

# Committee of Council Agenda

Tuesday, April 14, 2020

3:00 p.m.

Council Chambers

3rd Floor City Hall, 2580 Shaughnessy Street, Port Coquitlam, BC

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Pages

1. CALL TO ORDER

2. ADOPTION OF THE AGENDA

2.1 Adoption of the Agenda

Recommendation:

*That the Tuesday, April 14, 2020, Committee of Council Meeting Agenda be adopted as circulated.*

3. CONFIRMATION OF MINUTES

None.

4. REPORTS

4.1 RCMP 2019 Year in Review: City of Port Coquitlam

1

Recommendation:

None.

4.2 Coach House Development Permit Application – 3766 Somerset Street

38

Recommendation:

*That Committee of Council approve Development Permit DP000408 to regulate a coach house development at 3766 Somerset Street.*

4.3 Port Coquitlam/Coquitlam Intermunicipal Maintenance Agreement

54

Recommendation:

*That Committee of Council recommend to Council to:*

1. *Authorize the Mayor and Clerk to execute on behalf of the City of Port Coquitlam an agreement with the City of Coquitlam for the*



*maintenance of municipal boundary locations described in the attached document titled "Coquitlam/Port Coquitlam Infrastructure Maintenance and Cost Sharing Agreement;" and*

2. *Pursuant to Section 13 of the Community Charter, SBC 2003, C26, consent to the City of Coquitlam providing maintenance services in Port Coquitlam as described in the agreement.*

#### 4.4 McAllister Streetscape Design Options

137

Recommendation:

*That Committee of Council direct staff to proceed with detailed design for option two, of the McAllister Avenue Streetscape.*

#### 5. COUNCILLORS' UPDATE

#### 6. MAYOR'S UPDATE

#### 7. CAO UPDATE

#### 8. RESOLUTION TO CLOSE

##### 8.1 Resolution to Close

Recommendation:

*That the Committee of Council Meeting of Tuesday, April 14, 2020, be closed to the public pursuant to the following subsections(s) of Section 90(1) of the Community Charter:*

Item 5.1

*e. the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality;*

*k. negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public;*

Item 5.2

*e. the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality;*

Item 5.3

*i. the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose; and*



*I. discussions with municipal officers and employees respecting municipal objectives, measures and progress reports for the purposes of preparing an annual report under section 98 [annual municipal report].*

**9. ADJOURNMENT**

**9.1 Adjournment of the Meeting**

Recommendation:

*That the Tuesday, April 14, 2020, Committee of Council Meeting be adjourned.*

**10. MEETING NOTES**



**RECOMMENDATION:**

*None.*

**REPORT SUMMARY**

The purpose of this report is to provide Council with an update on the detachment's 2019 third trimester and 2019 annual results.

**BACKGROUND**

The objective of the final trimester report and 2019 year in review is to inform Council of the progress made by RCMP members, municipal employees, and volunteers in support of the priorities, goals, and objectives laid out in the Coquitlam RCMP 2016-2020 Strategic Plan.

This plan outlines three main priorities:

- Priority 1 - Enhance Public Safety;
- Priority 2 - Promote Community Engagement; and
- Priority 3 - Achieve Organizational Excellence

These priorities are defined in the plan with goals and objectives assigned to each priority and metrics designed to measure success and identify areas for improvement.

**DISCUSSION****2019-T3 Trimester Update**

Attachment #2 provides the 2019-T3 Trimester Update which includes the crime statistics from September 1 to December 31, 2019. The following observations were made for the City of Port Coquitlam:

Person crimes which include assault, domestic violence, robbery and sex offences were generally reduced in T3-2019 compared to the three-year average, particularly robbery. The exceptions were sex offences and assaults. These types of crimes are complex and time consuming and in 2019, Port Coquitlam Council approved four new RCMP members to address policing challenges in specific areas, two of which were for the Sex Crimes Unit and Domestic Violence Unit. The addition of these members will assist in continuing to address these critical areas.

Property crimes which include break and enter, theft, shoplifting and fraud decreased by 4% in T3-2019 when compared with the three-year average. There were individual increases observed for



theft of vehicle, break and enter-residence and break and enter-business. However, these increases represented relatively few files.

Overall the number of property crimes in Port Coquitlam has remained stable for the past three years.

The RCMP Mental Health Liaison Unit (MHLU) is dedicated to responding to clients with mental health needs who have contact with the police and require emergency response. The management of these mental health calls continues to be a key area of focus for the detachment.

