and filter water and air, and provide recreational and aesthetic benefits. Maintaining healthy natural systems will reduce strain on municipal infrastructure, support local wildlife and enhance quality of life for community members.</p>	<p>Stormwater is addressed on site to reduce impact of major storm events.</p> <p>The inclusion of trees and plants that support bird and insect populations.</p>
<p><i>Physical Structures/Infrastructure</i> The ability to effectively deliver basic services, shelter and physical amenities required to sustain the health and well-being of the community. This includes water supply, sanitary sewer, storm water drainage, solid waste management, roads, telecommunications, and energy efficiency and conservation including district energy. As well, this category includes attractive streetscapes, durable buildings, provision of a range of housing types and adequate community amenities.</p>	<p>The project will achieve Step 3 of 4 of the BC Building Code Step Code for the residential portion and Step 2 of 3 for the commercial portion, each one step greater than the requirements at the time of application.</p> <p>All buildings of the project will connect to the Lonsdale Energy Corporation district energy system.</p> <p>The project will upgrade required infrastructure (water, sewer, stormwater systems) as well as improve active transportation infrastructure around the site.</p> <p>Additional secured and covered bicycle parking has been integrated into the landscape design in order to support active transportation of residents.</p> <p>A car share stall and vehicle will be provided as a part of the development.</p>
<p><i>Human Potential</i> The ability of our local community to support our residents in their pursuit of individual livelihood objectives including access to education, healthy food transportation and affordable housing. Meeting these basic needs is essential for the maintenance and growth of human capacity.</p>	<p>The project includes a range of units to serve a broad spectrum of lifestyles, incomes, and abilities.</p> <p>Community gardens are included for residents of the proposed buildings on the rooftop amenity space.</p>

**Rezoning and Official Community Plan Amendment Application: 402-438 East 3rd Street And 341-343 St. Davids Avenue – Policy Review**

	<p>Access to active transportation and RapidBus transit infrastructure is an important component of this project.</p> <p>Affordable home-ownership is included as a part of the project in both the AHOP and Rent-to-Own aspects.</p> <p>The project includes numerous active transportation elements including infrastructure improvements and cycling maintenance facilities.</p>
<p><i>Social Connections</i></p> <p>The ability of our community to foster communication, interaction and networks to respond effectively to community issues. These may include supporting community members with low incomes, lone-parent families, and matters specific to children, youth, seniors and people with disabilities.</p>	<p>The rooftop amenity and other social spaces are provided to support interaction between residents.</p> <p>The inclusion of commercial retail and office space will provide opportunities for social connections at a neighbourhood centre.</p>
<p><i>Cultural Diversity</i></p> <p>The ability of our community to support and celebrate a diversity of cultural backgrounds. This includes recognition of the traditions of the Squamish Nation and the many cultures of residents who make the City their home. With both tangible and intangible elements, cultural capacity has economic implications and is strongly connected to social traditions. Manifestations of cultural practices can range from spiritual practices to heritage buildings</p>	<p>The project will include public art, to be located in a prominent location. The North Vancouver Public Art Advisory Committee will support the project in determining the final location and what an appropriate piece may be.</p>



**Rezoning and Official Community Plan Amendment Application: 402-438 East 3rd Street And 341-343 St. Davids Avenue – Advisory Body Input**

**Advisory Planning Commission**

The application was revised by the Advisory Planning Commission on October 9<sup>th</sup>, 2019. The Commission unanimously endorsed the following resolution:

*THAT the Advisory Planning Commission has reviewed the Rezoning Application for 402-438 East 3rd Street & 341-343 St. Davids Avenue and recommends approval subject to resolution of the following to staffs satisfaction:*

- *Strengthen EV charging provisions and sheltered, visitor bike parking,*
- *Explore in-kind community amenity contributions including affordable daycare, affordable rental, neighbourhood park amenities and community gardens,*
- *Explore a viable commercial/move-in/move-out loading area and sufficient pickup/drop off loading spaces,*
- *Explore local place making and indigenous and bee friendly landscaping;*

*THAT the Commission notably appreciates the following:*

- *The overall massing and scale,*
- *The homeownership rent-to-own (down payment) approach,*
- *Flexible, pedestrian-oriented laneway,*
- *Interest in daycare;*

*AND THAT the Commission wishes to thank the applicant for their presentation.*

The applicant has since provided required infrastructure for 100% EV charging of residential spaces (visitor spaces excluded), provided proposed amenities that include childcare and affordable home-ownership, integrated an on-site loading space, and provided a public art plan that includes local place making opportunities.

**Advisory Design Panel**

The application was revised by the Advisory Design Panel on October 16<sup>th</sup>, 2019.

The Panel unanimously endorsed the following resolution:

***THAT*** *the Advisory Design Panel has reviewed the Rezoning Application for 402-438 East 3rd Street & 341-343 St. Davids Avenue and recommends approval subject to addressing the following issues to the satisfaction of the Development Planner:*

- *Consider the use and design of the north building off of St. Davids;*
- *Further design development of the laneway use, animation and circulation;*
- *Consideration for a more generous space to the pedestrian and public realm in the breezeway;*
- *Further design development to all offsite transitional edges, not limited to: impact on neighbours to the north at lane and East 4th Street;*
- *Explore more significant moves on the south-east corner mixing architecture, landscape architecture and public art;*

**Rezoning and Official Community Plan Amendment Application: 402-438 East 3rd Street And 341-343 St. Davids Avenue – Advisory Body Input**

- *Consider the daycare design, location and outdoor amenity;*
- *Consider a tiered approach to the north building to allow more light to the street;*
- *Further develop the unit mix and use throughout the project,*
- *Encouraged to increase the rooftop amenity space; and*
- *Explore and balance appropriate lighting for CPTED concerns and for the public realm activities.*

**AND THAT** the Panel wishes to thank the applicant for their presentation.

The applicant has since removed the portion of the north and west buildings that spanned the lane thereby reducing the massing and reducing the impact on adjacent properties, terraced the north building from 4-storeys at the lane to 2-storeys at East 4<sup>th</sup> Street in order to present a more consistent residential character, refined the unit mix, revised the childcare design, and revised the lighting plan.

### **Integrated Transportation Committee**

The application was reviewed by the Integrated Transportation Committee on March 4<sup>th</sup>, 2020. The Committee unanimously endorsed the following resolution:

*THAT, the Integrated Transportation Committee, having received the presentation from Cascadia Green Development regarding the project located at 402-438 East 3<sup>rd</sup> Street/341-343 St. Davids Avenue, supports the project in principle, with the following considerations:*

1. *The traffic signal at the intersection at St. Patricks and 3<sup>rd</sup> Street be installed.*
2. *Provision of a car share vehicle in line with the zoning bylaw subject to staff and car share operator interest.*

*Further, the Committee commends the applicant for providing charging ability in each car and bicycle parking space.*

The applicant has received a letter of interest from the Modo carshare. Provision of the car share vehicle will be secured through legal agreements prior to final adoption.

### **Heritage Advisory Commission**

The application was reviewed by the Heritage Advisory Commission on March 10<sup>th</sup>, 2020. The commission unanimously endorsed the following resolution:

*THAT the Heritage Advisory Commission, having received and reviewed the presentation from Cascadia Green Development and Double Dare Design, regarding 402 – 438 East 3rd Street / 341 St. Davids Avenue, supports the*

*project subject to the resolution of the following items to the satisfaction of City staff:*

- a) Where possible, attempts are made to relocate the heritage “B” homes, located at 424 East 3rd Street and 428 East 3rd Street, to the satisfaction of staff and that the applicant consider a contribution to the cost of relocation, in scale with the saved demolition cost, to incentivize relocation occurring;*
- b) The scale of the proposed public art is appropriate to the site as it reflects the entire historical context of the Moodyville neighbourhood;*
- c) The recognition of the heritage buildings along the East 3rd Street frontage occurs, either through heritage plaques, history of ownership and/or naming opportunities within the development;*
- d) The resources of the North Vancouver Museum & Archives continue to be used;*
- e) The possibility of incorporating heritage components in the tenant improvement design guidelines be considered.*

*FURTHER, the Heritage Advisory Commission requests that the North Vancouver Public Art Advisory Committee include the Heritage Advisory Commission in its review of the public art application.*

Should Council approve the proposed application, staff will secure exploration of the relocation of the proposed Heritage “B” homes through legal agreements prior to final adoption. Similarly, the exploration of heritage into the public art will be formalized prior to final adoption through legal agreements.

# Public Hearing

402-438 East 3<sup>rd</sup> St & 341-343 St Davids Ave

## Development Application

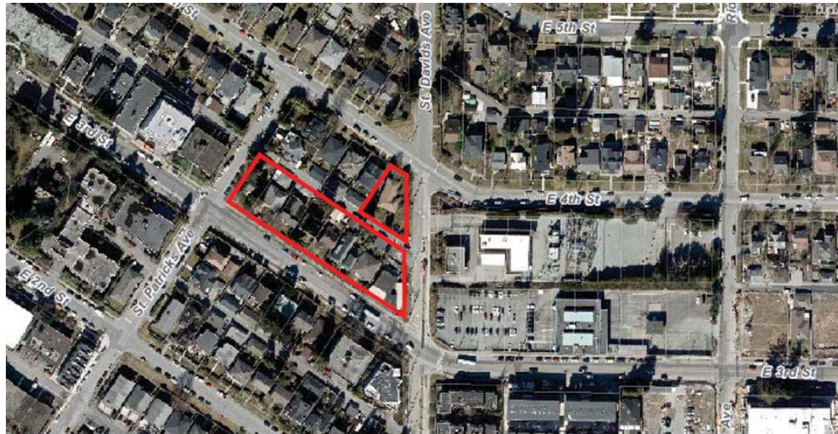
## Staff Presentation

Presented November 30, 2020

## Planning Division

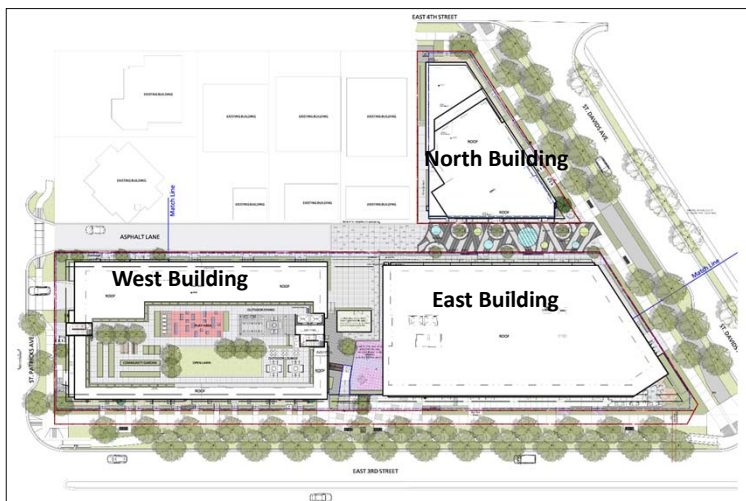


## Site Context

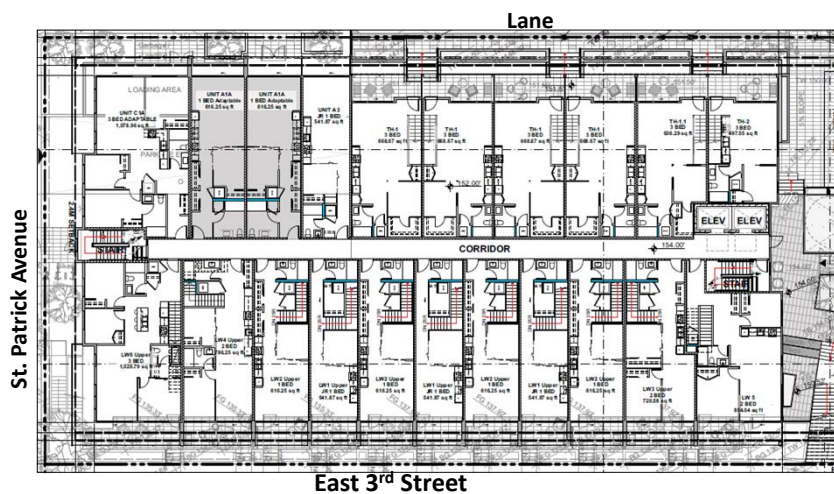




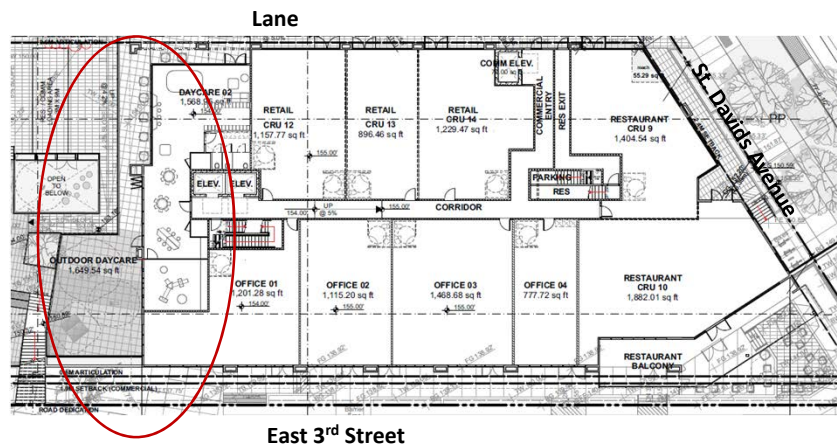
## Project Overview



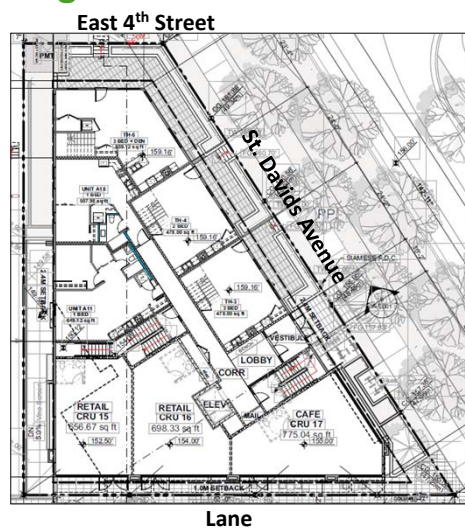
## West Building



## East Building



## North Building



## Project Timeline

- **August 2018** preliminary enquiry submitted (*only for east and north buildings*)
- **April 2019** **Formal enquiry submitted & neighbourhood outreach by applicant**  
(*proposal featured 4-storey west building, 5-storey east building, three townhouses on the north lot*)
- **August 2019** **Formal application submitted**
- **October 7, 2019** **Council provided early directions**
- **October 9, 2019** Advisory Planning Commission review
- **October 16, 2019** Advisory Design Panel review
- **November 19, 2019** **Applicant hosted DIS**
- **March 4, 2020** Integrated Transportation Committee review
- **March 10, 2020** Heritage pry Commission review
- **May 14, 2020** Public Art Advisory Committee review
- **July 14, 2020** **Applicant held virtual town hall meeting**
- **October 2020** Latest revised application submitted

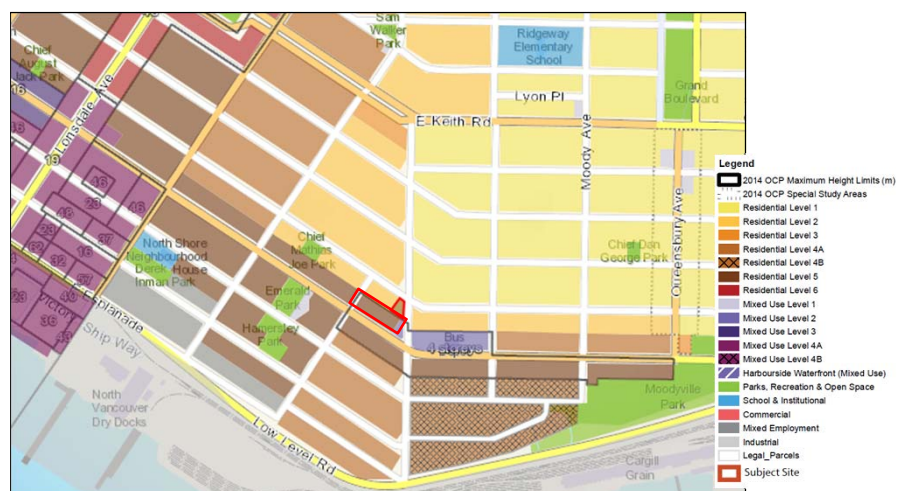
## Official Community Plan Amendment



## Land Use Designation Amendment

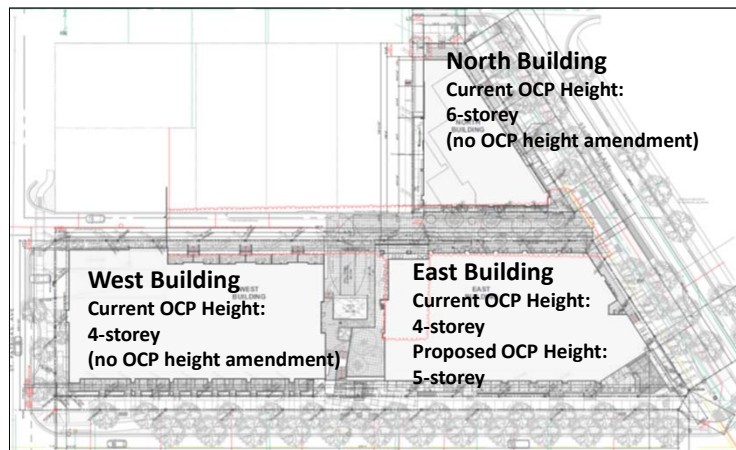
	Properties	Current OCP	Proposed OCP
	438 E 3 <sup>rd</sup> St. (corner lot – part of east building)	Mixed Use 2	Mixed Use 2 (no change)
	402-418 E 3 <sup>rd</sup> St. (west building)	Residential 5	Residential 5 (no change)
	424-432 E 3 <sup>rd</sup> St. (east building)	Residential 5	Mixed Use 2
	341-343 St. Davids (north building)	Residential 2	Mixed Use 2
<b>Commercial GFA (m<sup>2</sup>)</b>		280	1,548
<b>Residential GFA (m<sup>2</sup>)</b>		12,200	12,130
<b>Total GFA (m<sup>2</sup>)</b>		12,487	13,680

## Commercial Capacity and Local Economy





## OCP Height Amendment



## Height – West Building



	OCP	Existing RM-2 Zone	Proposed West Building
Height (storeys)	4-storey		4-storey
Height (m/ft.)		15 m (50 ft.)	14.6 m (47.9 ft.)

## Height – East Building



	OCP	Existing C-3 Zone (corner lot)	Existing RM-2 Zone (rest of East Building)	Proposed East Building
Height (storeys)	4-storey			5-storey
Height (m./ft.)		9.1 m (30 ft.)	15 m (50 ft.)	19 m (62.4 ft.)

Fifth Floor GFA: 16,000 sq.ft.

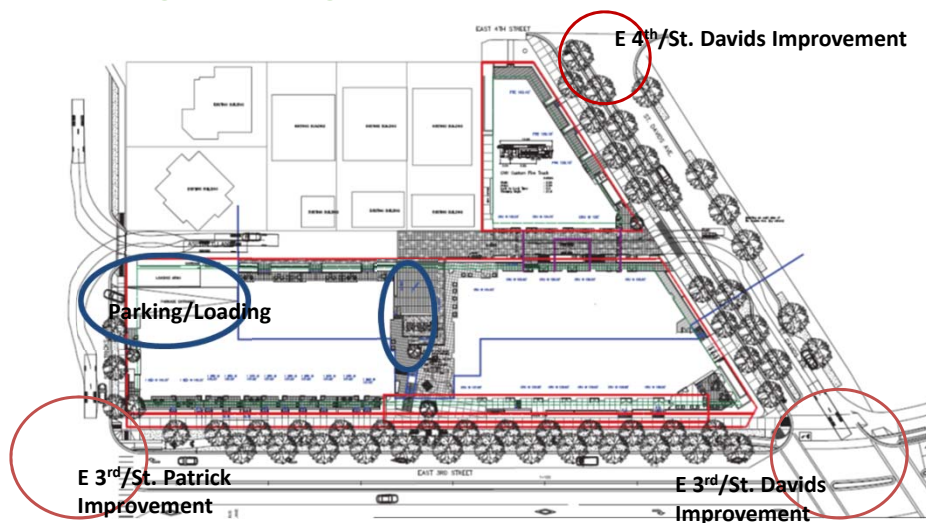
Dedication along E 3<sup>rd</sup> St.: 22,500 sq.ft.

## Height – North Building



	OCP	Existing RT-1 Zone	Proposed North Building
Height (storey)	6-storey		4-storey
Height (m./ft.)		8 m (26 ft.) to top of plate (i.e. flat roof) 10 m (33 ft.) to ridge line	14.8 m (48.6 ft.)