Overall, there was a small increase in mental health calls for service in T3-2019 compared to the three-year average however there was small decrease in average hospital wait times. The RCMP is working in partnership with various health and community agencies to seek changes to the process regarding mental health calls as RCMP members are currently required to wait at the hospital with clients until admitted to the facility and as a result this has a significant impact to the police resources. There has been some improvement in this area as there was a reduction in the number of files with wait times greater than or equal to two hours. The MHLU also supports the Provincial Integrated Court initiative which requires a member to be in attendance for court proceedings with mental health clients.

Overall the number of mental health calls remains high in relation to assigned resources and continues to be an area of focus.

Road safety is a top priority for the detachment and an additional Traffic Services member was approved by Council in 2019. This additional member has provided improved response to calls for service as well as increased proactive enforcement and visibility in the community. There was a marked increase in traffic speeding violation tickets in T3-2019 compared to the three-year average. There was also an increase in intersection infractions and a decrease in distracted driving along with smaller changes in the other categories of tickets.

Coquitlam RCMP members, municipal employees, and volunteers hosted several successful community events including the Back to School Speed Watch Campaign, Coffee with a Cop, Violence in Relationships Workshop, Volunteer Recognition Dinner, 9-1-1 We Care Toy Drive, and Operation Tracking Santa.

### 2019 Year in Review (Attachment #2 and #3)

Attachment #2 provides the 2019 Year in Review which includes a review of the crime rate, calls for service, and additional crime statistics for the most recent four years. The crime rate and calls for service increased slightly in 2019 compared to 2018.



Attachment #3 displays the statistical information that will appear in the April 2 edition of Tri-City News. Three separate charts for the entire jurisdiction display breakdowns of priority areas for the detachment including: Road Safety, Person Offences and Property Offenses. The RCMP Year in Review is intended to provide the public with information on general police and crime statistics for the entire detachment and highlights a variety of community activities for each month of the year.

### Uniformed Crime Reduction Unit Update

The Uniformed Crime Reduction Unit (UCRU) was created when Coquitlam/Port Coquitlam Councils approved eighteen new RCMP members over the course of three budget cycles (2015-2017) and was requested as a key component of the detachment's crime reduction strategy. The original vision for UCRU was one fully cost-shared 18-member unit deployed in two (2) teams of nine (9) members which is the most efficient and effective way to deploy police resources from an operational and administrative perspective. However, due to the timing of the approval of the members, initially the UCRU units worked exclusively in each city. As of 2017, Port Coquitlam approved the last remaining members to complete the two (2) nine (9) member fully cost-shared UCRU teams. These UCRU resources are now deployed according to the cost share (approx. 68% Coquitlam and 32% to Port Coquitlam).

The UCRU's mandate is to target high crime areas with police presence, primarily as foot and bike patrol teams, to add visibility, and to implement crime reduction initiatives that mitigate the crime causation factors which could lead to crime 'hotspots' becoming entrenched. The UCRU is focused on high risk areas to reinforce the crime reduction strategy.

Together with other Coquitlam RCMP teams, including the Prolific Target Team (PTT) and the Community Response Team (CRT), UCRU is an integral part of the intelligence-led, data driven policing methods that are employed to minimize crime in the City. This includes gathering frontline intelligence through proactive activities like street checks and targeted foot/bike/vehicle patrols and currently the focus of UCRU remains patrol in high crime areas and hotspots. In addition, the team's mandate has grown to also include engagement with homeless individuals and patrols for encampments.

With respect to UCRU police activity in downtown Port Coquitlam in 2019, 7% of their police files were associated with this area alone. However, these statistics do not capture the amount of time spent on the daily patrols in this location. Overall, the detachment had 1981 interactions in downtown Port Coquitlam including general duty and UCRU files.

The Coquitlam RCMP's intelligence-led, data driven policing methods are considered to be the industry's best practice and have been shown to be effective as measured by the steadily decreasing crime rate. By contrast, perception-based policing methods can lead to the risk of removing scarce resources away from areas deemed high crime risk through our analytical process. In addition, the detachment is obliged to support reactive/response-oriented services



such as 24/7 patrol/response and investigations. Meeting this obligation can result in under-resourcing of strategic/proactive initiatives if not carefully managed through the crime reduction initiatives. The OIC is ultimately accountable for determining overall operational priorities and deploying resources in a manner that provides the safest possible community.

### **FINANCIAL IMPLICATIONS**

None.