## Parking, Loading and Transportation



city  
of north  
vancouver

15

## Enhanced Public Realm



Breezeway



Commercial Mews



East 3<sup>rd</sup> Street Corridor

city  
of north  
vancouver

16

## Public Comments

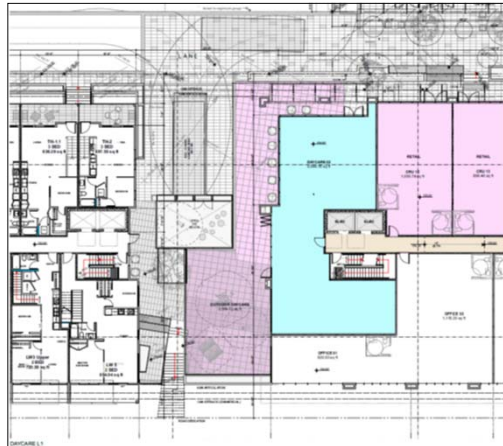
- **Support:**
  - Provision of local servicing commercial spaces
  - Innovative housing types
- **Concerns:**
  - Height, massing and shadow impacts
  - Change of use and character on East 4<sup>th</sup> Street
  - Childcare impacts
  - Traffic impacts
  - Change from existing OCP on land use designation and height

## Community Benefits - Child Care



Outdoor Play Area by the Breezeway

- Two 8-space multi-age groups
- Appx. 2000 sq.ft. indoor
- Appx. 2000 sq.ft. outdoor
- City-owned facility operated by a non-profit





## Community Benefits – BC Housing’s Affordable Home Ownership Program

A total of 9 units will be secured as AHO units in the building in perpetuity

Type of Units	Market Sale Price	\$ / sq.ft	AHOP Sale Price	\$ / sq.ft	% AHOP 2 <sup>nd</sup> Mortgage	AHOP Mortgage Amount	Qualifying Income
1 Bedroom (3)	\$492,052	\$912	\$369,039	\$684	25%	\$123,013	\$78,491
2 Bedroom (4)	\$718,893	\$907	\$431,336	\$544	40%	\$287,557	\$90,103
3 Bedroom (2)	\$940,262	\$888	\$470,131	\$444	50%	\$470,131	\$96,421
Market Value (Sale price)	\$6,232,251						
Total AHOP Revenue			\$3,772,722				
AHOP 2 <sup>nd</sup> Mortgage					\$2,459,529		

## Summary of Community Benefits

In addition to Development Cost Charges and other required service work, this application would offer the following community benefits:

- *Community Benefits - \$7.67 m (AHO contribution, childcare and cash)*
- *Public Art - \$300,000*
- *Dedication along E 3<sup>rd</sup> St.*
- *Public access to the breezeway secured through SRW*
- *One car share vehicle and dedicated parking space*
- *Off-site service work, including improvement to active transportation in the neighbourhood*
- *Rent-to-Own units*





## Overview

- Sustainable Neighbourhood Hub
- Responses to Community
- OCP & Proposal Comparison
- Height & Massing
- Shadow Study

## Sustainable Neighbourhood Hub

- Moodyville in transformation
- 438 E 3<sup>rd</sup> part of Moodyville Neighbourhood Centre
- Neighbourhood-scale shops
- Creating “Third Space”
- Pedestrian, transit, cycling alternatives to driving cars

## Moodyville Plan

East part of site is in Neighbourhood Centre

North of Lane is Transition Area





## OCP Amendment

What:

1. One storey of height on the east building
  - 6.16 feet above OCP
2. Extending Mixed-Use-2 designation from the east corner to include the east building, to permit commercial uses on the Ground Floor and First Floor

(Mixed-Use 2 permits **less** density than R-5)

3. Mixed-Use 2 designation on the North building, to permit commercial uses in the lane

## OCP Amendment

Why:

1. One extra storey required to make up 30,770 sf for road dedication & widened breezeway
  - Only compensates for ½ of lost floor space
2. Needed to expand commercial area to make it viable
3. Create a special outdoor public gathering place and retail in lane

## Moodyville Plan – Height on 3rd

- Four storeys over a basement visible from 3<sup>rd</sup> Street is explicitly permitted

**Guideline 7.1.7** Notwithstanding Guideline 7.1.6, a building on a lot with a Front Lot Line common to the north side of East 3<sup>rd</sup> Street between St. Patrick's Avenue and St. David's Avenue may present as more than four storeys height on its downslope frontage as a transitional response to the Lonsdale Regional Town Centre.

## Moodyville Plan – Floor Heights

- Residential Floor Heights:

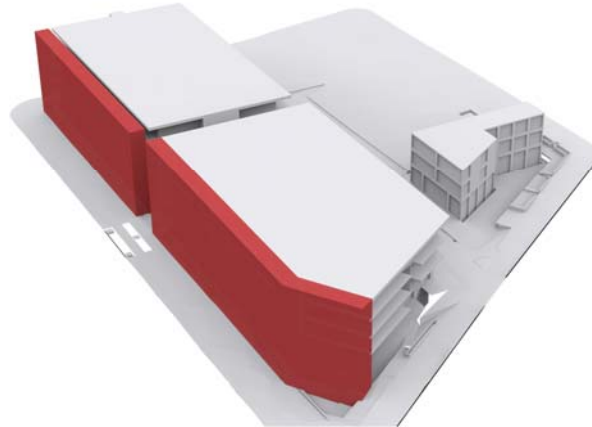
**Guideline 7.4.4** The maximum floor-to-floor height is 3.2 metres (10.5 feet). This height may be exceeded to the maximum permitted in the Zoning Bylaw for:  
Figure 37 (a) common lobby and amenity space for Apartment Use; and  
(b) no greater than 5% of Gross Floor Area for all residential uses.

- Proposed Residential Floor Heights are 10' 1"

**Changes:  
From OCP Base Case to Proposal**

CASCADIA  
Green Development

**Mass Lost to Road Dedication**



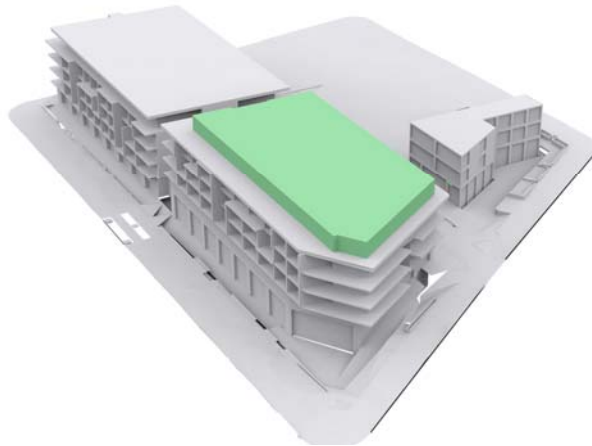
**Changes:  
5<sup>th</sup> Storey Compensates for Road &  
Breezeway Widening**

CASCADIA  
Green Development



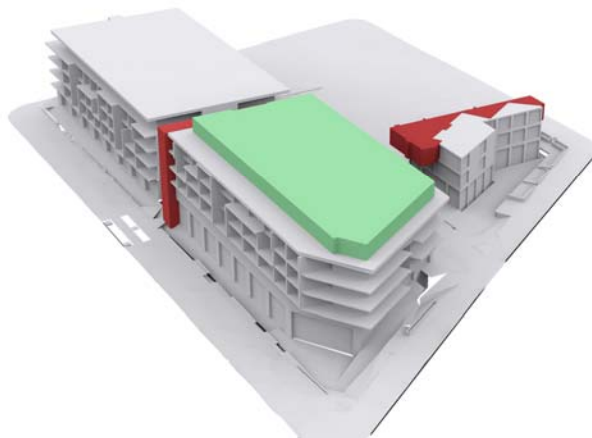
**Changes:  
5<sup>th</sup> Storey Compensates for Road &  
Breezeway Widening**

CASCADIA  
Green Development



**Changes:  
Terracing West & North side of  
North Building**

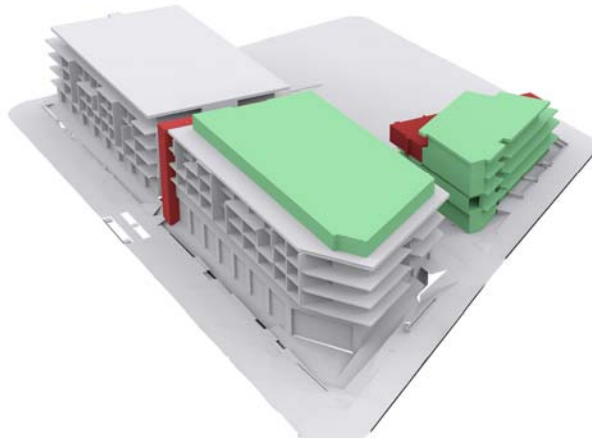
CASCADIA  
Green Development





## Changes: Terracing West & North side of North Building

CASCADIA  
Green Development



## Current Proposal

(Existing trees shown for scale, not part of proposal)

CASCADIA  
Green Development



## Public Engagement Overview

Ongoing	Pre-covid in-person meetings, Virtual meetings, phone calls, and emails
Feb 2019	Neighbour letter
Sept 2019	Neighbour letter #2
Nov 2019	Development Information Session
February – April 2020	Virtual Neighbour Outreach (multiple rounds) <ul style="list-style-type: none"> <li>• 18 invitations</li> </ul>
March – June 2020	Neighbour-led Public Realm Planning (several rounds of communication and invitations): <ul style="list-style-type: none"> <li>• Context of development, Public Realm planning, Development on Transit Routes, Lane/Arcade concepts, and three workshops.</li> </ul>
July 2020	Virtual Town Hall <ul style="list-style-type: none"> <li>• Follow-up meetings, responded to every single submission (hundreds)</li> </ul>

## Responses to Feedback

Project Phase		Changes
April 2019	Preconsultation	<ul style="list-style-type: none"> <li>• 4 storey West building</li> <li>• 5 storey East building</li> <li>• 3 storey THs &amp; daycare on north lot</li> <li>• Commercial E 3<sup>rd</sup> frontage</li> </ul>
Aug 2019	Full Application	<ul style="list-style-type: none"> <li>• 4 storey West building, <b>commercial frontage removed</b></li> <li>• 5 storey East building</li> <li>• 5 storey North building &amp; span across lane</li> <li>• Daycare on north lot</li> <li>• <b>Commercial lane</b></li> <li>• Commercial East building frontage on 3<sup>rd</sup> Street.</li> </ul>

## Responses to Feedback

Project Phase		Changes
April 2020	2 <sup>nd</sup> Submission  Responds to: <ul style="list-style-type: none"> <li>• Oct 2019 Council</li> <li>• Oct 2019 APC</li> <li>• Oct 2019 ADP</li> <li>• Nov 2019 DIS</li> <li>• March 2019 HAC</li> <li>• March 2019 ITC</li> <li>• Feb – April Virtual Neighbour Outreach</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Daycare moved to breezeway</b></li> <li>• <b>North building height reduced, terracing to 2 storeys at 4<sup>th</sup> Street (lower than adjacent duplex roof)</b></li> <li>• <b>Breezeway widened</b></li> <li>• 4 storey West building</li> <li>• 5 storey East building, commercial on lane &amp; E 3<sup>rd</sup> frontage</li> <li>• Span across lane</li> </ul>

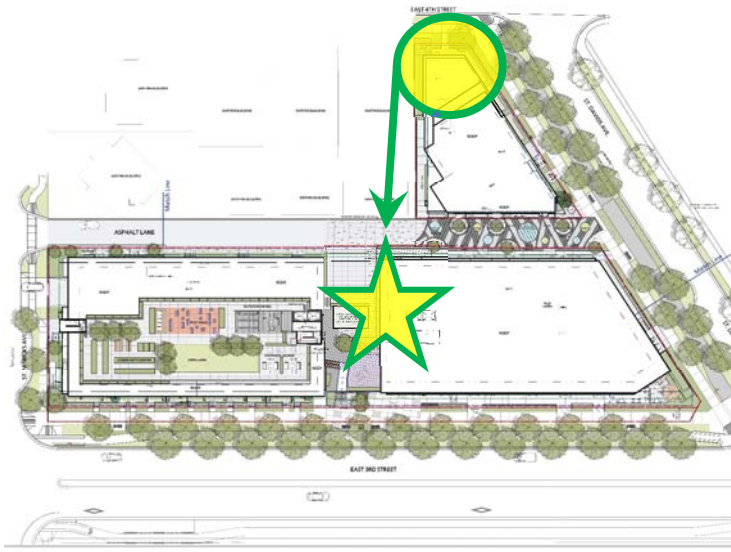
## Responses to Feedback

Project Phase		Changes
Aug 2020	3 <sup>rd</sup> Submission  Responds to: <ul style="list-style-type: none"> <li>• May 2019 PAAC</li> <li>• Neighbour Virtual outreach</li> <li>• March – June Neighbour-led Public Realm Planning</li> <li>• Virtual Town Hall</li> </ul>	<ul style="list-style-type: none"> <li>• <b>North building height reduced to 4 storeys terraces down to 2 storeys.</b> (Adjacent neighbour preferred terraced massing rather than 3-storey structure.)</li> <li>• <b>Removed span across lane, replaced by canopy</b></li> <li>• <b>3 Public Art opportunities identified</b></li> <li>• <b>Improved patio in SE corner</b></li> <li>• <b>Transportation Study updated</b></li> <li>• 4 storey West building</li> <li>• 5 storey East building, commercial on lane and E 3<sup>rd</sup> frontage</li> </ul>

## Responses to Feedback

Project Phase		Changes
Oct 2020	4th Submission  Responds to: <ul style="list-style-type: none"><li>• Technical comments from City staff</li></ul>	<ul style="list-style-type: none"><li>• Mostly technical details in response to staff comments</li></ul>

## Responses to Feedback: Moved Daycare

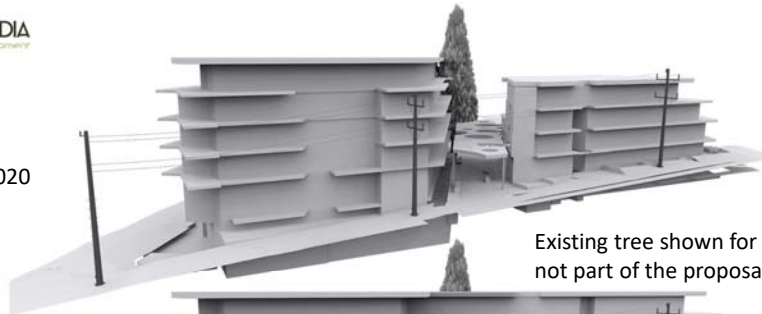




## Responses: Comparing Aug 2019 & Nov 2020

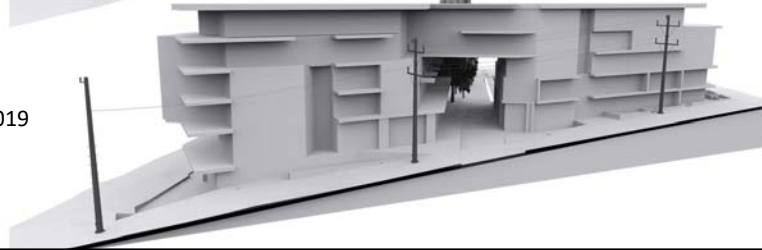
CASCADIA  
Green Development

Nov 2020



Existing tree shown for scale. It is not part of the proposal.

Aug 2019



## Responses: Comparing Aug 2019 & Nov 2020

CASCADIA  
Green Development

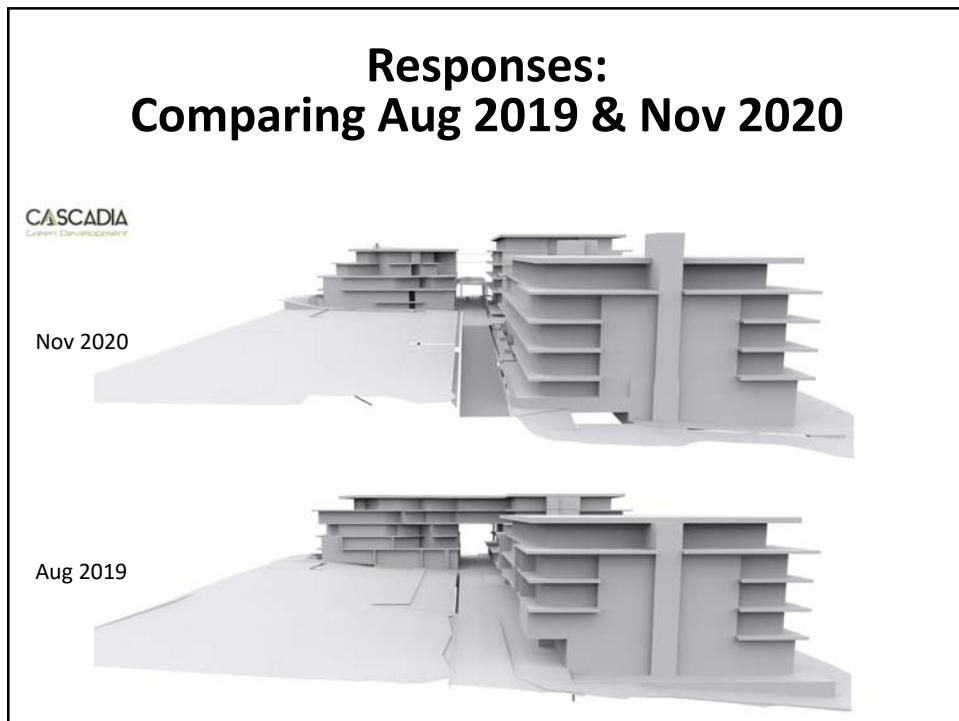
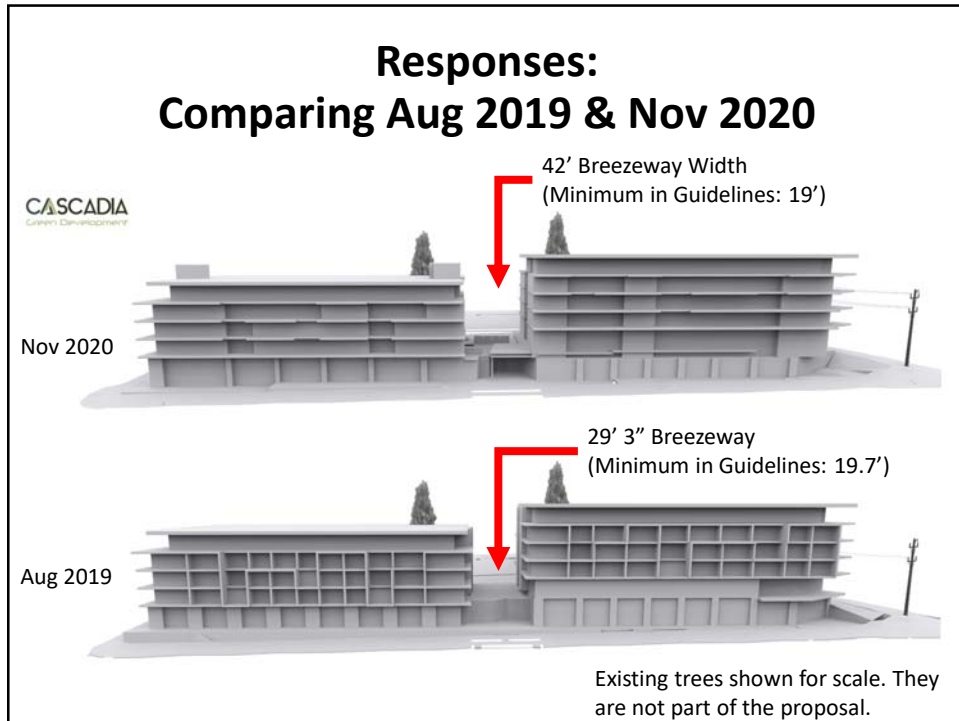
Nov 2020



Existing trees shown for scale. They are not part of the proposal.

Aug 2019

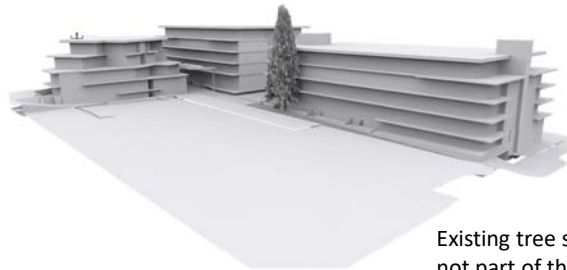




## Responses: Comparing Aug 2019 & Nov 2020

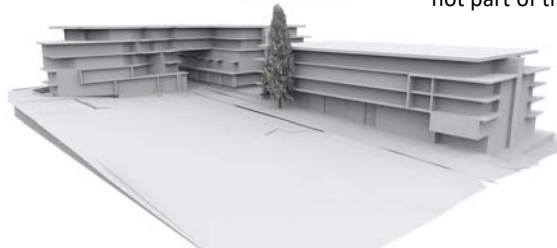
CASCADIA  
Green Development

Nov 2020



Existing tree shown for scale. It is not part of the proposal.

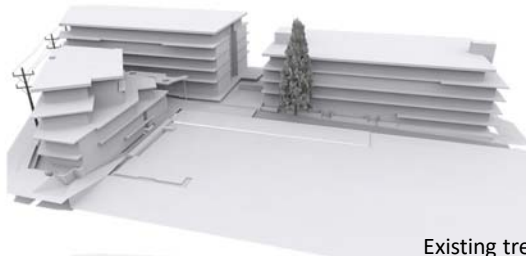
Aug 2019



## Responses: Comparing Aug 2019 & Nov 2020

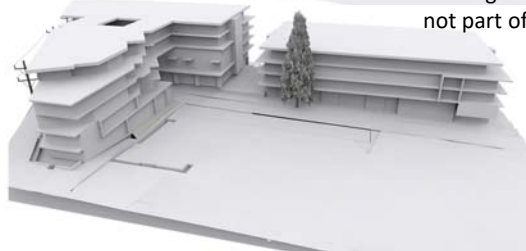
CASCADIA  
Green Development

Nov 2020



Existing tree shown for scale. It is not part of the proposal.

Aug 2019



## Height

Height increase on east building: how much above OCP?

	OCP Base Case			Proposed Design			Delta	
	Average Height (Ft)	OCP Floors	OCP FSR	Average Height (Ft)	Floors	FSR	FSR Delta (Proposed -OCP)	Height Delta (Proposed -OCP)(Ft)
West Building	44.6	4	2.60	44.3	4	2.38	-0.22	0.00
East Building	48.5	4	2.57	54.7	5	2.76	0.19	6.16
North Building ***	Undefined	6	0.50	37.5	4	1.92	1.42	4.40
			2.26			2.48	0.22	

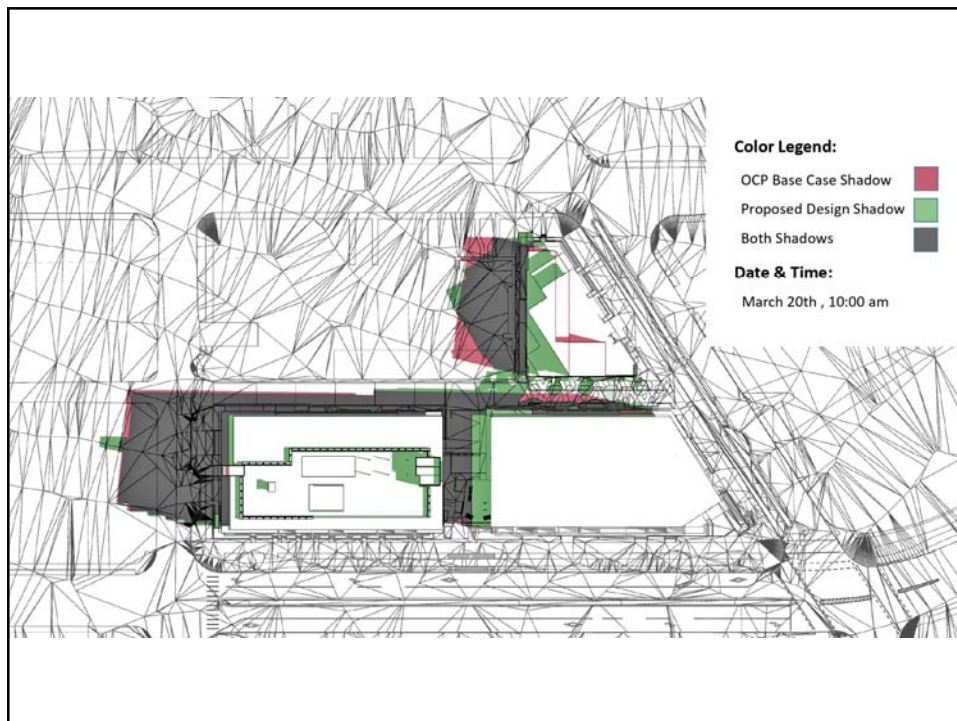
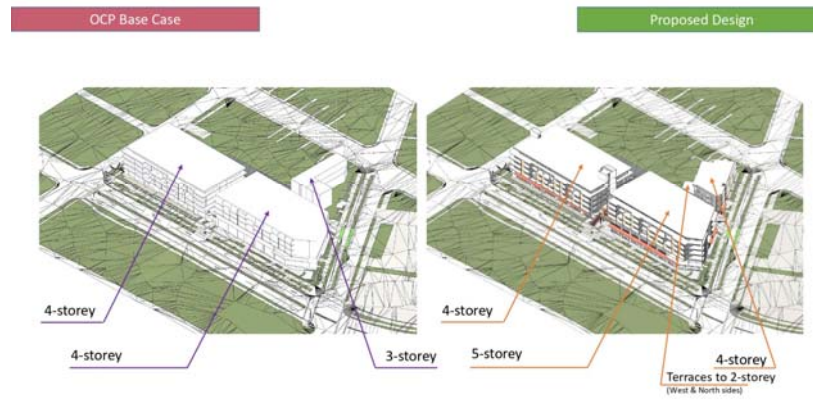
\*\*\*According to the OCP, the height is not defined but the number of floors should not be more than 6 Storeys. The zoning height limit for the North Lot is 33.1 ft

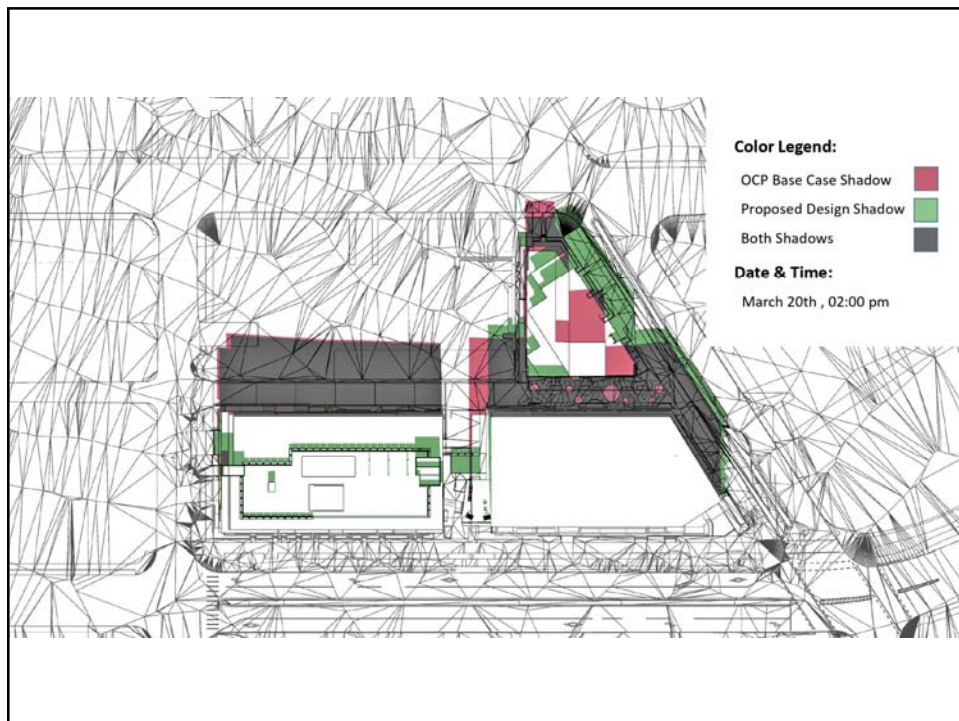
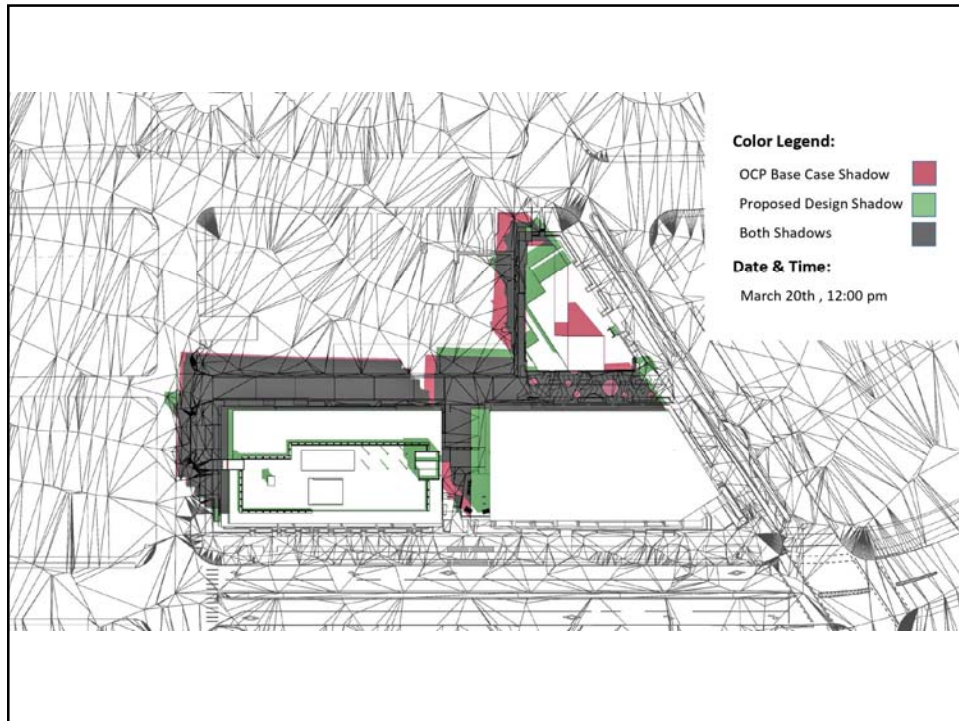
## Shadow Study

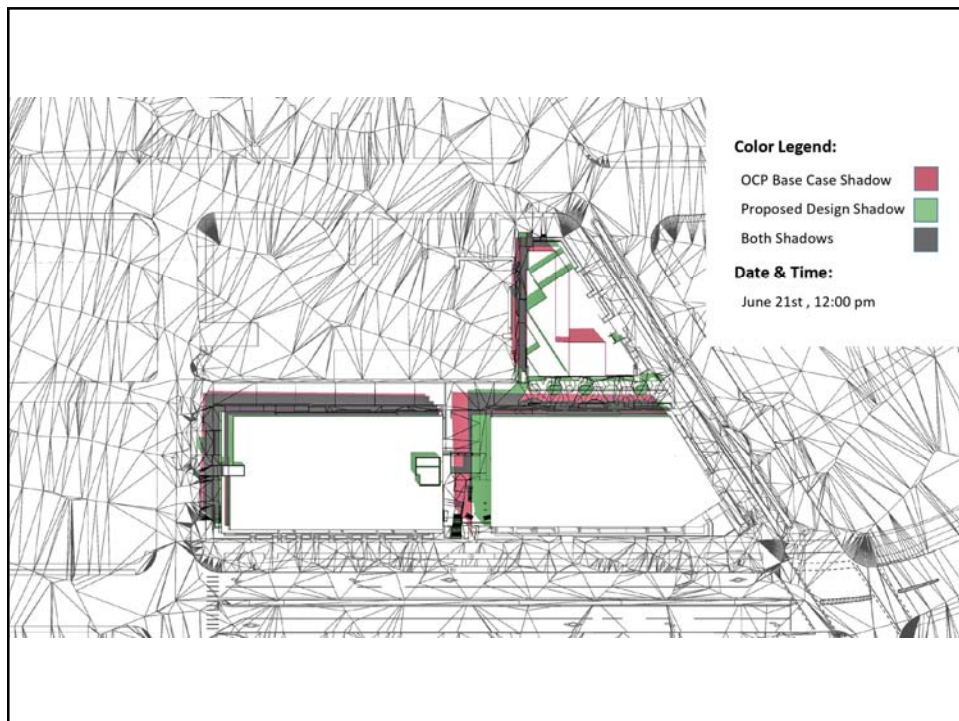
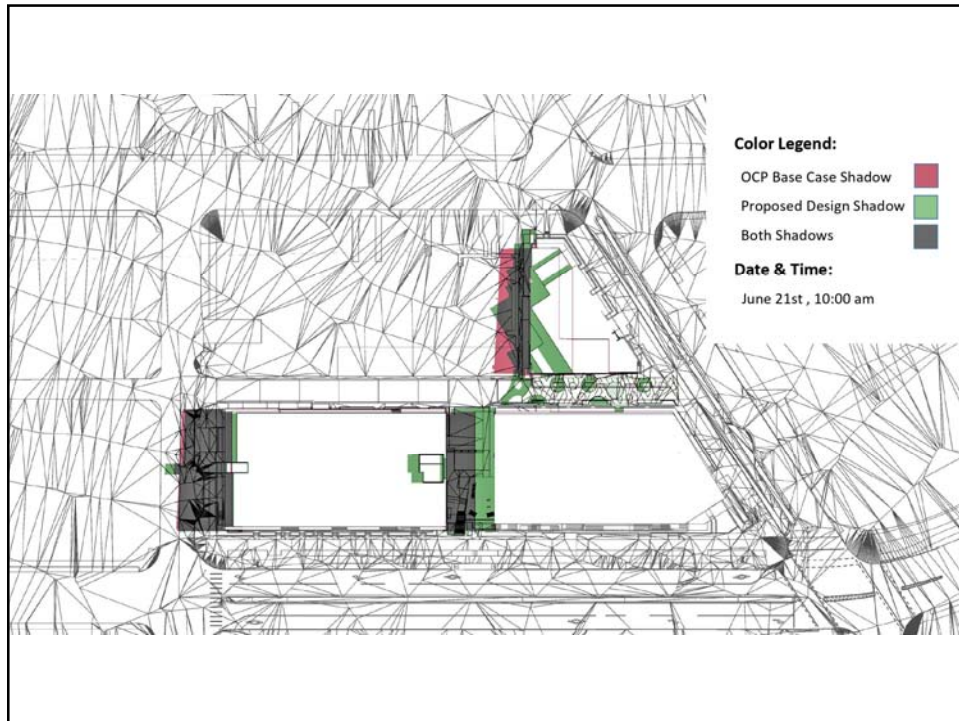
- No significant difference in shadow impacts between our proposal and what is permitted under current OCP designations
- Excludes shadow impacts of existing houses on each other.
- Widened breezeway: from 29'3" to 42' to allow more light to reach neighbours
- Worked with adjacent neighbour on massing



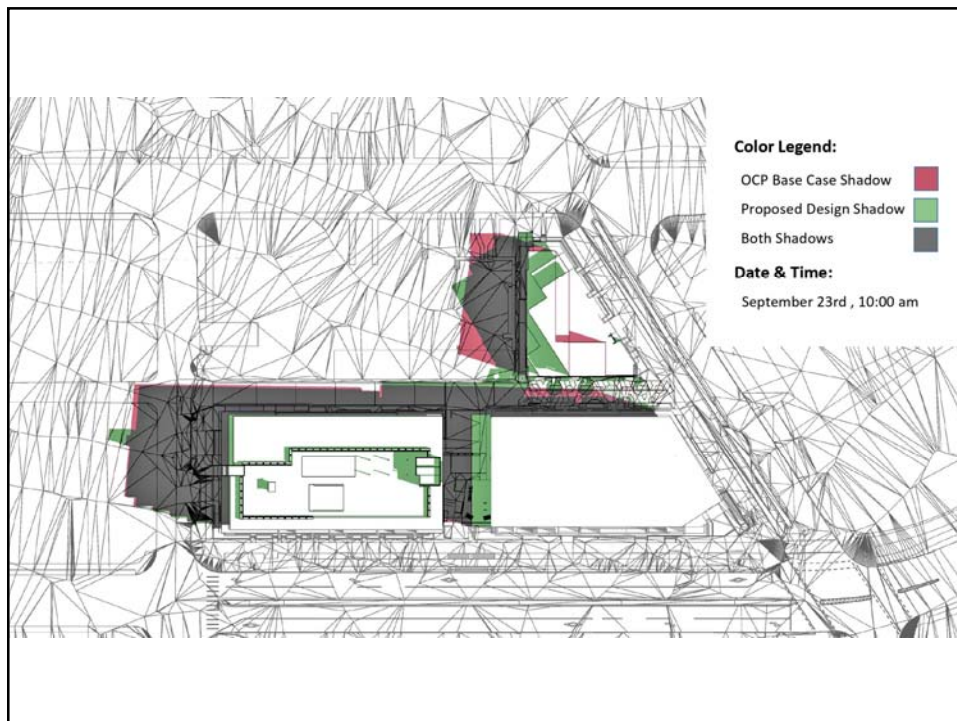
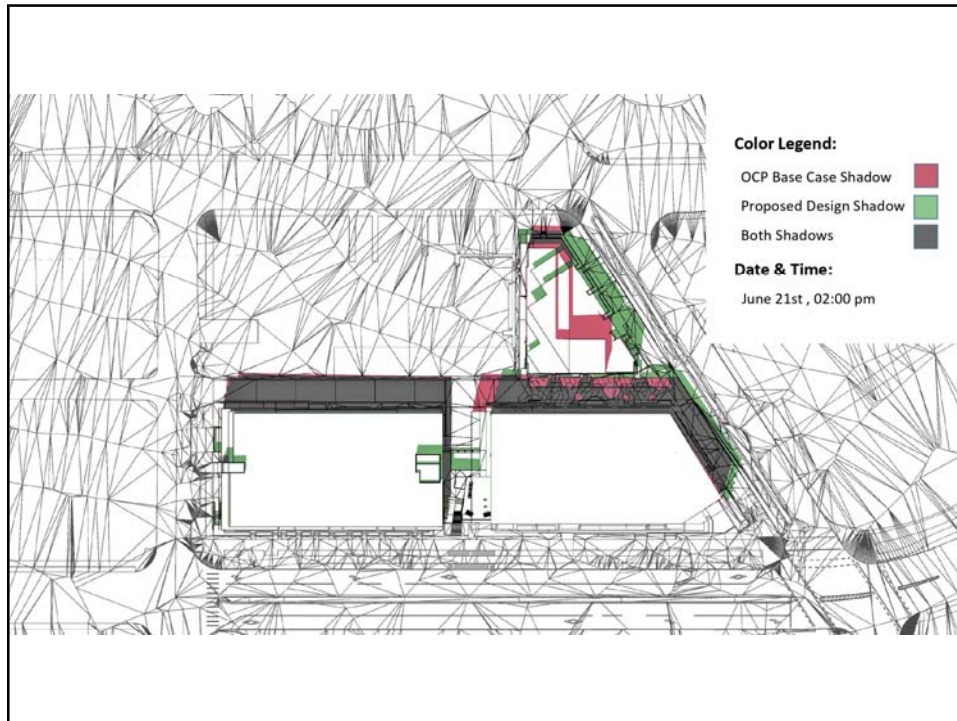
## Shadow Study Comparing OCP Base Case & Proposed Design



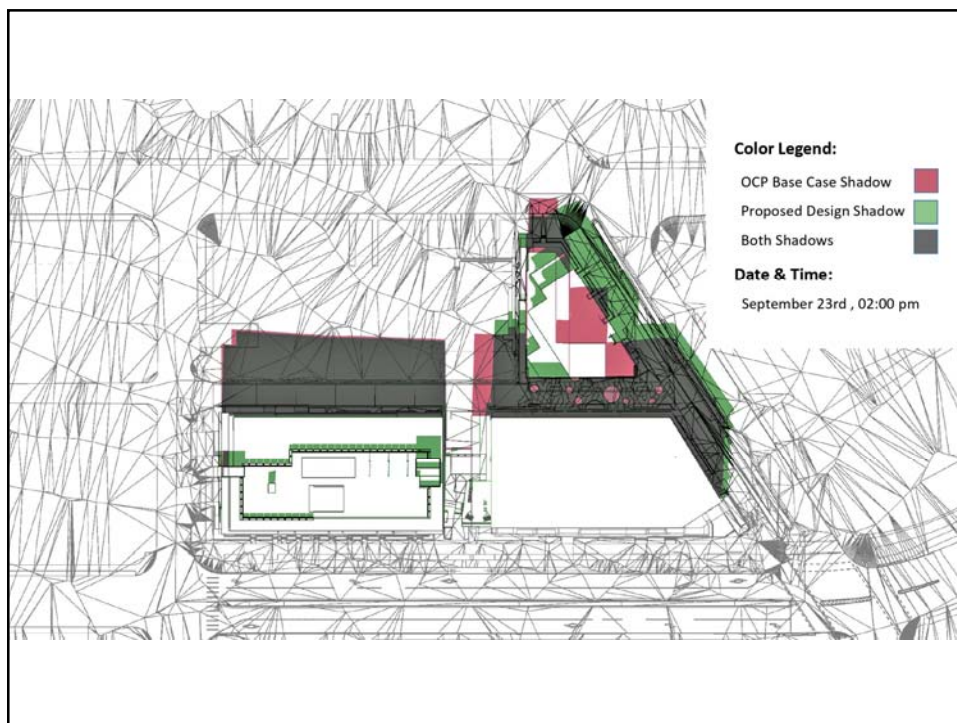
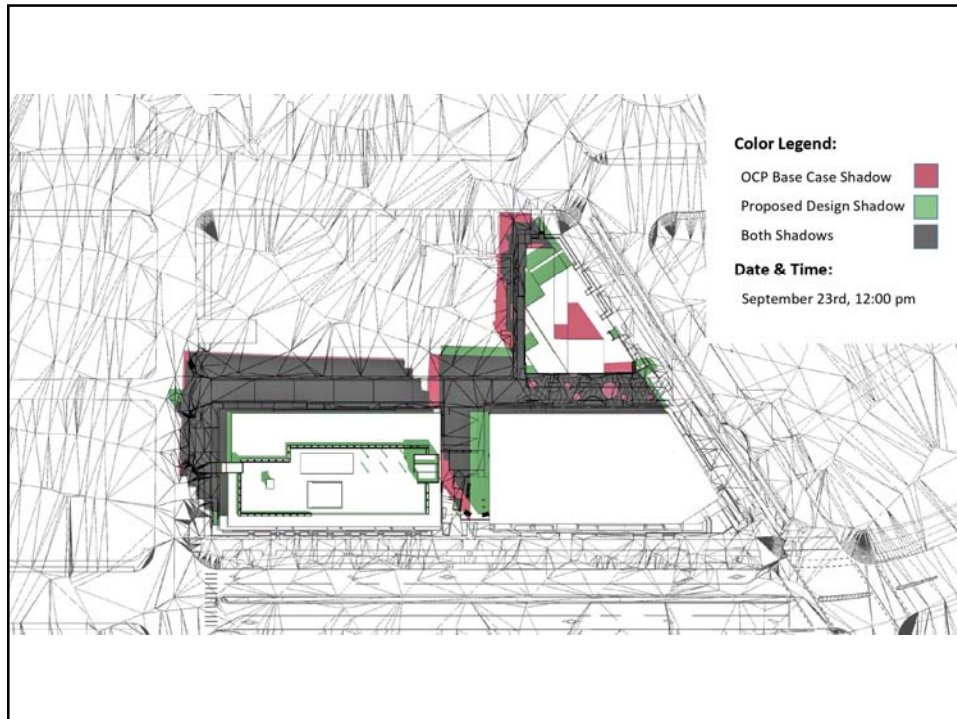




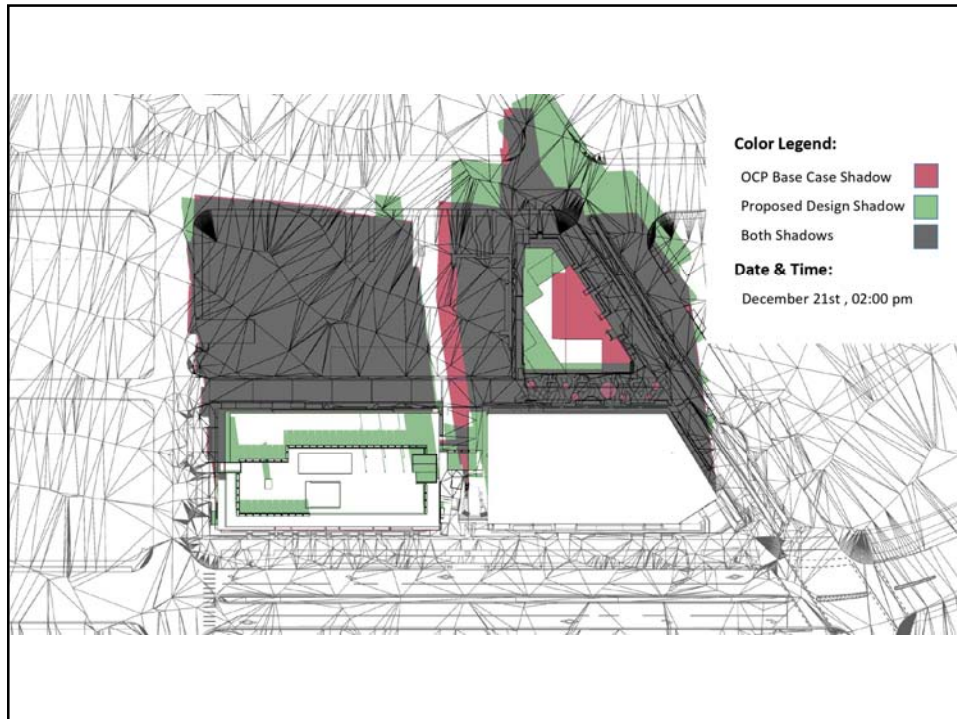












## Summary

- Sustainable Neighbourhood Hub
- Rent to Own
- Affordable Home Ownership
- Daycare
- Supports transit, pedestrians, bikes
- Supports Economic Recovery







**From:** Jan Malcolm <>  
**Sent:** July-08-20 10:24 PM  
**To:** Mayor Linda Buchanan; Holly Back (Councillor); Don Bell (Councillor); Angela Girard (Councillor); Tina Hu (Councillor); jmcilory@cnv.org; Tony Valente (Councillor)  
**Cc:** Clerks  
**Subject:** Cascadia Green Development - 402-438 E 3rd St & 341-343 St David's Ave, North Vancouver, BC  
**Attachments:** Feedback - 3rd Street and St David's Development.pdf

Good evening ladies and gentlemen of the City of North Vancouver Council:

I submitted feedback prior to the Town Hall Virtual meeting on July 14<sup>th</sup> for this proposed development. I am attaching that document for City Council as I feel it is appropriate to do so. Please understand it was filled into a form that had my personal information at the start so this document seems slightly bare.