### **ATTACHMENTS**

Att#1: Presentation Slides: RCMP Trimester 2019-T3 and 2019 Year in Review for the City of Port Coquitlam

Att#2: RCMP Trimester 2019-T3 and 2019 Year in Review for the City of Coquitlam

Att#3: RCMP Year in Review – Tri-City News Charts for the Detachment

**Lead author(s):** Darryl Lal, John Hill



**RCMP**



ROYAL CANADIAN MOUNTED POLICE

LOWER MAINLAND DISTRICT REGIONAL POLICE SERVICE – ***CONNECTED TO OUR COMMUNITIES***

# RCMP 2019 Year in Review: City of Port Coquitlam

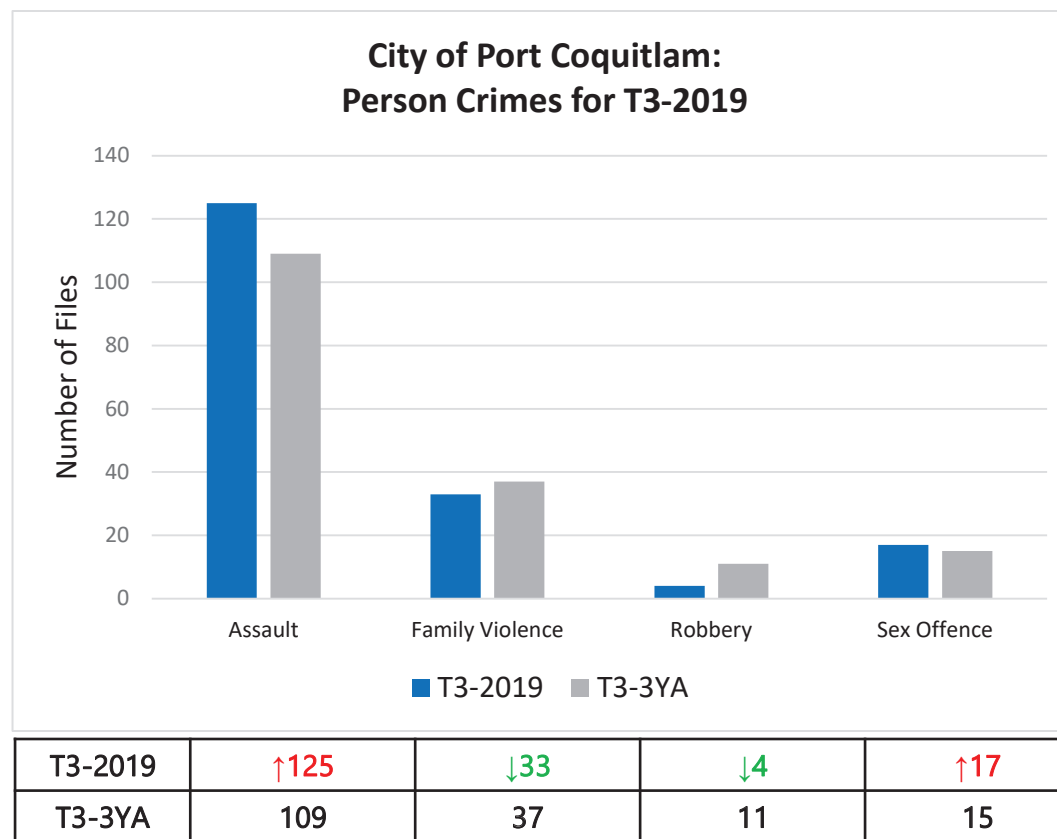
Presented by: Supt. Annette Fellner  
Presentation Date: March 24, 2020



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Gendarmerie royale du Canada

Canada

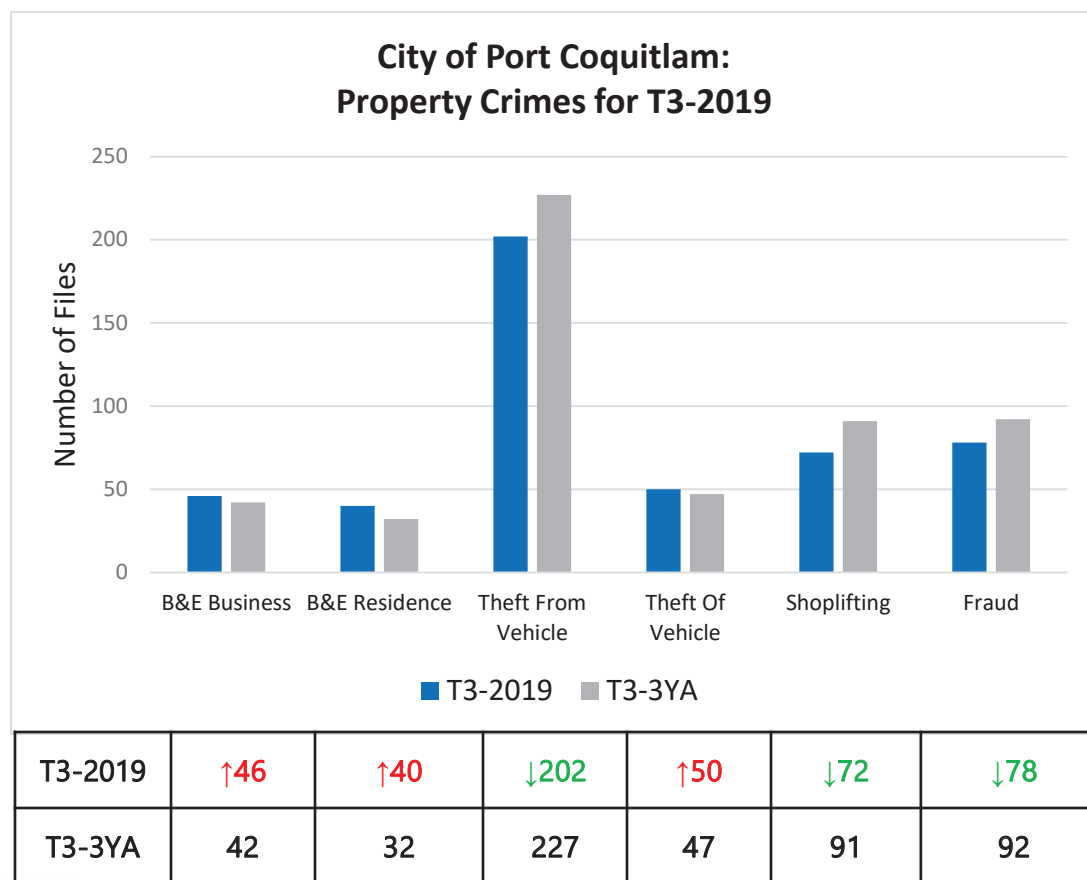




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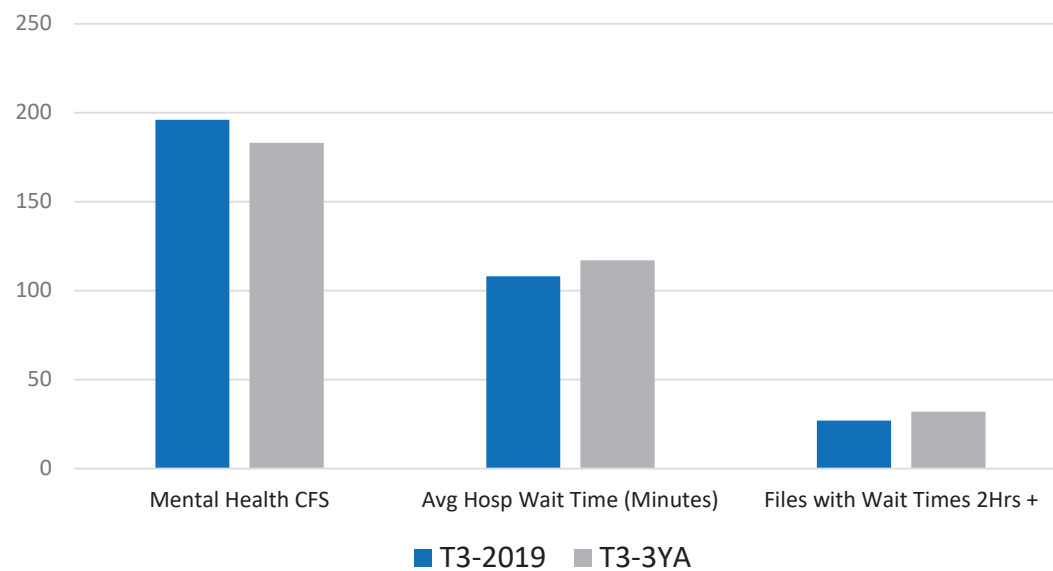


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**City of Port Coquitlam:  
Mental Health Calls for Service for T3-2019**