I hope you will be able to attend the Virtual Town Hall next week, as there were many statements made at the October 7, 2019 City Council meeting regarding what the neighbourhood would want, and I believe you will find that out by listening on Tuesday evening. If you are unable to attend, please talk to the residents about their interest in a town centre or hub at this location before you deem it a place for one. As none of the Council members live in the neighbourhood, please listen to the people who do and what they want for their community.

Thank you for your time and attention to our concerns.

Jan Malcolm  
522 4<sup>th</sup> Street East  
North Vancouver

I am opposed to this project.

I believe this development requires changes to the OCP; you mention it in your timeline on August 21, 2019 but it is not clear to me if this OCP amendment has been granted. I believe that along 3rd Street, only 4 floors are allowed. You are purposing 6 floors in the east building and 5 in the west building. And the north building at 4 floors is well out of the OCP allowable height for the Residential Level 2 - Low Density zone in which that lot is in.

I feel this is far too much density for this location. We have been inundated with the development on 3rd Street and to the south in Moodyville. Now you are trying to expand north of 3rd Street with even an even taller building, encroaching on 4th Street where all the dwellings to the west are duplexes, and to the east are single family homes, or homes with coach houses or suites. On the south side of the 500 Block of 4th Street East, only duplexes are allowed so your potential development will stick out like a sore thumb on 4th. This is not right, it is NOT what the OCP was planned for, and it is too much.

We have enough traffic and density in this part of the City and now you want to add another 175 units? No thank you. And you want to add numerous commercial units and cafes and restaurants that will add more traffic. Have you ever driven along 3rd Street during 'normal' rush hour driving? I don't try to go down the hill after 2:00 pm, and if I am coming home from work going west, I make sure I have everything I need before I drive up the hill to my home. I think you are naive to think that everyone who potentially would live in this development would take transit. If everyone that City Council figures will move in to the Moodyville area were to take transit, the buses would be overrun. It is not going to happen.

You stated on your site "We are proposing population density and commercial uses to support public transit along the new Express Bus corridor on E 3rd Street." You are dreaming that this will happen. Why else would you put 51 parking spots for your commercial units in the parking garage? Those people are not on transit!

I also feel you are not being thoughtful of the neighbours who currently live on the south side of 4th Street who you are going to shadow greatly by these buildings. You may have made changes to the north building and the breezeway, but when reviewing your Shadow Study on pages 57 and 58 of your information package, it is clear to me that these residents are going to be suffering from this development.

And finally, the size of many of the suites you are planning are tiny! Imagine having a three-bedroom apartment at just over 1000 square ft! If you are a family with children, that does not allow much space for a family. So, are you telling families and single people that yes, you can own a place and pay off your mortgage in 25 years but it is tiny and you won't have enough room for your family? Or a one-bedroom of 508 square ft - barely enough room for a bed or sofa in a living area.

I applaud some of your initiatives - Rent-to-Own Program, and the Affordable Home Ownership Program – below-market units available with potential support from BC Housing. But unfortunately, the minuses outweigh these pluses.

I look forward to being part of the Town Hall on July 14.

Jan Malcolm  
522 4th Street East  
North Vancouver

**From:** Jan Malcolm <>  
**Sent:** July-12-20 7:51 PM  
**To:** Mayor Linda Buchanan; Holly Back (Councillor); Don Bell (Councillor); Angela Girard (Councillor); Tina Hu (Councillor); jmcilory@cnv.org; Tony Valente (Councillor)  
**Cc:** Clerks; Mike Friesen; 'Shirazeh Dabiri'  
**Subject:** Further input re: Cascadia Green Development - 402-438 E 3rd St & 341-343 St David's Ave, North Vancouver, BC

Mayor, Council, and Mr. Friesen,

I would like to provide further input to the proposed development by Cascadia Green Development - 402-438 E 3rd St & 341-343 St David's Ave, North Vancouver, BC

Cascadia originally based its earliest proposal with no commercial laneway and just townhomes on the north lot. Then this fall, they added the laneway and substantially increased the density on the 4th Street lot to 4 story. Why?

The City of North Vancouver, along with the rest of the world, is in a health pandemic. The proven way to slow down the spread of Covid-19 is physical distancing, and **NOT** increased density. Yet these developers, with encouragement from City planning, are wanting to increase their density and cram more people into small condo units in this development.

On the North Shore, the hospital, medical services, the Police, and other services are overwhelmed with wait times already. Now you are not only adding huge numbers of people into Moodyville on, and south of 3<sup>rd</sup> Street, but looking at adding 175 more units here. As well, Ridgeway School is overflowing with portables on site. Where will the children from this proposed development go to school? Class sizes already must be smaller due to the pandemic, and this has no end in sight.

The pretence of affordable housing is untrue for this site, as was evidenced by the article in Business in Vancouver, by Frank O'Brien, dated July 10, 2020 – "Metro Vancouver land sale prices go stratospheric" where the final piece of this land assembly sold for \$17.5 million for 0.66 acres, resulting in a cost of **\$600 per square foot**. Affordable? For who??

The \$600 per ft<sup>2</sup> is just the land cost! No construction costs, marketing, finance charges or other soft costs required to bring the homes and commercial spaces to market.

The claim that more square footage, and hence more income from the property, keeps taxes and unit costs down is UNTRUE. The floor-space-ratio (FSR 2.6) allowed on the Moodyville neighbourhood site, equals a price of \$229 per buildable square foot, according to Klein Group of Companies, Vancouver, brokers on that deal.

This development is not wanted or needed. Several of the already permitted developments along 3<sup>rd</sup> Street in Moodyville have ceased or not begun construction, most likely because there is no demand for these units. And now you want to build another building, outside the traditional Moodyville area, with huge density, unwanted commercial units, 51 parking spaces for these commercial units when everyone is going to use transit, requiring not only Zoning Changes but an OCP change??

There is a simple answer: Unwanted, unneeded, expensive, small, and not fitting the character of the neighbourhood. NO!

Jan Malcolm, 522 4<sup>th</sup> Street East, North Vancouver

From: Victoria Cloud < >  
Sent: July 9, 2020 1:20 AM  
To: Holly Back (Councillor); Don Bell (Councillor); Linda Buchanan (Mayor); Angela Girard (Councillor); Jessica McIlroy; Tony Valente (Councillor); Mike Friesen; Tina Hu (Councillor)  
Cc: Max Donelan; Melissa  
Subject: Development proposed for 402-438 E 3rd St. & 341-343 St. David's Ave.

Dear Mayor, Council and Mr. Friesen,

We are one of the many residents the neighbourhood impacted by the large development proposed for 402-438 E 3rd Street and St. David's Ave. We have been involved in the many discussions the developer has had with the community and with our community members at large at the open house this past year. We echo the opinion of many of our neighbours that we are not in support of the proposal by the developer, Cascadia, as they have it laid out presently. We would likely as well be in more support of the development if it did indeed follow more closely to the Official Community Plan as it has been presented.

We are concerned specifically about the following:

1. How big the building will be, the density and overall height as it currently does not meet OCP guidelines to support our community. The canyon corridor created by these buildings will be extreme and will immediately densify an area that is in itself unique from Lonsdale area central.

2. The laneway being considered for commercial use is a real problem.

It disrupts our neighbourhood completely. During quarantine our elders, and children were not on the sidewalks as much as they were in our laneways to keep their distance but to also have a peaceful walk. We meet our neighbors and we look after each other in these laneways. Commercializing this area brings in vehicles unknown to us, individuals that may abuse the area at night, and violates privacy for our neighbours living there. It's a dreadful idea and virtually strips the culture of our laneways out of this already fragile community.

3. The traffic on our streets will increase and we have so many young families that live here. It is already a dangerous place to walk with children coming home from school at 3pm and yet more vehicles will only increase pedestrian risk. To date there has not been a traffic study shown to us relating to this development. More research on this and a discussion on this would be most helpful.

4. Parking is packed on 4th Street and we are concerned with little to no parking amenities for this building proposal that parking will be a nightmare ALL of us residents will have to bear.



5. Impact on our fragile schools! This developer seems completely unaware of the completely maxed out schools near by and has expressed no collaboration with the City of North Van on the issue of space in schools. Our School District has admitted they are in “a bit of a crisis” over the phone to me personally with regards to lack of space in the nearest Elementary School likely to take in kids from this development, Ridgeway Elementary School. The school is above 150% capacity with no sign of slowing. Schools and the City should be protecting our schools from the impacts of fast, opportunistic development within the school district and the impact on the community of schools at large. If this communication between the School District and the City has been done, the City needs to be transparent in sharing this information with the public.

We sincerely hope you all have more information than what the developer has provided on why the OCP needs to be challenged. The impression we have felt over the last few years is these developments are happening with such speed and little community forum. When this occurs it can mean much financial resources are being passed between individuals while residents concerns as a whole are downplayed. We feel YOU City Councillors have the power to hear the concerns of its residents, many of which have invested well over 40-50 years in this community, in this City, shaping it to be the City it is today. The very culture of our City comes from what we would describe as “legacy residents” and rather consider us obstacles to change that change occurs in concert with our feedback as it is a direct reflection of why it is awesome to live in this City. If you continue to bow to development and disregard resident feedback (like allowing development to modify and morph our OCP) you are dismissing the very fabric that has held our City together. We are not looking for a proposal of “cool ideas” (a comment made to me at the town hall by the developer when asking for research about some of his ideas). We are keen to see and hear WHY the OCP is being challenged and to level this with sound reasoning, working together to see a project at 3rd and St. Davids (West) that can support both your vision for our City and that of the residents, the true heart of this City.

Thank you for your time and look forward to the town hall and hearing back from you.

Victoria and Max Donelan-Cloud  
346 East 5th Street

**From:** cathy lewis < >

**Sent:** July 9, 2020 4:59 PM

**To:** Mike Friesen; [steven@cascadiagreendev.com](mailto:steven@cascadiagreendev.com)

**Cc:** Linda Buchanan (Mayor); Holly Back (Councillor); Don Bell (Councillor); Angela Girard (Councillor); Tina Hu (Councillor); Jessica McIlroy; Tony Valente

**Subject:** Cascadia Green Development Virtual Town Hall Meeting July 14, 2020, 402-438 E 3rd St & 341-343 St David's Ave,

I live just east of this proposed development and oppose this project at St. David's Ave and E 3rd Street, for many reasons.

Local residents worked extremely hard on specific guidelines in the OCP for development in this area. This proposal is not respecting that work and the developer is using various attractions to support their request for amendments.

There needs to be much more work done on this proposal before it goes forward.

**Questions and comments from the presentation material for Town Hall Meeting July 14, 2020**

Is the garbage staging area on the west end of the lane? How far is it from the corner house at St. Patrick's and the lane?

Is the set back of the North building on 4th St, 3m (9' 10") from the curb?

How wide is the separation between the North building and the adjacent duplex property line?

Is there a walkway running north south between the North building and the adjacent duplex?

Are there garbage collection zones at ground level between the North building and the adjacent duplex? If so what mitigation factors are planned?

You can assume there will be a lot of loading and unloading that will occur with a project this big and the number of different use units.

Where would the loading zone be? Will it be shared by the commercial tenants and the residential tenants?

How would vehicles, including trucks, turn around in lane? You can be sure this will happen.

What types of commercial activities do you see occupying these units? How will they be restricted in their uses?

It appears the North building has west facing balconies that look directly down on the adjacent duplex homes and yards. Is this correct?

Why in the previous traffic study was no data collected regarding the St. David's Ave. intersections at E 4th St and at E 3rd St. What is the plan for traffic at these intersections?

As was mentioned in the traffic study done previously by Watt Consulting, they did conceive that traffic leaving the parkade onto St. Patrick's may have a difficult time turning left onto 3rd St at peak traffic times and therefore may pursue alternate routes to head eastbound. That would mean increased vehicles on E 4th St. which already must handle a huge share of the eastbound traffic when 3rd St is backed up.

Why do you think commercial laneways are a good idea when they share it with residential zones that have lane access to their properties and garages? How do you think blocking off the lane is respectful of their usage of the lane?

Why does the pavilion roof structure jut out to the west so far? It looks like it breaks over the property line.

What is the capacity of Daycare spaces?

## **Comments**

It does not comply with OCP guidelines.

It is asking for far too many amendments.

The design does not fit in the parameters of the property efficiently. Many tight access points. Trying to cram too much activity into the lane.

The commercialization of laneways in residential areas is not supported by residents.

Any so called amenities offered are nowhere near what the City should consider to be sufficient.

There has been no genuine consideration for the adjacent residential properties or the families that live in them.

**From:** Submissions  
**Subject:** Cascadia Green Development Virtual Town Hall Meeting July 14, 2020, 402-438 E 3rd St & 341-343 St David's Ave,

**From:** cathy lewis < >  
**Sent:** July 9, 2020 4:59 PM  
**To:** Mike Friesen; [steven@cascadiagreendev.com](mailto:steven@cascadiagreendev.com)  
**Cc:** Linda Buchanan (Mayor); Holly Back (Councillor); Don Bell (Councillor); Angela Girard (Councillor); Tina Hu (Councillor); Jessica McIlroy; Tony Valente  
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The design does not fit in the parameters of the property efficiently. Many tight access points. Trying to cram too much activity into the lane.

The commercialization of laneways in residential areas is not supported by residents.

Any so called amenities offered are nowhere near what the City should consider to be sufficient.

There has been no genuine consideration for the adjacent residential properties or the families that live in them.

This is their worst nightmare. This project is extremely invasive. It is surrounding them in a cage that will be busy, noisy, non private and will affect their quality of life on a daily basis as long as they live there.

## **Recommendations if they want to go ahead with any proposal.**

Lower the height of the North building to 2 stories from lane right through to 4th St. No west facing balconies to look into backyards and decks. Keep the North building residential only.

Lower the East building at the corner of St. David's and E 3rd St to reduce the massiveness at that corner.

Keep any commercial units fronting 3rd Street only. Remove commercial from lane and St. David's Ave.

## **Summary**

I urge you to look at the aerial view of the architectural drawings of the corner of St David's and E 4th St looking south west. Would you want to live in these homes surrounded by this project?

City Staff and Council should be very careful on what is approved here. This will definitely be a precedent setting change that could lead to conflicts between residential neighborhoods and similar projects in the future.

Previous lack of good planning in the development of the Moodyville area should not now become the problem of the 4th St residents.

Finally, please, please do not call it LOLO ON 3RD!

Cathy Lewis  
E 4th St Resident

**From:** Stephen Mills <>  
**Sent:** July-14-20 9:53 AM  
**To:** Mike Friesen  
**Cc:** Holly Back (Councillor); Don Bell (Councillor); Linda Buchanan (Mayor); Angela Girard (Councillor); Jessica McIlroy; Tony Valente (Councillor); Tina Hu (Councillor); Clerks; Christine Rigby; Steven Petersson  
**Subject:** Re: Development proposed for 402-438 E 3rd St & 341-343 St David's Ave

Thank you Mike,  
Since my last email I was able to review the transportation study and identified several issues.

- This is an engineering report. As per EGBC quality management guidelines, any engineering report/study that is to be relied on must be sealed by an appropriate professional. This is not the case with the document from Watts Consulting. Action: Before this report can be relied on by CNV, it must be sealed as per EGBC quality management guidelines. Additionally, the sealed version must be issued to interested community members with a redlined version of any changes to the document.
- There is a vague reference in the report to a "diverter" being installed on 4th street to restrict east/west traffic. Action: More detail needs to be provided regarding "diverter".
- The study area for the parking assessment is skewed to include areas on 4<sup>th</sup>, east of St Davids while excluding areas on 4<sup>th</sup> west of St Patricks that are closer to the development. The areas east of St Davids see much lower use due to this portion of the street being single family residential houses only populating the north side of the street (the former Translink site and the BC Hydro substation are situated on the south side). Meanwhile the closer, excluded section consists of duplexes on both sides and is heavily congested in the evenings. Whether intentional or unintentional, this is a poor assumption that diminishes the impacts to parking in the neighborhood by the proposed development and favors the developer's request for a parking variance. Action: On-street parking study area to be revised that east and west extents are equidistant from the respective east and west corners of building.
- Section 6.2.1 states that peak weekday parking occurs at 9:00 am. This does not reflect reality. Peak parking occurs in the neighborhood in the evenings. Action: Revise parking study to reflect actual conditions. Likely this means more data to be collected.
- The study does not consider additional redevelopment of single family residences into duplexes. Action: Add assumption to study.
- The study does not include the redevelopment of the Translink site that will surely increase traffic/parking requirements. Action: Revise transportation study to include assumptions surrounding Translink site redevelopment.
- The study indicates that a constraint on St. Patrick and 3rd street will divert traffic onto 4th street. We are concerned with the safety of children and seniors due to commercial traffic increasing on 4th street (a residential street). Action: Provide measures to restrict commercial traffic from using 4th street as a thoroughfare and other traffic/parking discouragement measures to limit use by residents/patrons of development..

The study recommends a variance of 55 parking spaces in a neighborhood that is already at capacity in terms of parking (and losing a significant number of parking spots due to the Rapidbus and greenway lanes) while not including the eventual Translink development. The assumptions in the study are inadequate and favor the developers request for a variance. The studies assumptions

need to be revised and modelling redone to provide a more realistic view of the actual impact of the development (plus reasonable assumptions regarding future neighborhood growth) to support any request for variance on parking spaces.

CNV should encourage the developer to spend some meaningful time on the transportation study at the open house tonight.

Thank you.

Steve Mills  
368 east 4th street

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On Mon, Jul 13, 2020 at 9:44 PM Mike Friesen <[mfriesen@cnv.org](mailto:mfriesen@cnv.org)> wrote:

Mr. Mills and Ms. Rigby,

Thank you for input concerning the proposed Official Community Plan amendments and rezoning for 402-438 East 3rd Street and 341-343 St David's Avenue. A copy of your email has been saved to the file to support staff in their review of the application.

The project has not yet proceeded to Council consideration and staff are still preparing their opinion based on applicant revisions and public feedback through events such as the upcoming Town Hall. I will coordinate with the applicant to provide a response to your questions in a separate email as soon as possible.

Sincerely,  
Mike Friesen, Planner  
City of North Vancouver

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From: Stephen Mills <>

Sent: July 7, 2020 9:42 PM

To: Holly Back (Councillor); Don Bell (Councillor); Linda Buchanan (Mayor); Angela Girard (Councillor); Jessica McIlroy; Tony Valente (Councillor); Mike Friesen; Tina Hu (Councillor)

Subject: Development proposed for 402-438 E 3rd St & 341-343 St David's Ave

Mayor, Council and Mr Friesen,

We are residents of the neighborhood that will be impacted by the large development proposed for 402-438 E 3rd St & 341-343 St David's Ave. After review of the materials provided by the developer to date and attending the open house late last year, our opinion is that the development as proposed is not appropriate for the neighborhood and we are not supportive of the proposal in its current form. However, we would likely be more supportive of the redevelopment of the site if it more closely aligned with the OCP.

Our main concerns are:

- 1) Deviation from OCP (e.g., building footprint, density and height);
- 2) Laneway commercial being disruptive to neighborhood;



- 3) Increased traffic on residential streets and laneways;
- 4) Parking already at capacity on 4th street and lack of parking in proposed development (e.g., no parking for smaller units);
- 5) Visual and noise impacts from proposed development;
- 6) Lack of transparency and/or lack of planning with respect to the redevelopment of the adjacent former Translink site;
- 7) Impacts to existing facilities (e.g., schools); and
- 8) Lack of real amenities being offered by developer.

We are request that CNV staff (assisted by the developer as required) respond on the following items:

1. At the open house the developer touted the “amenity spaces” that would be available to building residents. These along with restaurants and increased traffic will increase noise levels in the neighborhood. Please provide a noise study that quantifies the impact to the neighborhood with mitigation measures that will be put in place.
2. To date we have not seen a traffic study related to the development. During times of congestion on Highway 1, 4th street is already being used as a thoroughfare for bridge traffic. What sort of traffic discouragement is under consideration to limit additional traffic onto 4th, ensure safety for neighborhood children and limit the already at capacity parking on 4th for primary use by residents and their guests? Please provide a traffic study/mitigation plan.
3. Why is CNV considering laneway commercial in a residential neighborhood? What is the precedent? This will encourage commercial traffic through laneways which will result in safety issues, disturbances to existing residences and encourage patrons to park on already congested residential streets. Commercial traffic will spill onto adjacent streets, especially during times of congestion on 3rd caused by eastbound bridge traffic. Please provide a detailed plan for commercial traffic access and how commercial traffic onto adjacent streets will be restricted.
4. What is CNV’s vision for the former Translink depot immediately adjacent to the east of the development? If the OCP is relaxed, it is certain that the future developer of the Translink site will also seek a relaxation based on any precedent that is set. We expect this will be redeveloped in the near to medium term and as a result, the cumulative impacts of the Translink redevelopment must be considered with the current proposal. The Translink site would be preferred for commercial development instead of the laneway accessed commercial being proposed as it is adjacent to a BC Hydro substation instead of residences. What is CNV’s vision for this site and what cumulative impacts will be considered in the current proposal?
5. Renderings to date do not adequately convey visual impact to the neighborhood. Provide renderings at several vantage points 4th street and north to provide a realistic description of visual impacts.
6. What is the developer’s/CNV’s estimate of school age population to reside in the

building? Please provide a statement as to how this will impact existing nearby school capacities.

7. The developer appears to be quite confident that the proposed development will not reduce sunlight in adjacent residences at any time of year. This is a significant issue with a recent development in the neighborhood (362 -368 East 3rd Street). Additionally, visual impacts from 362 - 368 East 3rd Street were understated and we are unaware of any subsequent action ever undertaken by CNV against the developer. Please provide performance criteria that will be used by CNV to measure shading and visual impacts and what remedies will be sought if criteria is not met.

8. Experience with other recent developers in the neighborhood has resulted in additional facilities (e.g., cell towers) being added post approval and increasing visual footprint. What is CNV's plan (e.g., restrictive covenant) to prevent similar instances in future?

9. Quite frankly, the developer's list of amenities offered by the proposed development are negligible to misleading (e.g., "donation" of frontage is a requirement by CNV for all redevelopment on 3rd) at best. Please provide a list of specific amenities that will be sought by CNV for development and how the developer will be held to honor this commitment. The other recent development in the neighborhood still has not honored its commitment (e.g., dedicated car share spot).

Stephen Mills and Christine Rigby  
368 4th Street East

**From:** K Kristensen <>  
**Sent:** July-14-20 4:42 PM  
**To:** Mike Friesen  
**Cc:** Melissa Mcconchie; Holly Back (Councillor); Don Bell (Councillor); Linda Buchanan (Mayor); Angela Girard (Councillor); Jessica McIlroy; Tony Valente (Councillor); Tina Hu (Councillor); Clerks; Christine Rigby  
**Subject:** Development proposed for 402-438 E 3rd St & 341-343 St David's Ave

Dear Mr. Friesen,

I have reviewed the plans to be discussed tonight, spent a significant amount of time in the neighbourhood thinking about this proposal and have discussed it at some length with neighbours of the area.

I am concerned with how this project came to be so much in excess of the zoning or and OCP and the original proposal. It seems that this is not a proposal but a done deal. Commitments seems to have been made before the community could reasonably be expected to have a real chance to understand what was at stake and weigh in. The result is what have now which is opposition and a loss of trust.

I think this development is harsh, it is too high, too dense, too bulky, the architecture is cold with a lack of articulation in the facades and quality of design and materials.

This project is too much, too fast and demonstrates a lack of care for the community. I believe the scant community benefits of this project are exaggerated by proponents and the city and the complex costs are discounted. I'm concerned about this project as a precent.

I request that this proposal be rejected.

We need to do better by the community with more open discussion, more sensitivity, quality, liveability and fit in design. Our city deserves a better process and a better built form than is proposed here.

Yours truly,  
Karen Kristensen  
428 East 9<sup>th</sup> Street  
North Vancouver

**From:** Melissa <>  
**Sent:** September-30-20 1:16 PM  
**To:** Angela Girard (Councillor); Tony Valente (Councillor); Linda Buchanan (Mayor); Don Bell (Councillor); Tina Hu (Councillor); Jessica McIlroy; Holly Back (Councillor)  
**Cc:** Alan; Clerks  
**Subject:** Letter encl. re: re: Cascadia Green Development at the 400 block of east 3rd St. and St. David's Ave  
**Attachments:** Letter from 423 E. 4th St. re Cascadia Green development.pdf

Mayor Linda Buchanan and Council  
141 West 14th Street  
North Vancouver, BC V7M 1H9

re: Cascadia Green Development at the 400 block of east 3rd St. and St. David's Ave

Dear Mayor Buchanan and Council,

I am writing to reiterate the concerns I noted in my October 31 letter to council regarding Cascadia Green's project at 402-438 E 3rd St & 341-343 St David's Ave. Over the past year, my neighbours and I have tried to provide feedback to this developer in the hopes that they might modify their proposed development to be in line with the city's official community plan, but they were unwilling to do so. My husband and I are not anti-development and we support the continued evolution of our area including four-story condos on 3<sup>rd</sup> St. and the future development of the bus depot site. We are asking council to ensure that the family character of our neighbourhood is preserved.

We understand that Cascadia is still finalizing their proposal but they have indicated that they will not be making any significant changes to their overall design, massing or height. We have also asked Mike Friesen to provide updated projections on anticipated population growth in the Moodyville area in light of changing immigration patterns/demand for multi-family housing and an overview of current commercial vacancy rates in the Lower Lonsdale area. Our neighbour Stephen Mills has also noted several gaps in the traffic and parking studies and missing information on the impact of the building height and massing on neighbouring properties. We would hope that this information would also inform your analysis of this proposal.

Letter encl.

Yours Truly,  
Melissa and Roger Alan McConchie  
423 E. 4<sup>th</sup> St. North Vancouver



Melissa and Roger Alan McConchie  
423 E. 4<sup>th</sup> St. North Vancouver V7L1J4

September 30, 2020

Mayor Linda Buchanan and Council  
141 West 14th Street  
North Vancouver, BC V7M 1H9

re: Cascadia Green Development at the 400 block of east 3rd St. and St. David's Ave

Dear Mayor Buchanan and Council,

I am writing to reiterate the concerns I noted in my October 31 letter to council regarding Cascadia Green's project at 402-438 E 3rd St & 341-343 St David's Ave. Over the past year, my neighbours and I have tried to provide feedback to this developer in the hopes that they might modify their proposed development to be in line with the city's official community plan, but they were unwilling to do so. My husband and I are not anti-development and we support the continued evolution of our area including four-story condos on 3<sup>rd</sup> St. and the future development of the bus depot site. We are asking council to ensure that the family character of our neighbourhood is preserved.

Cascadia has indicated that they have responded to neighbour's concerns, but their revised plan still requires several ocp amendments and does little to address the issues we raised with shadow cast, noise, privacy and a mismatched streetscape. The updated plan includes a small height reduction in the North building and removal of the land bridge, but we still have concerns with the following:

- Transforming our laneway and residential street into the commercial hub of Moodyville, which will add to an already congested area with limited **parking** and increase **traffic** and **speeding**. We will also be dealing with **noise impacts** from the commercial laneway.
- The **massing** and **height** of the North building is still unacceptable and imposing on our duplex. To put this in perspective, we currently have a triplex beside us on 4<sup>th</sup> St. and if this is approved there would be 24 units in this site alone. The building at 4<sup>th</sup> and St. David's is set back just 11 feet from the street. Our home is set back 20.5 feet. This is **spot zoning** that would allow a developer to propose a pocket for a four-story building on a street that is zoned for duplexes.
- The **massing and height** of the two five and six story buildings on third, which will cast a **huge shadow** on the surrounding duplexes and single-family homes, create **privacy** issues and eliminate views. Cascadia is totally unwilling to discuss the massing and building heights on 3<sup>rd</sup> St., which top out at over 70 feet tall and would be the tallest in the Moodyville area. Their breezeway is in fact required by your bylaws so it's hardly a concession to address these issues.
- Adding a **large day care facility to a residential st.**, which will increase traffic and parking issues.
- **Child safety** in our laneway – many young children play in this area.
- With the **commercial loading zone** directly behind our carport we expect commercial vehicles to be unloading throughout the day creating noise impacts and making it difficult to access or garage. The laneway is very narrow and my duplex neighbor Jeff Keate has raised concerns with Cascadia that delivery trucks may damage the overhang on our garage when they are backing up. He has also raised issues with **lane encroachment** from the canopy roof.

- These buildings should be considered by their **total height** not by the number of stories and this should include any rooftop amenities that add to that.
- Increasing **student enrollment pressure** at Ridgeway Elementary School where my children attend. The school currently has about 630 students, which far exceeds the official capacity of 485 students it was designed to accommodate. A new school at Cloverley is years away.

We understand that city planners had in mind the bus depot site as a future neighbourhood centre in planning the Moodyville area and we urge council to have the patience to see that through instead of supporting a short-term solution that will have negative impacts on a residential street. There is a strong consensus of support for commercial development at the bus depot site and Translink has been doing soil testing recently, which we can only anticipate is to prepare for an eventual sale of this land. If city planners want to expand commercial in the Moodyville area to dovetail with future bus depot development they should be looking to the South side of third St. directly across from this development with light commercial on the North side as the bottom floor only in a four-story building.

The city planning department has consistently told us that they support added density above and beyond the ocp because they want to see a mixed-use development in the Moodyville area. I would like to point out this street is not actually part of the Moodyville development zone, it is not currently zoned for mixed use, aside from a small portion on 3rd where the corner store used to be, and an expanded commercial zone was not anticipated by the ocp. This proposal does not take into account the quality of life of the neighbours who currently live on this street. If anything adding a commercial zone to a street this is currently designated residential gives us more reason to demand that the developer stays within the ocp height as we would already be dealing with the added impact of commercial development.

Cascadia is also trying to argue that they need to build taller in order to meet their profit margins and to offer the rent-to-own model, which is only a very small portion of the total units that will be put to market. While we understand the need to allow people to get into home ownership, we ask council to put a critical eye to the negative impact on this development vis-a vie the limited affordable housing offerings especially considering that current tenants will be displaced as a result of the development. Furthermore, I note that the Magnolia House, which was supposed to offer affordable housing in this area, has had rental vacancy since it first opened. In fact, many duplexes and houses are already offering more affordable housing in the basement suites that are rented on our street.

This proposal is simply way too big, it will ruin the family character of this neighbourhood and if council allows this development you will undermine all of voices that were heard during the official community plan process. The last council was credited with the success of the shipyards development, but also widely seen to have pursued a development agenda with little to no regard for the impact on existing residents. Our neighbours do not want to see this council allow development that goes above and beyond a plan that was just changed to allow for a substantial increase in density in the Moodyville area.

We love living and working in the city and we want our kids to be able to continue to walk to their neighbourhood school. This is a great neighbourhood and it would be a tremendous shame to see it completely overhauled when the official community plan already provides the roadmap for how to balance the need for new development with the impact on existing residents.

Melissa and Roger Alan McConchie  
423 E. 4<sup>th</sup> North Vancouver

**From:** Mike Friesen  
**Sent:** October-06-20 10:34 AM  
**To:** Erica Houston; Mayor Linda Buchanan  
**Cc:** mmconchie; Victoria Cloud; steven@cascadiagreendev.com; Angela Girard (Councillor); Karla Graham; Julie Peters  
**Subject:** RE: Cascadia proposed development at 402-438 East 3rd Street & 341-343 St. Davids Avenue

**From:** Erica Houston <>  
**Sent:** October-02-20 9:20 AM  
**To:** Mike Friesen <[mfriesen@cnv.org](mailto:mfriesen@cnv.org)>; Mayor Linda Buchanan <[Mayor@cnv.org](mailto:Mayor@cnv.org)>  
**Cc:** mmconchie; Victoria Cloud <>; [steven@cascadiagreendev.com](mailto:steven@cascadiagreendev.com); Angela Girard (Councillor) <[agirard@cnv.org](mailto:agirard@cnv.org)>  
**Subject:** Cascadia proposed development at 402-438 East 3rd Street & 341-343 St. Davids Avenue

Good morning, Mr Friesen:

I am writing about the proposed development at **402-438 East 3rd Street & 341-343 St. Davids Avenue** (<https://letstalk.cnv.org/east-3rd-st-davids>)

Myself, my husband, and our 2 children, reside at 322-5th Street East in Lower Lonsdale, one block north of the proposed development.

I am **not in favour** of this development in the way the developer has proposed in its current state. **I am in favour of this development with modifications.** My request is to ask that the developer reduces the size of this development to be in keeping with the city's Official Community Plan which already allows for a huge density increase in this neighbourhood.

I am **EXCITED** to fast forward to the future when this development is complete when my family can walk down for a coffee or for brunch at a new local cafe or restaurant.

I **DO NOT** look forward to that day:

- when there are shadows cast on the houses (backyards for families) behind the development,
- when I feel it is unsafe for my children to cross the even busier streets (that are already busy) in our neighbourhood,
- when I'm losing my residential parking on my own street because parking is scarce and ample parking is not provided for the vehicles using the services,
- when I hear that Ridgeway students and teachers aren't getting the support they need because they're already *overcapacity* and this development will keep putting strain on them,
- OR, when I pass by FOR LEASE/RENT signs on empty spaces simply because there is an overabundance of space.

It seems that there are differing opinions on this project - Great! Discourse is needed & I very much appreciate living in this city for the welcomed discourse on civic issues. However, when the city is not remaining true to its OCP, the city needs to listen to its citizens and the people who are directly affected by blatant disregard for its own community guidelines.

In addition, I am also curious to learn more about the participants who are **fully in favour** of the developer with the plans as currently presented:

- 1) Do they live close enough to this development to feel the negative effects of it (shadows on the houses behind the development, decreased resident parking, increased traffic, road safety issues for our children, pressure on our schools), etc.)
- 2) Are the people who are in favour even going to use the services or rent / own the residential spaces like they claim they would? Why aren't they leasing/renting the spaces already available in LoLo?
- 3) Why are they blindly in favour of it when there are already SO many vacant places (commercial and residential) in Lower Lonsdale already, let alone an area that is farther from the heart of Lower Lonsdale?
- 4) Do these people perhaps have a close / personal relationship with the developer to help push this proposal through as is - but I digress - that is not fact and only my speculation of reading between the lines with the comments from the virtual town hall - oddly suspicious, no?

Thank you for taking the time to read this email.

Erica Houston  
322 East 5<sup>th</sup> Street  
North Vancouver

Jordan & Norrie Crockett  
452 4<sup>th</sup> Street East  
North Vancouver, BC  
V7L 1J5

October 6, 2020

RE: Proposed development and rezoning at 3<sup>rd</sup> and 4<sup>th</sup> and St. David's

Dear members of council,

As residents of the area for the last 8 years, we have watched our neighbourhood change. We built a home with a laneway here two years ago and we plan to live here for a long time. When we first moved to the area we were very happy to have the opportunity to participate in the extensive public consultation phase of the current Official Community Plan. When the OCP was released, although it allowed for a dramatic increase in density for the Moodyville area, we thought it still showed foresight in retaining certain elements for our neighbourhood.

A maximum of 4 stories on 3<sup>rd</sup> has meant the buildings that have been constructed do not dominate the street or turn Moodyville into the Lonsdale corridor. The duplex zoning on 4<sup>th</sup> was maintained to create a buffer and gradual change to the density on and below 3<sup>rd</sup>. And the bus depot is the only commercial zoning, which when it is developed will provide adequate space in addition to Queensbury.

Unfortunately, this developer believes the public process and extensive planning that created the current OCP is not adequate. They believe we need more commercial space, taller buildings, and that duplex zoning is not enough, they need 5X the density instead. They originally proposed a building that met the zoning and could have been under construction with support from residents if they had not decided to ask council to consider more. Given the market topping price they paid for the assembly, it seems residents are being asked to help cover for poor investment decisions.

COVID has had an impact on the process, the town hall held virtually was a farce. Without accountability, the developer was clearly able to bring in as many allies as possible to drown out the legitimate concerns of the local residents most affected. But COVID has also brought a renewed sense of community to our neighborhood, the laneways were alive with people, and commercial space, the centerpiece of this developments outsized demands, is being revaluated around the world as people focus on the home.

We could list all the reasons why we disagree with what the developer is asking for, but we think you all know them. We just want you to know that we are opposed to the development and so are our neighbours. We cannot be as the OCP had the largest impact on Moodyville when it was released and we are still here. Most of us plan to be here a long time. We simply want our OCP, the one we helped shape, consulted on, and participated in, to be adhered to. When we are asked again to start the process all over to build a new OCP, and the neighborhood has adapted to the changes created in the current one, that will be the time for developers to ask for changes. Not now when we have only just begun on seeing through the plans of our current OCP.

Thanks for your time and consideration,

Sincerely Jordan & Norrie Crockett  
452 4th Street East



Jeff Murl, CPA, CGA  
482 4<sup>th</sup> Street East  
North Vancouver, BC  
V7L 1J5

October 18, 2020

RE: Proposed redevelopment and rezoning at 3<sup>rd</sup> and 4<sup>th</sup> and St. David's

Dear City of North Vancouver Council,

I have lived in my home on 4<sup>th</sup> street for 8 years, in that time things have changed dramatically. As I settled in, I got to know what the neighborhood would become through the OCP process. I took part in shaping what would happen and felt like I played a small part in guiding the changes. Ensuring that what few mature trees were left would be protected was one, keeping a smooth transition to our single-family homes was another.

A maximum of 4 stories on 3<sup>rd</sup> has ensured that we will have a reduced scale as development approaches 4<sup>th</sup>. The duplex zoning on 4<sup>th</sup> was maintained to create a buffer and gradual change the street. And the bus depot, which I cheered when it left, was always going to be the biggest development in the neighborhood, and the OCP shows that.

Unfortunately, this developer believes the public process and extensive planning that created the current OCP is not adequate. They believe we need more commercial space, taller buildings, and that duplex zoning is not enough, they need 5X the density instead. They originally proposed a building that met the zoning and could have been under construction with support from residents if they had not decided to ask council to consider more

COVID has had an impact on the process, the town hall held virtually was not a great piece of public consultation. The report submitted showed how many scripted supporters of the developer were present. Fortunately, the consultant was able to filter out the nonsense and focus on the concerns of actual residents. We support the development if it adheres to the OCP zoning, but that changes the developer is asking for are unsuitable to the form and character of our neighborhood.

COVID has also brought a renewed sense of community to our neighborhood, people are using the lanes, their yards, the paths. There is more than enough commercial space available now, and when the bus depot is developed years down the road, this neighborhood will be well served.

I wanted to list all the bullet points, but instead I have attached them as an appendix. But In conclusion I just want you all to know that I support the development as laid out in the OCP. However, any changes to the zoning in our neighborhood should only be done through the formal consultation process that comes with a new OCP. Let the document designed through so much consultation, and thought, guide the development of our neighborhood until such time as a new one can be made.

Sincerely

Jeff Murl, CPA, CGA

## Appendix

### Residents

- Given the ongoing construction of the neighborhood, those residents who have purchased in the neighborhood based on the design of the OCP won't be present to participate in the rezoning process.
- Those residents who have been vocal have been against the proposed rezoning. Those for the development in the public consultation are not residents of this neighborhood.

### OCP/zoning

- The OCP as presented is the best version of resident's intentions for the neighborhood and should be adhered to.
- The guiding documents for Moodyville also clearly outline 4 stories on 3<sup>rd</sup> street and should be adhered to.
- 4<sup>th</sup> street is duplexed zoned to create a buffer and transition to the single-family homes beyond. 5X the FSR of 0.5 as proposed is not a suitable transition.
- This development is an outlier in scale, design and use that does not work in the context of this neighborhood. Since most of the area is developed or undergoing development under the current OCP, it will continue to exist in isolation and dysfunction for the foreseeable future.
- The current zoning has guided the entire development of Moodyville resulting in a cohesive design for the neighborhood on 3<sup>rd</sup> from multiple developers.
- There are no properties beyond duplex on 4<sup>th</sup> and no other opportunities leaving this as the only outlier.

### Commercial

- When the bus depot is developed, given its mass and potential commercial zoning, it will more than provide for a neighborhood when complete. By then the residents will be in place to guide its development to suit their needs.
- The availability of small commercial spaces is covered by Queensbury and in that case is already underused.
- Commercial space does not make the heart of a community, its residents do, and the new park in Moodyville is our heart, not a concrete tower overwhelming duplex property on 4<sup>th</sup> street and the 4 stories on 3<sup>rd</sup>.
- We have ample commercial to the east and west. When the residential development is complete, the bus depot will be developed with those residents in mind.