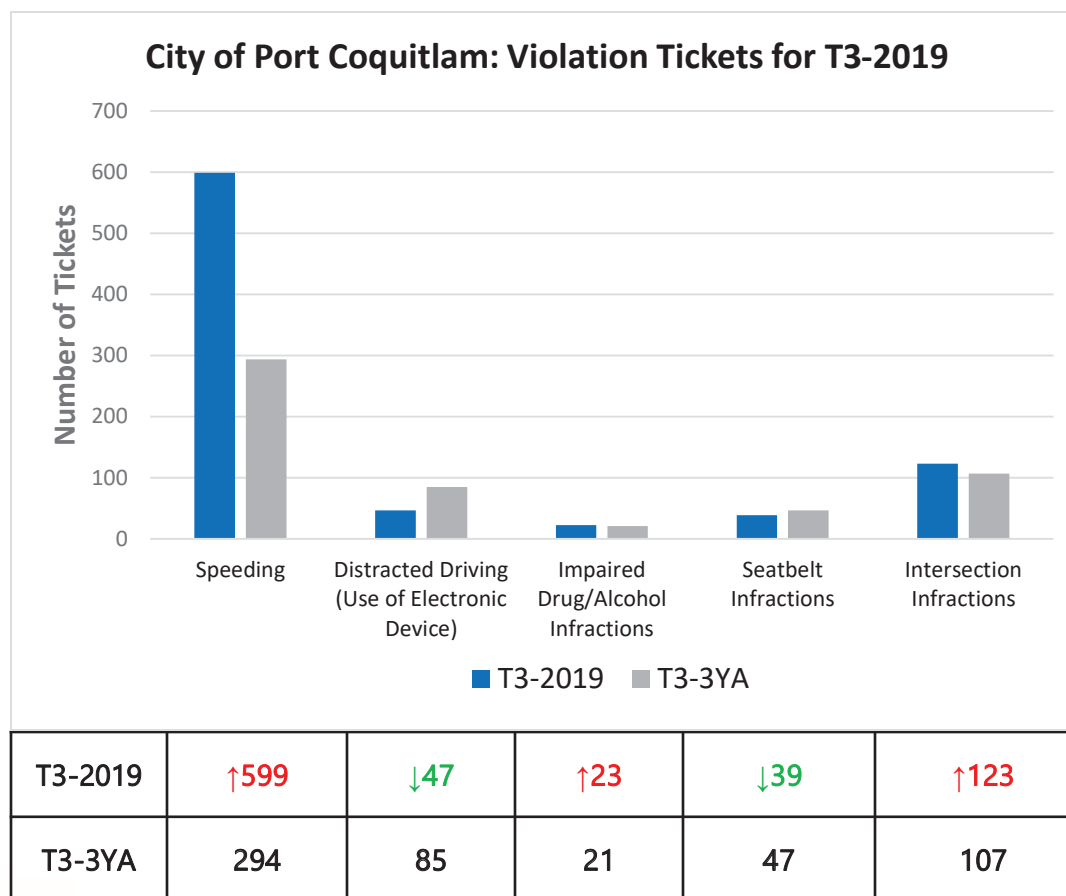
T3-2019	↑196	↓108	↓27
T3-3YA	183	117	32



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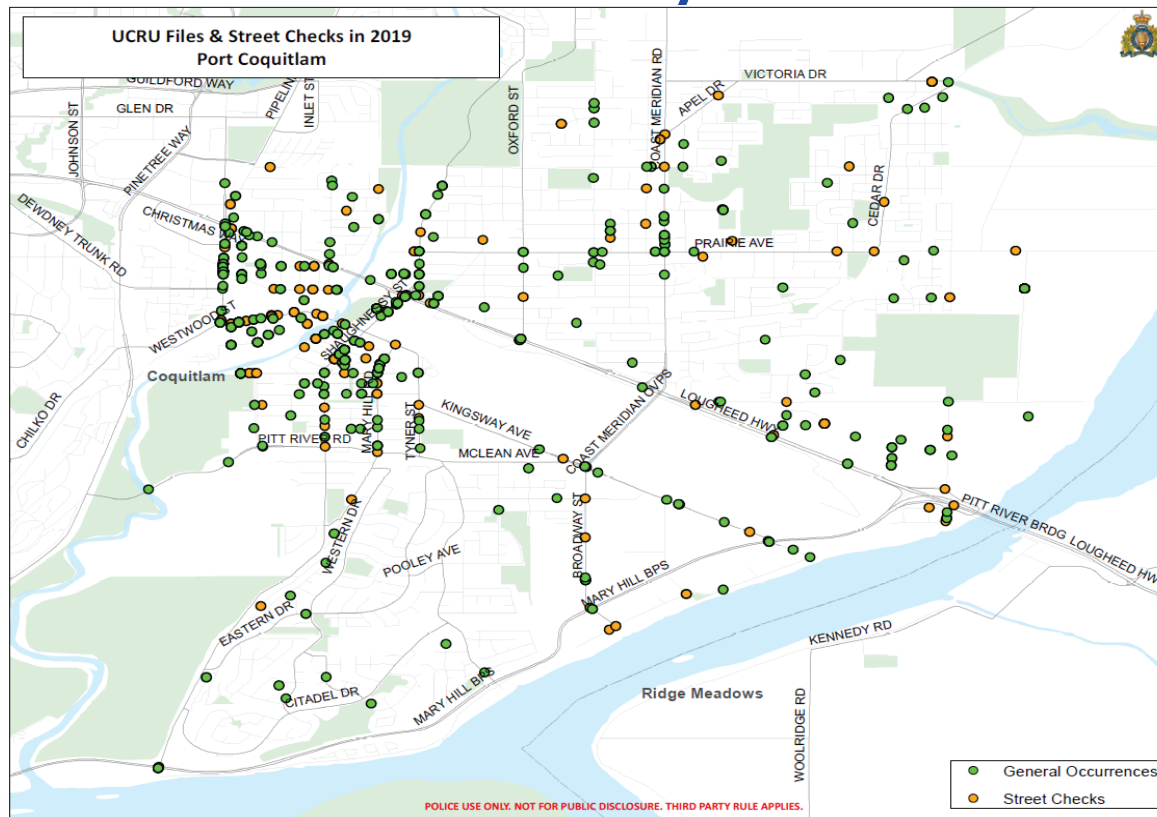