### **Size and mass**

- 4<sup>th</sup> Street is a bike route and its character and massing divert from current zoning.
- Increased densities have been on offer for pure rentals buildings, this has zero rentals.
- Increased size does not bring cost of units below comparable – affordability is not addressed by the scale of the development, as prices provided are inline with market prices already on offer.
- The above lane mass is inappropriate for the area and better suited to areas of high density like Lonsdale avenue. Moodyville is not as dense and this project would be an outlier that does not add to the neighborhood.

### **Parking**

- The proposed development does not provide enough parking for either residents or commercial. Posing issues in an area that has no additional parking.
- The reduction in parking is over reliant on an unproven belief that transit alleviates parking requirements. Without alternatives available, the impact of the failure of that theory could be significant.

### **Amenities**

- The childcare facility is too small and would be better placed blocks away from 3<sup>rd</sup>, and closer to the new Moodyville park.
- The rent to own program is interesting, but not fleshed out, doesn't make up for the lack of any rentals (therefore how do you "rent" to own) And can be implemented in a project of the size allowed in the zoning.
- It is unclear what additional compensation the city will get for allowing building on city land above the lane.
- The setbacks, bus lane and 3<sup>rd</sup> street treatment would be the same under a building built to the current zoning.

### **Recommendation**

Do NOT allow a zoning amendment for the site. Allow the OCP zoning to be maintained to allow the full buildout of the neighborhood according to the OCP as created by the desires of the residents. Allow the developer to build as the current zoning allows, a 4-story residential block on 3<sup>rd</sup> street. The alley should be maintained as is and the corner lot they have acquired on 4<sup>th</sup> street should be maintained at duplex zoning, in this case likely allowing the development of 3 town homes. Do not begin the next round of speculation on 4<sup>th</sup> that will irrevocably alter our street like those to the south. This neighborhood has seen enough change as a result of the last OCP, allow us an opportunity to guide the next phase through a proper OCP process.

Sincerely,

Jeff Murl, CPA, CGA

482 4<sup>th</sup> Street East

**From:** louise nicholson  
**Sent:** November-14-20 10:21 AM  
**To:** Clerks  
**Subject:** comments for Nov 16 Council Meeting

Hello,

I am writing to comment on items 14 and 15 of the November 16/20 council meeting:

14. "Official Community Plan Bylaw, 2014, No. 8400, Amendment Bylaw, 2020, No. 8806" (Cascadia Green Development, 402-438 East 3rd Street and 341-343 St. Davids Avenue, Land Use Designation and Permitted Height Change)

15. "Zoning Bylaw, 1995, No. 6700, Amendment Bylaw, 2020, No. 8807" (Cascadia Green Development, 402-438 East 3rd Street, and 341-343 St. Davids Avenue, CD-730 and "Moodyville Development Permit Area Guidelines" amendment)

I'd like it to go on record that I am not in favour of amendments to the OCP. This OCP already exceeded the building heights that were felt to be appropriate for this area. To further amend this plan, I believe, would go against the wishes of the community which were, as I recall, quite against the proposed building heights of the OCP.

To make changes to the OCP so soon after its adoption brings to question the validity of this plan, not to mention the expense in creating it. Why bother creating an "official" plan if it isn't a plan to work within?

Please remember that the developers serve their own purposes, not those of the City and the residents of the City. Please remind them that they need to work within the confines of our OCP.

Regards,

Louise Nicholson  
628 5<sup>th</sup> St. East  
North Vancouver, BC

**From:** howard rubin <>  
**Sent:** November-14-20 1:30 PM  
**To:** Submissions  
**Subject:** Cascadia application Nov. 16

Your Worship

I am a resident at 405 4th St. East and I am opposed to the Cascadia proposal. This project has a huge impact on our immediate neighborhood as it will change that area from a residential neighborhood into a highly commercial area. Even with the changes to north end that abuts 4th Street, the reduced height is the factor that extends the commercial aura and vehicle traffic to our street up and down 4th St.; a reduction in height would ameliorate that concern.

I received a written notice of the public hearing of the Cypress Land Service Development Variance application by mail, to be held on the same Council Meeting on [November 16](#) as the Cascadia application but only found out about the Cascadia application colloquially from a neighbor. The waiver of a public hearing noted on the Cypress Land Service notice also gives helpful information on how to submit an email to [input@cnv.org](mailto:input@cnv.org) and I will follow that procedure, but others affected by the Cascadia project should have received a similar notice and I respectfully suggest that the Cascadia application be adjourned for a similar notice.

Howard Rubin  
405 East 4th St.



**From:** Don Peters <>  
**Sent:** November-14-20 3:47 PM  
**To:** Clerks  
**Subject:** Nov 16 - Cascadia Green Application: East Third St. and St. David's Ave

Good afternoon, Mayor and Council:

I am writing to inform you that the Community Housing Action Committee fully supports this application at First Reading Monday and urges Council to move the application to Public Hearing, when we will support it in detail.

Moodyville is a neighbourhood undergoing a profound transformation and we believe this project will provide significant public benefits for the community, including live-work units, daycare spaces, and improved affordability-as well as rent-to-own options.

Respectfully

[Don Peters](#)

Housing Advocate  
Chair, Community Housing Action Committee  
604.982.3309

[don.peters@nscr.ca](mailto:don.peters@nscr.ca)

[www.nscr.ca](http://www.nscr.ca)



North Shore Community Resources acknowledges and honours that we live and work on the unceded territories of the Coastal Salish people. Including the St'at'imc, Skwxwú7mesh (Squamish), xʷməθkʷəy'əm (Musqueam) and səl' ilwətaʔɪ (Tsleil-Waututh) Nations.

This email may be privileged and confidential. Any use or redistribution of this email by an unintended recipient is prohibited. If you receive this email in error please contact us by email.

**From:** cathy lewis <>  
**Sent:** November-15-20 4:19 PM  
**To:** Clerks  
**Subject:** Item 14 and 15 Nov. 16th Council Meeting

Nov. 15, 2020

To Mayor and Councillors

Re: Item 14 and 15 of the November 16, 2020 Council Meeting

Cascadia Green Development, 402-438 East 3rd Street and 341-343 St. Davids Avenue, Land Use Designation and Permitted Height Change

Cascadia Green Development, 402-438 East 3rd Street, and 341-343 St. Davids Avenue, CD-730 and "Moodyville Development Permit Area Guidelines" amendment

This project should not go ahead as currently proposed. The developer has had ample time and public input to change the plans in order to make them more acceptable to the neighbours on E 4th St, and they have not done that.

The 3 buildings that will engulf these 5 properties on E 4th St are too large and too high. The north building should be no more than 2 storeys. The east and west buildings should be no more than 4 storeys. Commercial should only be on 3rd St. There are many problems with the usage of the lane regarding traffic for deliveries, waste collection, moving vans, residential and commercial drop offs, pedestrian traffic and vehicles going in and out of underground parking. All this is expected to be shared with properties to the north that also have lane access.

I urge you to look at the aerial view of the architectural drawings of this project from the corner of St David's and E 4th St looking south west. Would you want to live in these homes surrounded by this project?

The residents on the south side of E 4th St have already been greatly stressed by the proposal of this project and have tried to work with the developer to make their concerns heard. However, if this goes to Public Hearing and their concerns have not been addressed they will have very little recourse to mitigate the negative impact this will have on their lives.

This project is trying to put too much into this site. The only way this could have worked would have been if they had owned the entire block including south 4th St. To sandwich this much onto a site shared with residential duplexes is wrong.

Newer councillors may not know all the community work that was put into the development of the Moodyville Guidelines and the OCP. These Guidelines were specifically created to prevent a zoning cliff between 3rd street and the residents to the north on 4th St.

There is much argument to be made that the building out of the Moodyville area south of E 3rd St. with over 4000 residents, is deficient in amenities. That is because of previous poor planning. Developers for that area and City Planners should have worked together to provide a variety of housing, daycare space, commercial units and other services that the growing population needs.

Because of that neglect the residents of E 4th St are now expected to bear the hardships of living in the midst of the "hub".

Although this project may meet the wishes of many who do not live directly adjacent to it, the challenge of the developer is to design it in a respectful way that can be a benefit to the whole neighbourhood.

Times have changed and there is no doubt more housing is needed, however changing times should not mean that development cannot be accomplished in a way that is sensitive and respectful to the residents that will live in the midst of this massive project.

Cathy Lewis  
655 E 4th St  
North Vancouver

**From:** Lisa McCall <>  
**Sent:** November-16-20 10:06 AM  
**To:** Clerks  
**Subject:** Rezoning application 400 block E 3rd N Van

I wish to express my disapproval of the proposed rezoning application for 3rd Street. The developers have no regard for the current residents wishes as has been proved by the ridiculous development already along 3rd street in the Moodyville park area. What used to be a nice established neighbourhood with family streets has turned into high density ugly warehouse blocks with no character and mass density. It is too much for 3rd Street and Keith Road already with only a bigger problem to come. When neighbours expressed our concerns over such a radical change to density along 3rd street we were placated and then ignored. The sheer audacity of developers and city counsel to now plan to ignore the 2014 OCP which was "sold" to the neighbours as being something to look towards for future planning because of greed should not be allowed. As many of my neighbours have also expressed we live in a neighbourhood and density should not be the exclusive goal. I strongly oppose any change to the OCP plan agreed upon in 2014.

Lisa McCall  
623 E. 6th Street  
North Vancouver, BC V7L 1R4

**From:** Wendy Abbott <>  
**Sent:** November-16-20 10:13 AM  
**To:** Submissions  
**Subject:** Zoning Amendment East Third Street

City Clerk,

I would like to express my concerns regarding the proposed Amendment Bylaw for the development at East Third Street and St.Davids.

My home is in the 300 block East 5th Street, and I walk the neighbourhood daily.

I am concerned about the height of the proposed building. I believe it will be detrimental to surrounding residences, blocking light and increasing traffic behind the homes on 4th. Traffic on 5th is increasing monthly and parking becoming scarcer and more difficult.

I believe the Density Bonus/Community Benefits are merely to assuage Council and neighbourhood. The "Buy to Own" is a hook and a way for the developer to make further dollars. The minimal parking on Third Street as well as access to daycare from the lane will contribute to added traffic in the back lane.

The pressure to change the OCP to piggyback onto the Moodyville Development Permit Guidelines is a catchall allowing for similar projects to go ahead without a development permit gives a feeling of losing control of our neighbourhood. We'll have no say in what happens.

I am not against development, I just feel this project as presented does not fit into the "ambiance" of the surrounding neighbourhood of duplexes and low rise apartment buildings. Have the developer lower the level please.

Sincerely,

Wendy Abbott  
323 East 5th Street



**From:** Slater, Jay Michael <>  
**Sent:** November-16-20 10:51 AM  
**To:** Clerks  
**Subject:** Rezoning application for 402-438 E 3rd St and 341-343 St Davids Ave

To: City of North Vancouver Mayor and Council,

Re: Rezoning application at 402-438 E 3rd St and 341-343 St Davids Ave

As a 20 year resident of Lower Lonsdale I'm writing to oppose the application which would allow greater density and higher building heights proposed for the corner of St. Davids Ave and E 3rd Street. As you know this area is already under intense development pressure and the population of people and cars has and will continue to increase with the currently allowed development under the approved OCP.

My objections are as follows:

1. The current OCP passed in 2014 was intended to guide development up until review in 2031. This is already an aggressive approach to development and densification of Lower Lonsdale and has (and will) change the residential character of this historic neighbourhood.
2. It is troubling that despite the huge number of increased units and density in the area, there's still an appetite by developers to further disrupt the character of Lower Lonsdale. The newest condo/townhouse projects have already resulted in traffic congestion, pressure on limited infrastructure (schools, shopping etc, all of which must be access by vehicle as there is little within walking distance) and has not to any appreciable degree improved the cohesion of the neighbourhood. These problems will increase with even just the current development plans.
3. It is unclear whether the current developments are fully occupied and of those that are how many are by full-time residents as opposed to investors with little concern for the neighbourhood.
4. Altering the OCP at this point would set new frame around which future developments are considered and future applications to amend the zoning. Developers will want more and higher and more dense projects with all the consequent negative effects on the neighbourhood. If the City's goal is to preserve some degree of heritage in neighbourhoods, to promote a walking/cycling culture rather than driving, and to address the real issues of housing stability and affordability then **please vote against this application.**

With respect,

Jay Slater  
519 E. 7th Street  
North Vancouver, BC

To: City of North Vancouver Mayor and Councillors

Re: Rezoning application for 402-438 East 3<sup>rd</sup> Street and 341-343 St Davids Avenue, City of North Vancouver

I am a 34 year-resident of the City of North Vancouver and would like you to consider my rejection of the proposed rezoning at the above address to provide additional density and usage.

My principle objections are summarized as follows:

- Increased densification over and above approved OCP
- Ingraining increase densification for future projects
- Building height and envelop casting shadows, blocking views and changing character
- Impact on traffic

The most recent OCP review was adopted in 2014 with a view that the plan would guide development to 2031. Many, myself included, believed the proposed growth rate for the city was too aggressive at the time and sought to lower proposed housing density to maintain some of the residential flavour of the city.

Six years have passed and changes are being proposed in this and other projects to increase housing density beyond what was included in the OCP.

Firstly, the proposed project would result in significant higher densification from current use. If we assume the current site houses 16 to 20 residents and one corner store, the impact of this proposal increases the density to 169 units or 340- 420 more people. This and future Moodyville projects should conform to the zoning density defined in the OCP.

The project is in the environs of Moodyville which has recently had whole residential blocks torn down and replaced with a mix of townhouse and condominium developments. Some units appear to remain unsold. The Wall Development Group and possibly another developer have deferred their construction start of 2 – 3 city blocks in this area for 3 to 7 years. Any move to permanently ingrain changes to the usage/ density guidelines in the OCP now, will likely allow higher density for those blocks as well.

We live under the mountains and hence the land is sloped. This particular proposal is objectionable as the buildings are described as 4 and 5 story buildings when it is clearly 5 and 6 stories from the main 3<sup>rd</sup> Street thoroughfare. The building of two floors of commercial usage with higher ceiling allowances exacerbates the already over height request with higher density. The residents surrounding this proposal did not envision 6 story buildings or the use of the laneway altered. Height restrictions in the OCP would be revised for this and future applications.

Traffic congestion, availability of public transit and parking issues were issues of great concern to those who desired less densification in the 2014 consultation process for development of the OCP. While projects are underway to improve public transit and bridge traffic, the construction is still underway and there is little proof that traffic problems will have been solved. This is despite lower usage of transit and roads during the pandemic. (I continue to plan my day so that I do not have to access Keith, 3<sup>rd</sup> or Lion's Gate bridge between 3 and 6.) I understand that the developers undertook transportation studies, but any results from such studies must be highly speculative as traffic issues remain a frequent occurrence.

I commend the designers of the Moodyville Park bike and play area. It is very successful but those who live in the area north of the park already experience parking issues as many parents or guardians drive their kids and bikes to the park. More density will exacerbate the problem. I also understand from the application that less than 1 parking space per person would be provided. I have not seen significant enough developments in public transit in North Vancouver to justify the reduction in parking spaces. Metro Vancouver, used for a comparison, provides more public and more timely transit options to their residents.

There are two heritage buildings in the blocks. If we truly believe that heritage buildings need protection than there should not be any discussion about trading density for these buildings. If one has a heritage building, it might be renovated to meet OCP density guidelines but there should not be any trading of density. I understand that this is a way to fund projects and schools but it inherently changes the character of the neighbourhood.

Developers will always be seeking to increase density so that they can maximize returns. This project site was purchased for some \$17 million. Was that too much? The City should not deviate from the OCP because a developer may have paid too much for their investment – that is not governments mandate. Nor should they deviate from the OCP because they want permanent increases in property tax collection.

There is commercial space being included in this development which is, in part, justified by the less than 1 Km to the Queensbury commercial area. Although not mentioned, the project is also about the same distance to the Lonsdale and 3<sup>rd</sup> retail and commercial space. I take issue with the assumption that retail or commercial space needs to be within 1 Km. The Queensbury retail outlets did not appear successful prior to the last decade. With internet shopping and working from home increasing in popularity even prior to the pandemic, the demand for retail and commercial space seems to be on the decline. Why is this being encouraged?

Finally, my review of the valuation of Community benefits leads me to conclude that IF the project is approved, that the City and its ratepayers would be much better off if the City collected the \$7.67 million (valuation taken from The City of North Vancouver Planning and Development Department, Report dated November 4, 2020 File No 08-3400-20-0005/1) in cash rather than barter for benefits. In the bartering of density with developers this project attributes the valuation of 9 units getting a second mortgage at \$2.45 million. This is a benefit of \$273,281 for EACH of the 9 households. Subsidizing rent for more households would be a better use of resources if we really believed this was a true monetary exchange.

In addition, the daycare proposal is valued at \$2.9 million for 16 spaces. Assuming 20 years of benefit and a conservative 2% interest rate, the annualized value of this benefit is \$58,800 or \$4,900 per child per year. This translates to approximately a 30% subsidy to childcare if total cost is \$12k per annum. Not sure how one directs this subsidy to the neediest and do not see this as the best vehicle for distributing benefits to those in need of subsidized child care.

If the density increase is approved, the residents of the City would be better off getting \$7.67 million in cash, the valuation of which is not disputable, rather than barter for day care spots and second mortgages. In all, I would much rather see compliance to the OCP of 2014.

I will make my calculations available to anyone who requests them.

Veronica Dolenc, CA, CPA,  
509 East 7<sup>th</sup> Street,  
North Vancouver.

**From:** BERNADINE ESKELIN <>  
**Sent:** November-16-20 11:52 AM  
**To:** Clerks  
**Subject:** Rezoning Application: 402-438 East 3rd St and 341-343 St Davids Ave

Mayor and Council:

As 39 year residents of the City on North Vancouver we would like to voice our objection to the proposed rezoning. Our concerns have been well out-lined in the e-mails to you from a) Melissa McConchie and b) Veronica Dolenc and we agree with all of them. (Note: please request copies if required).

In addition, we would note that COMMUNITY means "all of us". We happen to reside just outside of the 100 meter notification zone and feel the process should have been open to the WHOLE COMMUNITY especially given the Pandemic crises- we are restricted from any regular routines let alone keeping up-to-date on civic issues. It is a lock down for our safety. In the past few days I have been randomly surveying the neighborhood to find that most people I asked had no idea about the proposed changes to the OCP.

We want the to preserve the character of our neighborhood. We all have a fundamental right to the sun. The increased shading caused by the proposed tall buildings would severely affect those residents on E4th and St Patricks's

We need more green space and more schools. Ridgeway Elementary already has too many portables and they want are already parking in what used to be open area when our children attended.

We need a realistic transit plan-will we ever be safe using transit again? What about the steadily increasing traffic congestion?

Queensbury Ave is already a commercial area that was unable to sustain a grocery store. Commercial shops on Lonsdale are having to close given the Covid situation.

Our quality of life is constantly under pressure and we DO NOT WANT to see this rezoning application approved.

Regards  
Bernadine and Hannu Eskelin  
406 East 5th St  
North Vancouver, BC



**From:** chris hanna <>  
**Sent:** November-16-20 12:14 PM  
**To:** Clerks  
**Subject:** Rezoning application at 402-438 E 3rd St and 341-343 St Davids Ave

To: City of North Vancouver Mayor and Council,

Re: Rezoning application at 402-438 E 3rd St and 341-343 St Davids Ave

I have lived on the North Shore all my life between East 11th and East 4th Streets I'm writing to oppose the application which would allow greater density and higher building heights proposed for the corner of St. Davids Ave and E 3rd Street. As you know this area is already under intense development pressure and the population of people and cars has and will continue to increase with the currently allowed development under the approved OCP.

My objections are as follows:

1. The current OCP passed in 2014 was intended to guide development up until review in 2031. This is already an aggressive approach to development and densification of Lower Lonsdale and has (and will) change the residential character of this historic neighbourhood.
2. It is troubling that despite the huge number of increased units and density in the area, there's still an appetite by developers to further disrupt the character of Lower Lonsdale. The newest condo/townhouse projects have already resulted in traffic congestion, pressure on limited infrastructure (hospital, schools, shopping etc, all of which must be accessed by vehicle as there is little within walking distance) and has not to any appreciable degree improved the cohesion of the neighbourhood. These problems will increase with even just the current development plans.
3. It is unclear whether the current developments are fully occupied and of those that are how many are by full-time residents as opposed to investors with little concern for the neighbourhood.
4. Altering the OCP at this point would set a new frame around which future developments are considered and future applications to amend the zoning. Developers will want more and higher and more dense projects with all the consequent negative effects on the neighbourhood. If the City's goal is to preserve some degree of heritage in neighbourhoods, to promote a walking/cycling culture rather than driving, and to address the real issues of housing stability and affordability then **please vote against this application.**

With respect,

Chris Hanna  
246 East 4th Street  
North Vancouver BC

**From:** Louise Bradley <>  
**Sent:** November-16-20 3:37 PM  
**To:** Clerks  
**Subject:** Zoning amendment, 3rd and St.David

To the NVan clerks office,

Under no circumstances is it reasonable to increase density and height in new applications for development in Moodyville.

The OCP was a hotly debated guideline in 2014, and disregarding the plan is counter to the democratic oversight of our community.

Look at it again in 2030.

Do not change the rules midstream.

Louise Bradley,  
428 East 5th St.  
North Vancouver

**From:** David Germann <>  
**Sent:** November-15-20 4:35 PM  
**To:** Mayor Linda Buchanan <[Mayor@cnv.org](mailto:Mayor@cnv.org)>  
**Subject:** Development Application 402-438 E 3rd St & 341-343 St Davids Ave

Dear Mayor Buchanan,

I am a resident at 249 East 4th Street and am writing to express my opposition to the proposed development by Cascadia Green which will have its 1st and 2nd reading this Monday November 16, 2020. While I'm not opposed to developing the site, the proposed mass and height is excessive considering the buildings will wrap around a number of homes to the north along 4th Street with some of them cast in shadow for most of the winter months.

In particular the multi-story mixed-use building along 4th Street should not be allowed as the scale of the building and commercial component will significantly alter the neighborhood character of this residential street with families living in townhouses, semi-detached and detached houses. City staff acknowledged this in their preliminary review from October 2019 regarding council's decision to proceed with a staff review of the development application. Below an excerpt of the staff report:

*Changing the land use designation of the St. Davids Avenue parcel from Residential Level 2 to Mixed-Use Level 2 represents a change of character for the neighbourhood.[...] Ensuring the proposed design respects the character of the neighbourhood and considers the quality of life of adjacent parcels will be a key facet of staff's review.*

The development application needs to adhere to the OCP which allows 4 storeys along 3rd Street and triplexes on the St. Davids site. Having commercial components along 3rd Street makes sense but not on the St. Davids site and in the laneway directly adjacent to existing homes.

Sincerely,  
David Germann  
#9 – 249 East 4th Street  
North Vancouver, BC V7L 1J1

**From:** bwaz bwaz <>  
**Sent:** November-16-20 4:29 PM  
**To:** Clerks  
**Subject:** Rezoning Application for 402-438 E 3rd St and 341-343 St Davids Ave

Dear Mayor Buchanan and Council,

I've been watching the process and public involvement in the proposal to rezone the properties at 402-438 East 3rd and 341-343 St. Davids Avenue. I have made my opinion known to the developer and the Planning Manager that I feel this is an inappropriate request for this block. Residents above this block have been given guidance through the OCP, and with the expectation that nothing with a six story height would be allowed. We have designed and planned our lives accordingly.... both in investment and in expectation that the community will be stable without extreme surprises coming our way.

A comment by the developer, was that due to City regulations... some of the property bordering East Third Street will be used for road allowances for rapid transit. To take full advantage of the property size, an allowance for more height was being requested. One assumes they want to maximize profit on the development site and move on... leaving the community to pay for their request for more units (and height) on the site after they are gone. If allowed to build to the current OCP, I'm sure a more than comfortable profit could still be achieved.

It should come as no surprise to the developer that there is a carefully thought out and hotly contested OCP for this area, and to try and sneak this proposal past the residents of the area is plain wrong.

I have lived on East Sixth Street for more than 30 years, and was part of the groups involved in trying to keep the current OCP at a reasonable level for the existing and future residents of our area. With the high density of East Third and below still to come to completion, one can easily already see the demand on our roads. At its peak, some days my quiet street can be like a freeway with up to 30 vehicles zipping past my single family home every 60 seconds.

We need to be mindful of the neighbourhood, and the people who live here. They should not expect high volume of traffic on their streets because of a quick moving plan where developers pressure council to allow larger and larger projects. I believe a phrase used in the last election was for "low and slow", that we need to be cautious as we move forward as these proposals come forward. Until we fully know the changes to come with the completion of homes and the increased density of the area, we need to slow down and manage the growth of our community.

We respect the OCP, and the work that went into creating the framework for our City and our residents. When this proposal for rezoning comes before council, I hope you see to follow the OCP and reject it.

Thank you

Brian Wawzonek  
522 East 6 Street  
North Vancouver, B.C. V7L 1R1

**From:** Ron Gosney <>  
**Sent:** November-16-20 10:04 PM  
**To:** Submissions  
**Subject:** Rezoning Application 402-438 E 3rd

We moved into the neighborhood 2 years ago after studying the zoning and the 2014 OCP. We are against the proposal for the above mentioned addresses primarily because it does not conform to the OCP and zoning bylaws. Any property that borders on 4th Street needs to conform to the height restrictions of the RT1 zoning. I can not contemplate how council would allow rezoning and thereby impacting residents that bought in the area knowing there was an OCP in place that purported to have vision through 2031.

I would also add that a 4 storey building on the north side of 3rd should not exceed typical 4 storey apartment building height. By this I mean residences would have 8' ceilings. I also worry about precedence and inevitable "creep" if you allow this particular development to go ahead as proposed.

Thank you for listening to our concerns,

Ron & Janet Gosney  
503 East 7<sup>th</sup> St  
North Vancouver



**From:** Masud Chaklader <>  
**Sent:** November-19-20 10:50 AM  
**To:** Submissions  
**Subject:** Affordable housing program - 400 block East 3rd St, North Vancouver

I have lived in Canada for 35 years. I have never owned a house and I believe this kind of project will be able to help build a good future for a family household.

This project approval will allow affordable housing that will help provide for my family as well. Please consider this proposal.

Thank you,

Best Regards,

Masudur Chaklader  
8464 Duff Street  
Vancouver, BC

**From:** bwaz bwaz <>  
**Sent:** November-19-20 11:34 AM  
**To:** Submissions  
**Subject:** Cascadia Green Development proposal - Public Hearing Input

Dear Mayor and Council,

After listening to the heartfelt objections and uncertainty on issues from the developer and City Staff regarding the Cascadia Green Development Monday evening, I am more certain than ever that this project is very much a non-fit for the East 3rd Street corridor. There seems to be no true visual explanation definition as to the height and light implications of the proposal, and one can understand how the residents and community feel the developer is trying to push this amendment to the OCP through as quickly as possible, without concern for the comments or sincere concerns of residents.

I had signed up for the information session the developer put forward, but due to last minute changes as the event was near starting, I was unable to participate as I was unable to get online into the session. I sat waiting online, with a message saying something like I was awaiting approval of the host to be let in. In the end, it did not happen. Prior to that, I had sent a request to the developer for some clarity on what the proposal included, as I was concerned about the size and height. I got a reply saying they would answer all the questions and concerns at the information meeting. After another email to them asking for information, I did get the most minimal of information, at most pointing me to their web page. As I was not in favour with the proposal, it was interesting that somehow I wasn't allowed into their information session.

After that, I sent another email saying I still disapproved with the size and height of the proposal as it was not within the OCP and that consideration should be made to alter it to conform to the OCP. Obviously, the developer had no intention of listening to the concerns of the community and has gone ahead with the proposal as it stands before us.

It is very easy to see as you walk East 3rd Street in the area of the proposed development, to note the height of existing buildings and visualize how much taller this proposal to amend the OCP actually would be. Trying to put that visual into numbers and comparisons to other areas in the City when before Council really is difficult to comprehend. That and the semantics of calling the proposal four or five stories with an additional ground level is confusing to residents who only see what's being proposed, which looks like six stories as opposed to four stories elsewhere near by. If one is to stand in the lane and on East 3rd of the surrounding blocks of the proposal and one can easily see that a development of this height would be out of place. Too, the extra density this project would bring is definitely not in line with what the residents and Council defined in the hotly discussed OCP. One can applaud the effort made to include daycare space and lower cost housing in the proposal, but I see it as a carrot dangled in front of us trying to distract us from the facts at hand... that this development does not belong in the area in its proposed size. The development does not conform to the OCP, and there are no concrete reasons to allow an amendment to be approved.

Governments often tell a community that one approval of an odd project does not set a precedent. Really, it's more like spot zoning! I questioned that rationale in my 30 plus years as a resident and taxpayer of the City of North Vancouver. Once something is allowed to get through, it's proven that developers see that opening and expect that they too should be allowed such exemptions. They then

often push that limit even more expecting approval based on those other approvals. What's that old phrase, "give them an inch, and they want to be the ruler"?

With the enormity of the other projects going in and below East 3rd Street, I am a firm believer that it's time to let the dust settle on what we've already committed to. In a previous email to Council, I noted how much traffic I get diverting from East 3rd or Keith Road on my 500 block of East 6th Street. All last summer, (2019) any time there was a slowdown in traffic on the main roads, my block became a freeway. Yes, with the early onset of restrictions due to Co-Vid, March through June were quieter, but it's now once again back to normal. Last week with an issue on the Second Narrows bridge, cars were lined up at the round about at Ridgeway and East 6th jockeying for position to get off East 3rd Street or Keith Road. With that volume of traffic coming through our neighbourhood, often at higher speed than legal, concern is also high for the safety of children walking down from Ridgeway Elementary. Although a round about is considered to be a traffic calming measure, I often see children waiting at the corner attempting to get the attention of those drivers zipping through the roundabout. If this proposal for extra density and size is approved, where will the children that live there go to school? Ridgeway Elementary is already above it's capacity, and sees no diminishing of that volume any time soon.

Again, let's see what happens once all the units in the Moodyville area are completed before going above and beyond what's set in the OCP. Let's see how the traffic and the student population of our schools handle the increase in density. Now is not the time to open up the OCP for something that isn't needed, and that most residents, neighbours and community members oppose.

Thank you for the opportunity to give my opinion.

Brian Wawzonek  
522 East 6 Street  
North Vancouver, B.C. V7L 1R1

**From:** T Tran <>  
**Sent:** November-23-20 1:04 PM  
**To:** Submissions  
**Subject:** Support 400-block East 3rd Street

My name is Thai, and I live at 1920 Larson Rd, in the City of North Vancouver. I am writing to support the proposed development at 400-block East 3rd Street.

This developer is proposing an innovative, sustainable neighbourhood hub in an area that has grown quickly, but has few commercial services within walking distance. I am also pleased that they propose to provide much-needed affordable housing units, rent to own units, and are giving a daycare space to the City. I understand that the developer is asking for one extra storey of height in order to make this project feasible. I think this is a reasonable trade-off in order to bring these benefits to the community."

Best regards,

Thai Tran  
1920 Larson Rd  
North Vancouver

**From:** niki ward <>  
**Sent:** November-23-20 2:22 PM  
**To:** Submissions  
**Subject:** 402-438 East 3rd Street and 341-343 St. Davids Avenue

Re: November 30, 2020 - 402-438 East 3rd Street and 341-343 St. Davids Avenue proposed development

I am in whole-hearted support of this proposal, and welcome the opportunity to participate in affordable 'rent to own' programs within this city.

Regards,

Niki Ward  
3655 Wesbrook Mall  
Vancouver BC V6S 0G6



April 30th, 2020

The Mayor and Councillors  
City of North Vancouver  
North Vancouver, BC

Ladies and Gentlemen;

Re: Cascadia Green Development Proposal  
402-438 E.3rd St.& 341-343 St.Davids Ave.  
North Vancouver, BC.

New revised plans for this development have just been submitted to your Planning Dept. for review and recommendation to Council.

I understand as a citizen and ratepayer of the City that NEW development and construction must go forward and based on the OCP these developments in most cases will follow the guidelines as recommended therein. Any exceptions and additions are debated and voted on and amended, as you all know.

East 4th Street from Lonsdale to Queensbury Ave is predominantly FAMILY housing most of which the dwellings are DUPLEXES which based on the current zoning the Maximum Peak Heights are 33 feet 1 inch. There are also LANES at the rear of all properties (20 feet wide) shared by each Street resident 3rd/4th, 4th/5th etc etc.

THIRD Street is one of the CITY'S main transportation corridors, and while this street once had Single Family Homes either side (old at that) with the Introduction of the Moodyville Official Community Plan NEW development along this route rezoned to Multi Use with a Maximum of FOUR STOREYS.

NEW Development for the past 18 months has seen numerous FOUR Storey dwellings go up on the South side of 3rd from Queensbury to St.Davids Ave comprising Town house and Apartment/Condo complexes and more recently on the North side of 3rd from Queensbury to Ridgeway THREE Storey T/Houses and Apartments. All of these living spaces show progress and certainly equates \$\$\$ for the City Coffers.

**Moving Westward along 3rd and on the North Side between Ridgeway and St. Davids Ave is the Trans Link Property (currently used as an Audi Car Park) and**

**beside is the BC Hydro substation. WHAT A PERFECT LOCATION along this BLOCK for a COMMERCIAL NEIGHBOURHOOD CENTRE??**

And now we arrive at 3rd and St. Davids the PROPOSED CASCADIA Development. All South Side 4th St Property Owners on the Lane 3rd/4th between St Davids and St Patricks are horrified to think this BEHEMOTH DEVELOPMENT just 20 feet across the Lane EXCEEDING ALL HEIGHT RESTRICTIONS Ranging from 71 feet 9 inches (East Side of 3rd) and 65 feet 10 inches includes outdoor lounge (West Side of 3rd).

The OCP calls for maximum FOUR Storeys????

This Development continues up St Davids and within 11 feet from E 4th. These Buildings with their continuous FLAT ROOF System cover ridiculous Square Footage and for us Home Owners on this corner the **SHADOWING** from this BEHEMOTH will most certainly impact our quality of life, our Lawns & Gardens. The ORIGINAL proposal for TOWN HOUSES on St.David from 3rd Street to 4th Street should be RUBBER STAMPED.

Also access for Commercial Deliveries along our DEAD END LANE to 3 Proposed Restaurants and 2 Coffee/Cafe Shops. Plus many Commercial/Retail Stores. No turning around for Trucks and tricky entering or departing our own Garages.

The logistics for this Development to create Commercial and Residential in essence is impractical. The Trans Link & Hydro land between Ridgeway and St Davids covers a full block (no lanes and no houses on the South side of E 4th.) Access plus the total Land Coverage would in my estimation work perfectly for the Neighbourhood Centre.

Mayor and Council I am asking that you approve development along 3rd as MULTI USE / RESIDENTIAL FOUR STOREY **ONLY** plus TOWN HOUSES on St.David to 4th, and abide by the **OCP** and reconsider any COMMERCIAL for RE-LOCATION.

Yours Sincerely,

.....  
Brian and Sarah Charleton (421 E 4th St. North Vancouver BC V7L 1J4)  
Erin Harris

**From:** Stefanie <>  
**Sent:** November-23-20 4:38 PM  
**To:** Submissions  
**Subject:** Cascadia Green Development - East 3rd St / St Davids Ave

Mayor & Council,

My name is Stefanie Wyer Rose and I have had the privilege of growing up on the North Shore being raised in the Grand Boulevard Area. I am the resident/owner of 403 East 5<sup>th</sup> Street in the City of North Vancouver and have resided there since November, 2002. I chose to have and raise my family in the City of North Vancouver so that they too could enjoy the benefits I did as a child; that of a sense of community in a quiet, family-oriented neighbourhood. During my 20 years in the Lower Lonsdale/Queensbury neighbourhood, I have witnessed first hand various community changes and have lived through numerous developments too many to count, the largest being Ridgeway Annex and Moodyville. I am well immersed in the current and ongoing densification plan underway on 3<sup>rd</sup> Street.

I understand that our community is changing. I also understand that further densification is planned for 3rd Street. My issue is with the currently proposed development by Cascadia Green, between 3rd and 4th Street and along St. David's which includes a four-storey building right across the street from my residence and a six-storey building on 3rd Street. This is not a change I can live with, or support. The original plan for this development was to include a mixed-use, four-storey building on 3rd Street along with a triplex on 4th Street. This was supported by the City's official community plan. This plan would have allowed for increased housing in our area, commercial development along 3rd Street while striking a balance with local residents.

I am concerned about transforming St. David's from a residential zone into the commercial hub of Moodyville. This will inevitably add to an already congested neighbourhood with limited parking, and increased traffic, noise and speeding. As I reside on a corner lot, traffic and speeding have been an ongoing issue (noise) and a safety concern for not only my children, but all children in the neighbourhood. Any further densification would only worsen this situation.

I have only ever known this neighbourhood as a family-oriented neighbourhood. Cascadia Green's development will change the character of St. David's and 4th Street. The massing and height of the six-storey building on 3rd Street and the four-storey on 4th Street, will cast a huge shadow on the surrounding duplexes and single-family homes and create privacy issues for surrounding neighbours. My backyard, patio, living room and master bedroom will all be directly overlooked by the proposed four-storey unit on 4th Street and St. David's.

Adding a large daycare facility to a residential street will again increase already pressing traffic and parking issues. And the increase in residents will only place pressure on student enrollment at Ridgeway Elementary School where my children attend. The school currently has 625 students, which far exceeds the official capacity of 485 students it was designed to accommodate. A new school will eventually open (likely on the Cloverley site), but we are years away from that actually happening.

In follow up I would like to state again that I am NOT in favour of this proposed development or in the amendment to the OCP and I am asking that the City respect its own official community plan and zoning and require the developer to scale this development back to include a four-storey, mixed-use, commercial/residential building on 3rd Street along with a triplex on 4th Street.

Sincerely,  
Stefanie Wyer Rose  
403 East 5<sup>th</sup> Street  
North Vancouver

**From:** cecile bibet <>  
**Sent:** November-23-20 8:10 PM  
**To:** Submissions  
**Subject:** 300 block east 3rd street Cascadia project

My name is Cecile Bibet. My family lives at 366 east 4th street and I want to express my concern about this project going into council next week.

I found it too high, too dense and it will affect our neighborhood tremendously in a negative way : traffic will get busier on 4th and it,s already á by pass street used by motorist to reach the Second narrows bridge when 3rd street is clogged.

Then the density proposed for the Cascadia project is simple too high and why does theCNV again wants to change the OCP to please a developer ? Why do you spend time and money to create an OCP if you change it when a project requests it ?

Already 3rd street is full of condos in the moody ville area and now you want to add more and higher building at the corner of 3rd and st David's and use the laneway with a commercial purpose , this is unrealistic and unreasonable.

Our kids love to play or ride their bikes/scooters in the street under minimal surveillance but allowing this project to come to life will just destroy our peaceful neighborhood and make it a nightmare in terms of traffic, light obstruction and density.

I don't think Council should allow that to happen. Keep high buildings where they are allowed under the OCP and nothing else.

Thanks for your time

Cecile Bibet  
366 East 4<sup>th</sup> Street  
North Vancouver



**From:** noel matic <>  
**Sent:** November-23-20 9:17 PM  
**To:** Submissions  
**Subject:** FW: Cascadia Development -St David's and 3rd/4th St

Please see email below sent to the Mayor and Council on Oct 22 2020 our opposition to the project if above and beyond the current approved OCP.

----- Original message -----

From: noel matic <>  
Date: 2020-10-22 12:44 p.m. (GMT-08:00)  
To: "Linda Buchanan (Mayor)", "Angela Girard (Councillor)", "Tony Valente (Councillor)", "Tina Hu (Councillor)", "Don Bell (Councillor)", Jessica McIlroy  
Cc: "mfriesen@cnv.org" <[mfriesen@cnv.org](mailto:mfriesen@cnv.org)>  
Subject: Cascadia Development -St David's and 3rd/4th St

Dear Mayor and City Council,

My name is Noel Matic and my wife Elenita Matic are resident and owner of 414 E 4th St, North Vancouver.

This email is to express concern to the current proposal for development at St David and 3rd/4th St. The information and drawings presented at the virtual town hall meeting last July are above and beyond the current Official Community Plan which we are opposing.

We are not against this development as long as it will be within the current approved OCP guidelines.

Respectfully yours,

Noel and Elenita Matic  
414 East 4th Street  
North Vancouver

**From:** Karla Munro <>  
**Sent:** November-24-20 2:11 PM  
**To:** Linda Buchanan (Mayor); Holly Back (Councillor); Don Bell (Councillor); Angela Girard (Councillor); Tina Hu (Councillor); Jessica McIlroy; Tony Valente (Councillor); Submissions  
**Subject:** FW: Opposition to Cascadia Green Development on East 3rd and St. David's Avenue

Please ensure that the following email expressing my opposition to the Cascadia Green Development on East 3<sup>rd</sup> and St. David's Avenue is placed on the official record.

Thank you,  
Karla Munro

---

**From:** [Karla Munro](#)  
**Sent:** December 1, 2019 4:32 PM  
**To:** [lbuchanan@cnv.org](mailto:lbuchanan@cnv.org); [hback@cnv.org](mailto:hback@cnv.org); [dbell@cnv.org](mailto:dbell@cnv.org); [agirard@cnv.org](mailto:agirard@cnv.org); [thu@cnv.org](mailto:thu@cnv.org); [jmcilroy@cnv.org](mailto:jmcilroy@cnv.org); [tvalente@cnv.org](mailto:tvalente@cnv.org)  
**Subject:** Opposition to Cascadia Green Development on East 3rd and St. David's Avenue

Dear Mayor Buchanan and Council,

My name is Karla Munro and I am a resident of the City of North Vancouver. I reside at 235 East 11<sup>th</sup> Street and have two children who attend Ridgeway Elementary School. I am writing to express my opposition to the Cascadia Green Development application for sites 402 – 438 East 3<sup>rd</sup> Street and 341 – 343 St. David's Avenue (the “**Proposed Development**”).

I have looked at the plans submitted by the developer for the Proposed Development, which include a large six-story building along 3<sup>rd</sup> Street, a four-story building extending from St. David's Avenue up to 4<sup>th</sup> Street, with mixed use commercial and residential, including commercial in the alley.

For the following reasons, I believe that the Proposed Development is inappropriate in its size and density and should not be approved by council in its current form.

The Proposed Development, with its massive density and commercial zoning in the alley, is too much for this neighbourhood. I know several families with children who reside in this area. This is a family-oriented area where children play in the alley. The Proposed Development would completely change the character of this neighborhood from a family-oriented one to a much more urban area with an emphasis on density, commercial use and nightlife.

As well, this area is already quite congested. The Proposed Development would exasperate the existing issue of lack of parking, as well as cause an increase in traffic and commercial vehicle loading and unloading.

The Proposed Development is also within the current Ridgeway Elementary School catchment. The number of students at Ridgeway Elementary School currently exceeds the school's official capacity. It is worrisome that the City of North Vancouver might approve the Proposed Development without considering the effect of having to accommodate the many children who may move in.

Finally, as you are aware, the Official Community Plan for this area allows for a maximum of four stories along 3<sup>rd</sup> Street and low-density residential developments along 4<sup>th</sup> Street. The Proposed Development clearly exceeds the Official Community Plan. I ask that you please do not approve the Proposed Development in its current form and that you request that the Proposed Development be scaled back to comply with the City's Official Community Plan.