## Common UCRU Activities in 2019

- Foot and bike patrols, curfew checks
- Patrols of high crime areas and designated hotspots
- Patrols of 3030 Gordon Avenue area
- Engagement with homeless individuals and patrols for encampments



## UCRU Police Activity Files in 2019



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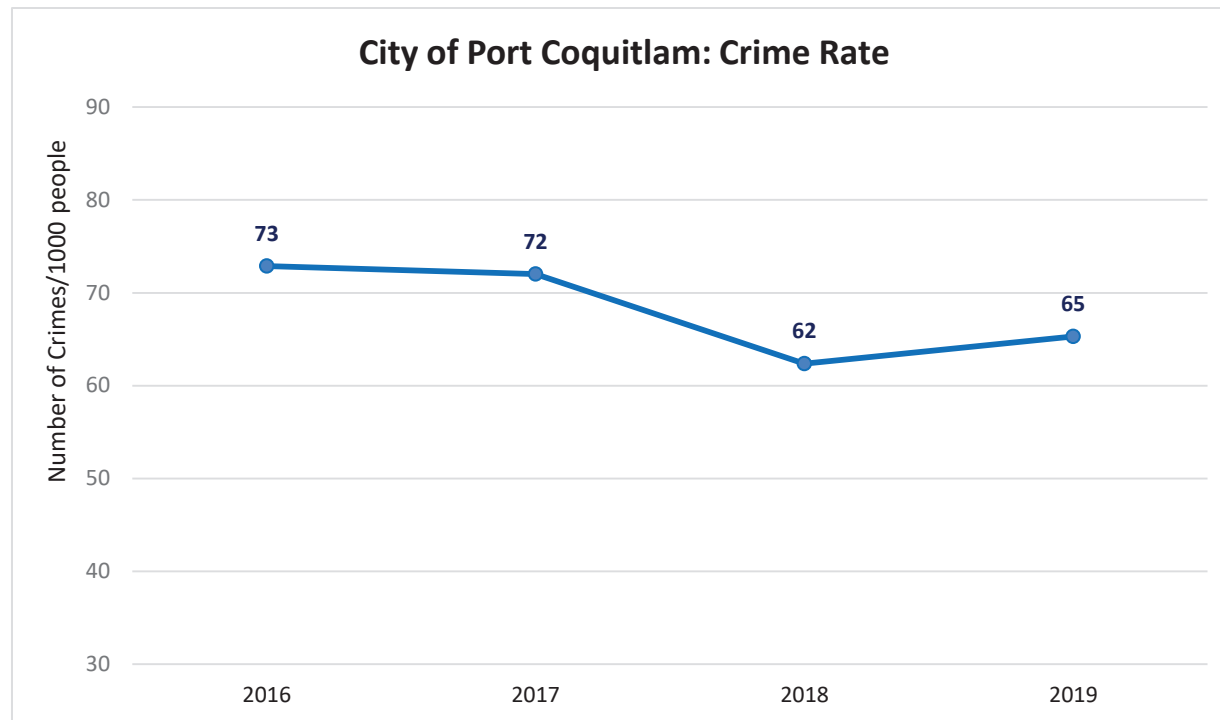
## 2019 T-3: Selected Community Events Hosted by Staff, Members, and Volunteers:

- September: Back to School Speed Watch Campaign
- October: Coffee with a Cop
- November: Violence in Relationships Workshop
- December: Volunteer Recognition Dinner
- December: 9-1-1 We Care Toy Drive
- December: Operation Tracking Santa

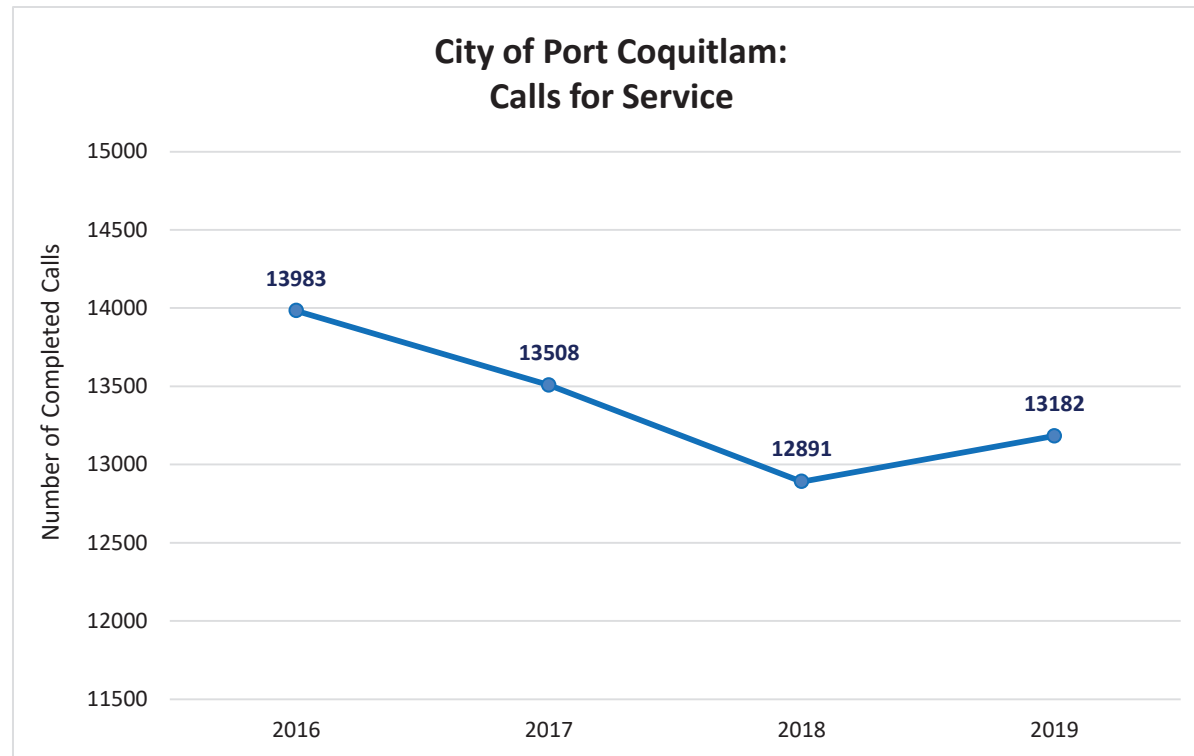


## 2019 Year in Review City of Port Coquitlam



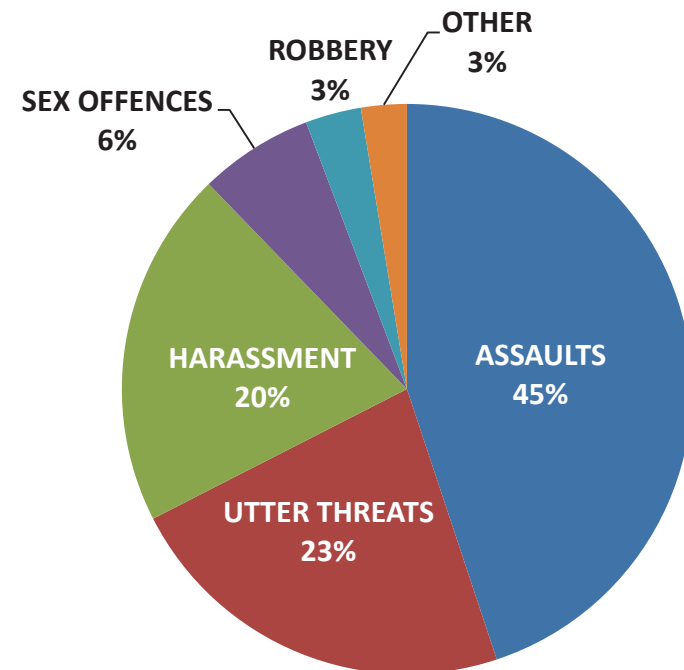
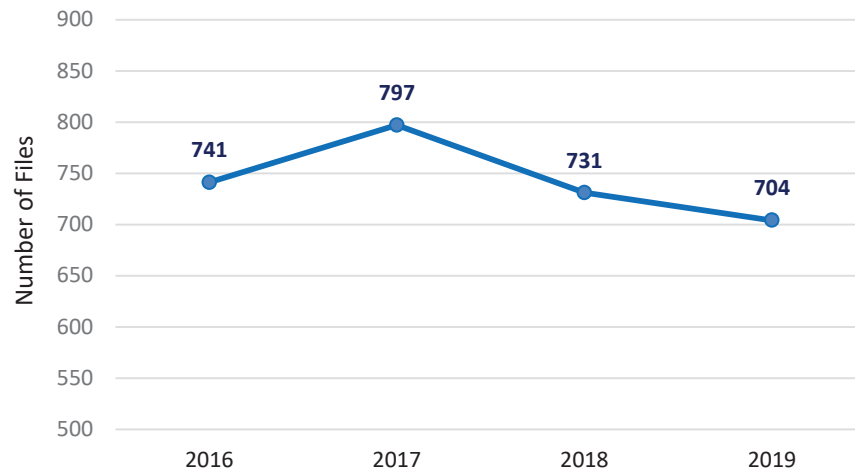