As the mayor and the councillors of the City of North Vancouver, please consider the wishes of the majority of the residents of the city who would like to see new developments stay within the city's Official Community Plan.

Sincerely,

Karla Munro  
235 East 11<sup>th</sup> Street  
North Vancouver

**From:** Neil Malik <>  
**Sent:** November-24-20 4:26 PM  
**To:** Submissions  
**Subject:** Feedback for upcoming Public Hearing

Hello, I would like to provide a written submission for the upcoming public hearing regarding 402-438 E 3rd St & 341 - 343 St Davids Ave.

I am opposed to this development application, for the reasons the application is contrary to the OCP, the size and design do not match the existing neighborhood, and already high strain on traffic and schools in the area. Moodyville is an area with still much growth to come with many more units already under construction, and we should be cognizant of that before putting even more strain on the area infrastructure. We are at a crossroads where the quality of life for residents can either improve, or go downhill fast, if the original vision for the development of Moodyville is not maintained. Thank you.

Neil Malik  
405 - 733 E 3rd St  
North Vancouver



# NOTICE OF PUBLIC HEARING

**WHO:** Cascadia Green Development  
**WHAT:** Official Community Plan Bylaw, 2014, No. 8400,  
Amendment Bylaw, 2020, No. 8806  
Zoning Bylaw, 1995, No. 6700, Amendment Bylaw,  
2020, No. 8807  
**WHERE:** 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue  
**WHEN:** Monday, November 30, 2020 at 5:30 pm  
**HOW:** View the meeting online at [cnv.org/LiveStreaming](https://cnv.org/LiveStreaming)

Notice is hereby given that Council will consider:

**Official Community Plan Amendment Bylaw, 2020, No. 8806 and Zoning Amendment Bylaw, 2020, No. 8807** to rezone the subject properties to permit the development of 3 buildings with a total of 169 market strata residential units, commercial uses (services, retail and offices) and a City-owned childcare facility.

- West Building - 4-storeys at the lane and 82 residential units, including live-work units at grade;
- East Building - 5-storeys at the lane, with commercial retail units at grade and office uses above, a childcare space, and 71 residential units;
- North Building - 4-storeys at the lane, stepping down to 2-storeys at East 4<sup>th</sup> Street, commercial retail units facing St. Davids Avenue and the lane, and 16 residential units.



The proposed total density for the entire project is 2.48 FSR. Two levels of underground parking are provided across the west and east buildings.

As City Hall remains closed to the public, the Public Hearing will be held electronically via "WebEx". All persons who believe their interest in property may be affected by the proposed bylaws will be afforded an opportunity to speak at the Public Hearing and/or provide email or written submission. To ensure all submissions are available for Council at the Public Hearing, certain deadlines have been implemented.

For email submissions: Include your name and address and send to [input@cnv.org](mailto:input@cnv.org) **no later than 12:00 noon on Monday, November 30, 2020.**

For written submissions: Include your name and address and mail or deposit into a drop-box at City Hall **no later than 4:00 pm on Friday, November 27, 2020**, as documents are subject to a 24-hour quarantine period before being opened due to COVID-19.

To speak at the Public Hearing by phone: Pre-register by completing the online form at [cnv.org/PublicHearings](https://cnv.org/PublicHearings) or provide contact information by phone to Julie Peters at 604-990-4230 **no later than 12:00 noon on Monday, November 30, 2020.**

Due to the recent Provincial Health Officer Order issued for November 7-23, 2020, and to continue to minimize the potential exposure of COVID-19 to City staff and residents, an in-person speaking opportunity will not be available.

Speakers who have not pre-registered will also have an opportunity to provide input at [cnv.org/PublicHearings](https://cnv.org/PublicHearings). Call-in details will be displayed on-screen at the Public Hearing (watch web livestream). Once all registered speakers have provided input, the Mayor will call for a recess to allow additional speakers time to phone in.

Once the Public Hearing has concluded, no further information or submissions can be considered by Council.

The proposed Official Community Plan and Zoning Amendment Bylaws, background material and presentations of staff and the applicant will be available for viewing online at [cnv.org/PublicHearings](https://cnv.org/PublicHearings) on Friday, November 20, 2020.

Please direct any inquiries to Yan Zeng, Manager, Development Planning, at [yzeng@cnv.org](mailto:yzeng@cnv.org) or 604-982-8305.

141 WEST 14TH STREET / NORTH VANCOUVER / BC / V7M 1H9  
T 604 985 7761 / F 604 985 9417 / [CNV.ORG](https://cnv.org)   



**THE CORPORATION OF THE CITY OF NORTH VANCOUVER**

**BYLAW NO. 8806**

**A Bylaw to amend “Official Community Plan Bylaw, 2014, No. 8400”**

The Council of The Corporation of the City of North Vancouver, in open meeting assembled, enacts as follows:

1. This Bylaw shall be known and cited for all purposes as **“Official Community Plan Bylaw, 2014, No. 8400, Amendment Bylaw, 2020, No. 8806” (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, Land Use Designation and Permitted Height Change)**.
2. “Schedule A Land Use” of “Official Community Plan Bylaw, 2014, No. 8400” is amended by reclassifying the following properties:

<b>Lot</b>	<b>Block</b>	<b>D.L.</b>	<b>Plan</b>
2	129	274	BCP3286
S/L 1		274	BCS752
S/L 2		274	BCS752
10	129	274	878
11	129	274	878
B	129	274	878

From Land Use Designations “Residential Level 5” and “Residential Level 2” to “Mixed-Use Level 2” as indicated in ‘Schedule A’ attached to this bylaw.

3. "Schedule A Land Use" of "Official Community Plan Bylaw, 2014, No. 8400" is amended by revising the maximum building heights applicable for the following properties:

<b>Lot</b>	<b>Block</b>	<b>D.L.</b>	<b>Plan</b>
2	129	274	BCP3286
S/L 1		274	BCS752
S/L 2		274	BCS752
10	129	274	878
11	129	274	878
A	129	274	LMP40956

From "Four Storeys" to "Five Storeys" as indicated in 'Schedule B' attached to this bylaw.

READ a first time on the 16<sup>th</sup> day of November, 2020.

READ a second time on the 16<sup>th</sup> day of November, 2020.

READ a third time on the <> day of <>, 2020.

ADOPTED on the <> day of <>, 2020.

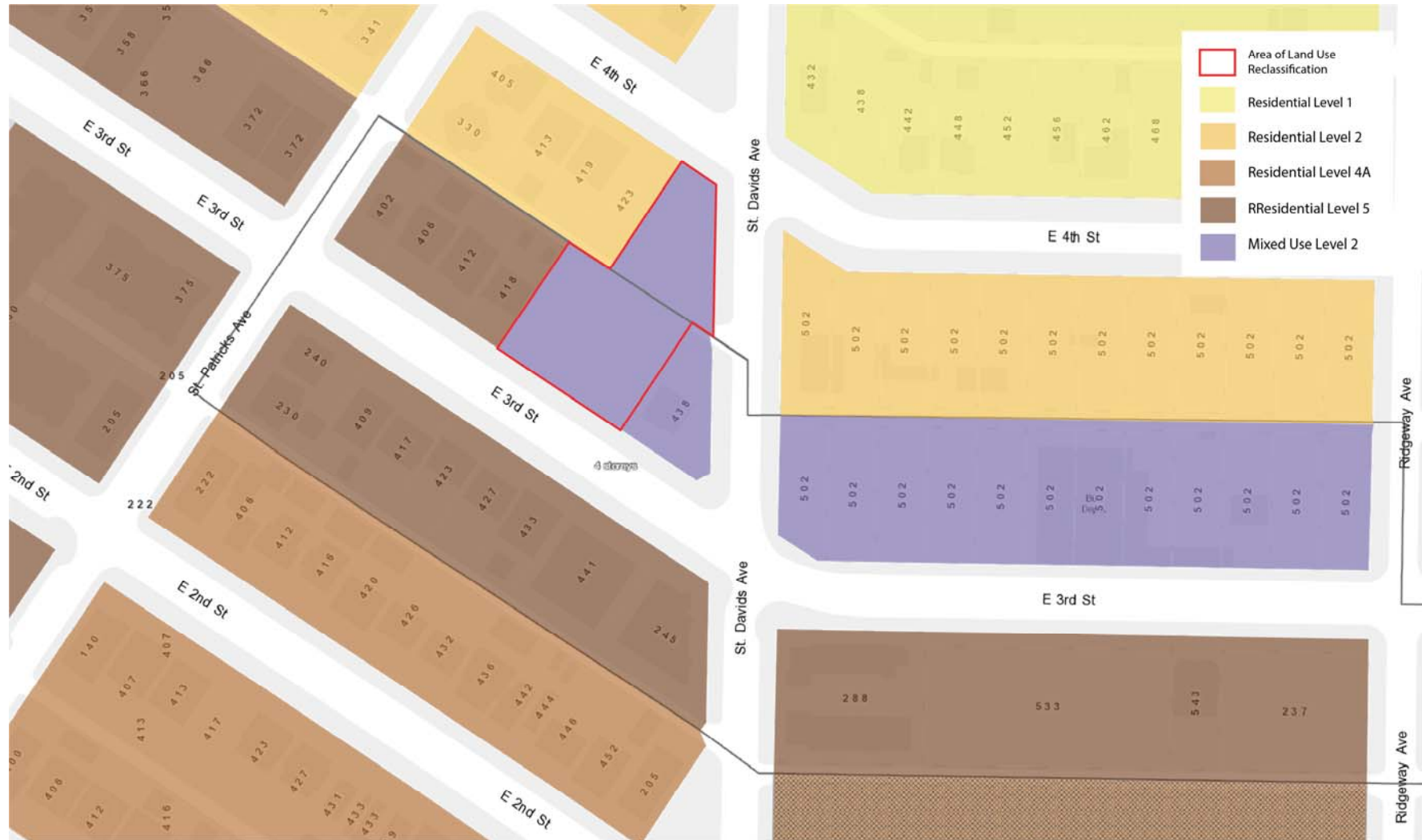
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MAYOR

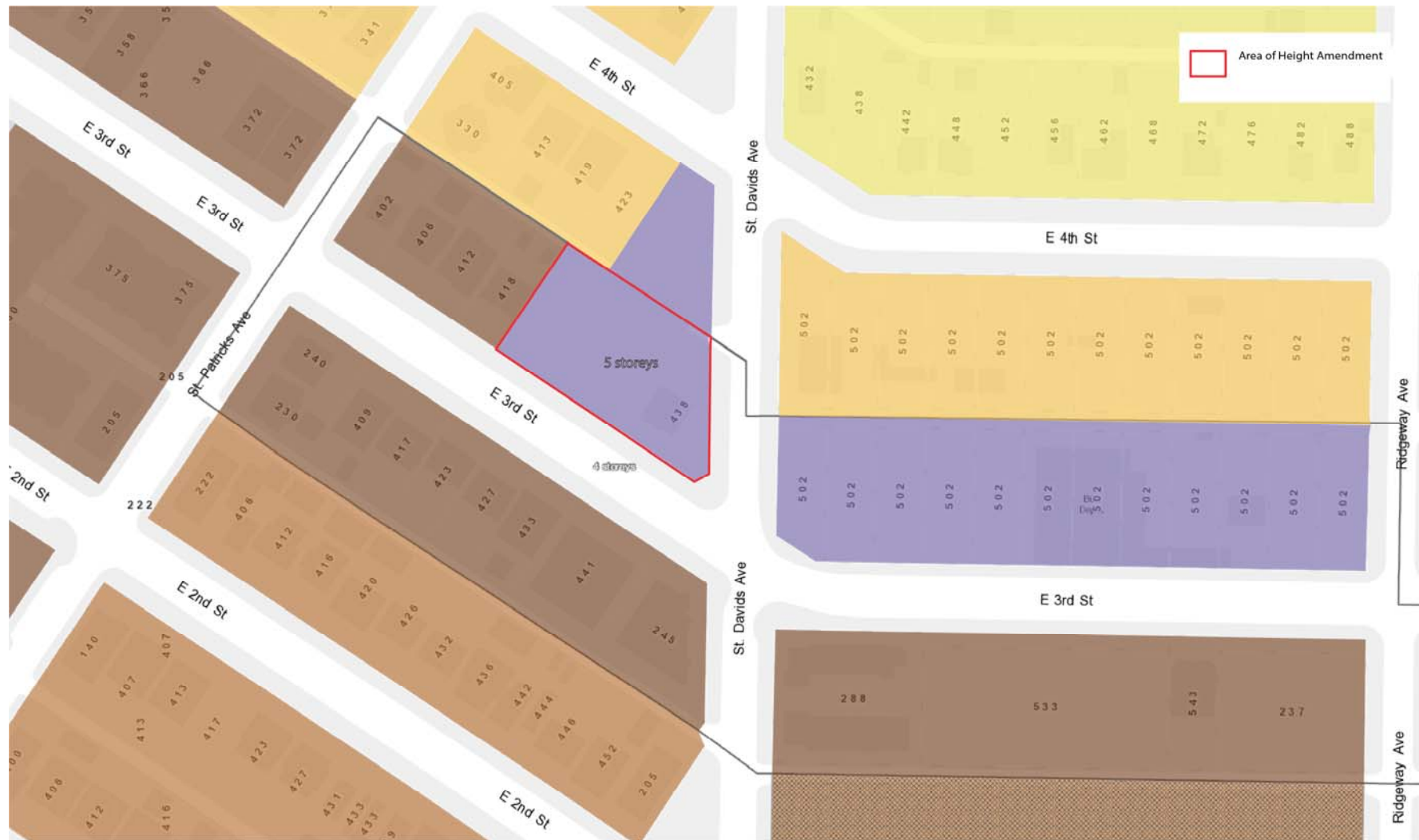
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CORPORATE OFFICER

## Schedule A Land Use Designations



## Schedule B Maximum Building Heights



# THE CORPORATION OF THE CITY OF NORTH VANCOUVER

## BYLAW NO. 8807

### A Bylaw to amend “Zoning Bylaw, 1995, No. 6700”

The Council of The Corporation of the City of North Vancouver, in open meeting assembled, enacts as follows:

1. This Bylaw shall be known and cited for all purposes as “**Zoning Bylaw, 1995, No. 6700, Amendment Bylaw, 2020, No. 8807**” (Cascadia Green Development, 402-438 East 3<sup>rd</sup> Street and 341-343 St. Davids Avenue, CD-730 and “Moodyville Development Permit Area Guidelines” amendment).
2. Division VI: Zoning Map of Document “A” of “Zoning Bylaw, 1995, No. 6700” is hereby amended by reclassifying the following lots as henceforth being transferred, added to and forming part of CD-730 (Comprehensive Development 730 Zone):

Lots	Block	D.L.	Plan	
16	129	274	878	
S/L 1		274	LMS1767	
S/L 2		274	LMS1767	
14	129	274	878	
13	129	274	878	
11	129	274	878	
10	129	274	878	from RM-2
2	129	274	BCP3286	
S/L 1		274	BCS752	
S/L 2		274	BCS752	from CD-421
A	129	274	LMP40956	from C-3
B	129	274	878	from RT-1

3. Part 11 of Division V: Comprehensive Development Regulations of Document “A” of “Zoning Bylaw, 1995, No. 6700” is hereby amended by:
  - A. Adding the following section to Section 1100, thereof, after the designation “CD-729 Comprehensive Development 729 Zone”:  
“CD-730 Comprehensive Development 730 Zone”
  - B. Adding the following to Section 1101, thereof, after the “CD-729 Comprehensive Development 729 Zone”:  
“CD-730 Comprehensive Development 730 Zone”

In the CD-730 Zone, permitted Uses, regulations for permitted Uses, regulations for the size, shape and siting of Buildings and Structures and required Off-Street Parking shall be as in the C-2 Zone, except that:



- (1) In the CD-730 Zone, three principal buildings – West Building, East Building and North Building – shall be permitted on the subject site as shown in Schedule 145: Buildings and Setbacks;
- (2) Permitted Uses
- (a) For the West Building, Permitted Uses shall be limited to:
- i. Apartment Residential Use;
  - ii. Ground Oriented Apartment Residential Use;
  - iii. Live/Work Studios, limited to units fronting East 3<sup>rd</sup> Street;
  - iv. Accessory Non-Commercial Social and Recreational Facilities;
  - v. Accessory Home Occupation Use, subject to Sections 507(6), (7) and (8) of this Bylaw;
  - vi. Accessory Home Office Use;
  - vii. Accessory Off-Street Parking Use;
  - viii. Accessory Off-Street Loading Use;
- (b) For the East Building, Permitted Uses shall be limited to:
- i. Retail Service Group 1 Use;
  - ii. Accessory Apartment Residential Use subject to Section 607(1) of this Bylaw, except that subsection 607(1)(a) shall be waived;
  - iii. Accessory Non-Commercial Social and Recreational Facilities;
  - iv. Accessory Home Occupation Use, subject to Sections 507(6), (7) and (8) of this Bylaw;
  - v. Accessory Home Office Use;
  - vi. Accessory Off-Street Parking Use;
  - vii. Accessory Off-Street Loading Use;
- (c) For the North Building, Permitted Uses shall be limited to:
- i. Retail Service Group 1 Use, limited to commercial retail units fronting the lane;
  - ii. Accessory Apartment Residential Use subject to Section 607(1) of this Bylaw, except that subsection 607(1)(a) shall be waived;
  - iii. Ground Oriented Apartment Residential Use;
  - iv. Accessory Non-Commercial Social and Recreational Facilities;
  - v. Accessory Home Occupation Use, subject to Sections 507(6), (7) and (8) of this Bylaw;
  - vi. Accessory Home Office Use;
  - vii. Accessory Off-Street Parking Use;
  - viii. Accessory Off-Street Loading Use;
- (3) Gross Floor Area
- (a) Principal Buildings shall not exceed a combined Gross Floor Area of 1.83 times the Lot Area;
- (b) Notwithstanding 3 (a), the maximum Gross Floor Area permitted may be further increased as follows:

<b>Additional (Bonus) Density</b>			
<b>Additional Density Category</b>	<b>Description</b>	<b>Additional Density (Bonus)</b>	<b>Policy Reference</b>
In-kind amenity	16-Space Childcare Facility  Nine Affordable Home Ownership Units	Maximum 3539 square metres (38,093 square feet) or 0.65 FSR	OCP Section 2.2

Such that the total density on the site shall not exceed 2.48 FSR.

(4) Height

- (a) The West Building shall not exceed a Building Height of 4 storeys, nor 14.6 metres (47.9 feet) as measured from the average Building Grades at the north property line along the rear lane;
  - i. Notwithstanding 4 (a), parapet walls, guard rails, railings, and formwork for planting beds may project beyond the Building Height by not more than 1.1 metres (3.5 feet);
  - ii. Notwithstanding 4 (a), trellises, outdoor amenity storage structures, and staircase and elevator structures to permit access to the roof may project beyond the Building Height by not more than 3.05 metres (10 feet);
  - iii. Notwithstanding 4 (a), elevator shafts and mechanical equipment are exempt from Building Height restrictions;
- (b) The East Building shall not exceed a Building Height of 5 storeys, nor 19 metres (62.4 feet) as measured from the average Building Grades at the north property line along the rear lane;
  - i. Notwithstanding 4 (b), parapet walls may project beyond the Building Height by not more than 0.3 metres (1 foot);
  - ii. Notwithstanding 4 (b), elevator shafts and mechanical equipment are exempt from Building Height restrictions;
- (c) The North Building shall not exceed a Building Height of 4 storeys, nor 14.8 metres (48.6 feet) as measured from the average Building Grades at the south property line along the lane;
  - i. Notwithstanding 4 (c), parapet walls may project beyond the Building Height by not more than 0.3 metres (1 foot);
  - ii. Notwithstanding 4 (c), elevator shafts and mechanical equipment are exempt from Building Height restrictions;
- (5) The Lot Coverage of the subject site, together with accessory buildings, shall not exceed 65%;
- (6) Setbacks from lot lines for Principal Buildings on Site B and C shall conform to the minimum distances identified in Schedule 145: Buildings and Setbacks;
- (7) Section 608 shall not apply;

- (8) Section 609 shall not apply;
  - (9) For the purposes of the CD-730 Zone, all required vehicle and bicycle parking may be provided on any property within the CD-730 Zone;
  - (10) Off-Street Parking, Short-Term and Secure Bicycle Parking, and Accessory Off-Street Loading Spaces shall be provided in conformity with the requirements of Division IV, Parts 9, 10, and 10A, except that:
    - (a) A minimum of 162 residential vehicle Parking Spaces shall be provided;
    - (b) A minimum of 61 commercial vehicle Parking Spaces shall be provided, of which, 10 shall be identified as shared residential visitor and commercial parking;
    - (c) One Shared Vehicle shall be provided on site and of the parking to be provided, one space shall be reserved for a Shared Vehicle. The Shared Vehicle and Shared Vehicle Parking Space shall be subject to Section 905(3) except that subsection 905(3)(d) shall be waived;
    - (d) Two Loading Spaces shall be provided;
  - (11) All exterior finishes, design and landscaping shall be approved by the Advisory Design Panel.
4. Document F “Moodyville Development Permit Area Guidelines” of Division VII: Development Permit Guidelines of “Zoning Bylaw, 1995, No. 6700” is hereby amended by:
- A. Adding the following condition to Section 2.2 Exemption:
- Where lands have been the subject of a successful rezoning and Official Community Plan amendment since the adoption of the Development Permit Guidelines, and a comprehensive review of the proposed development has been completed as part of that process.

READ a first time on the 16<sup>th</sup> day of November, 2020.

READ a second time on the 16<sup>th</sup> day of November, 2020.

READ a third time on the <> day of <>, 2020.

ADOPTED on the <> day of <>, 2020.

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MAYOR

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CORPORATE OFFICER

## Buildings and Setbacks



## Legend



Subject Site