**City of Port Coquitlam:  
Person Crimes**

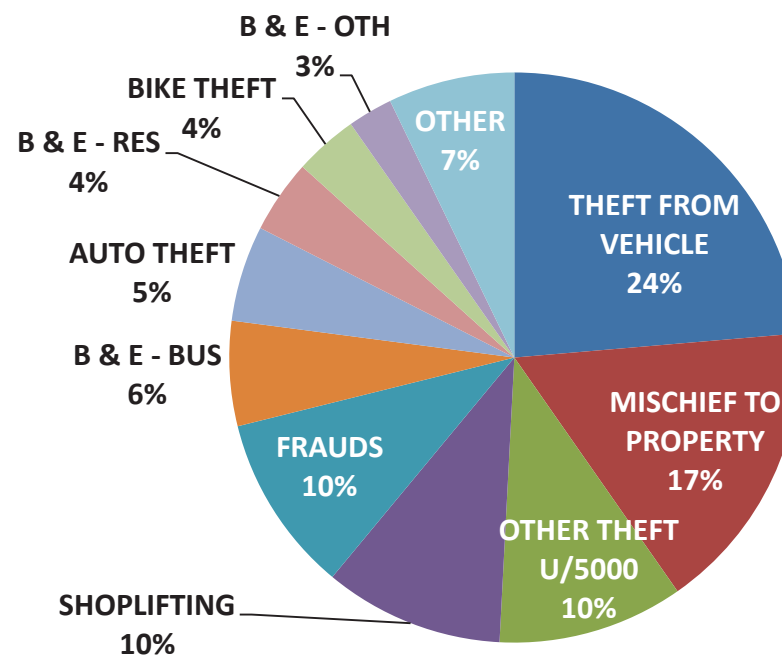
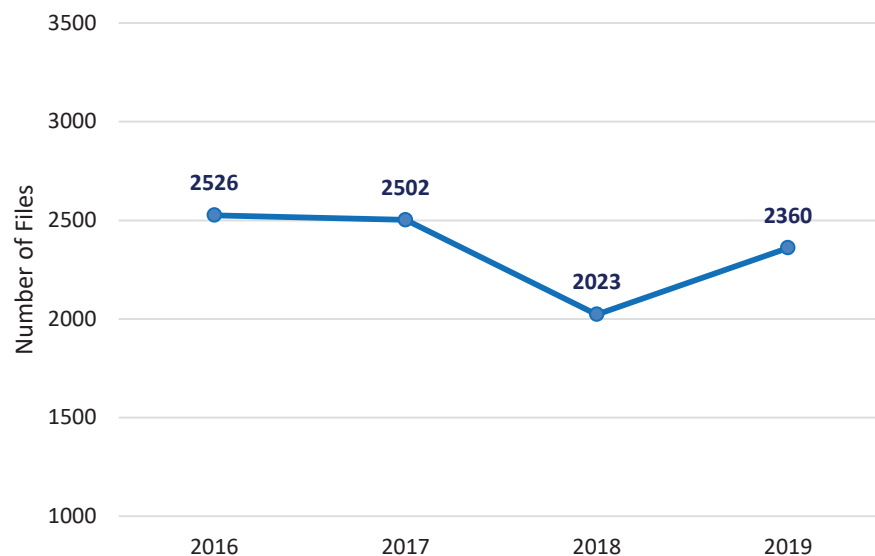


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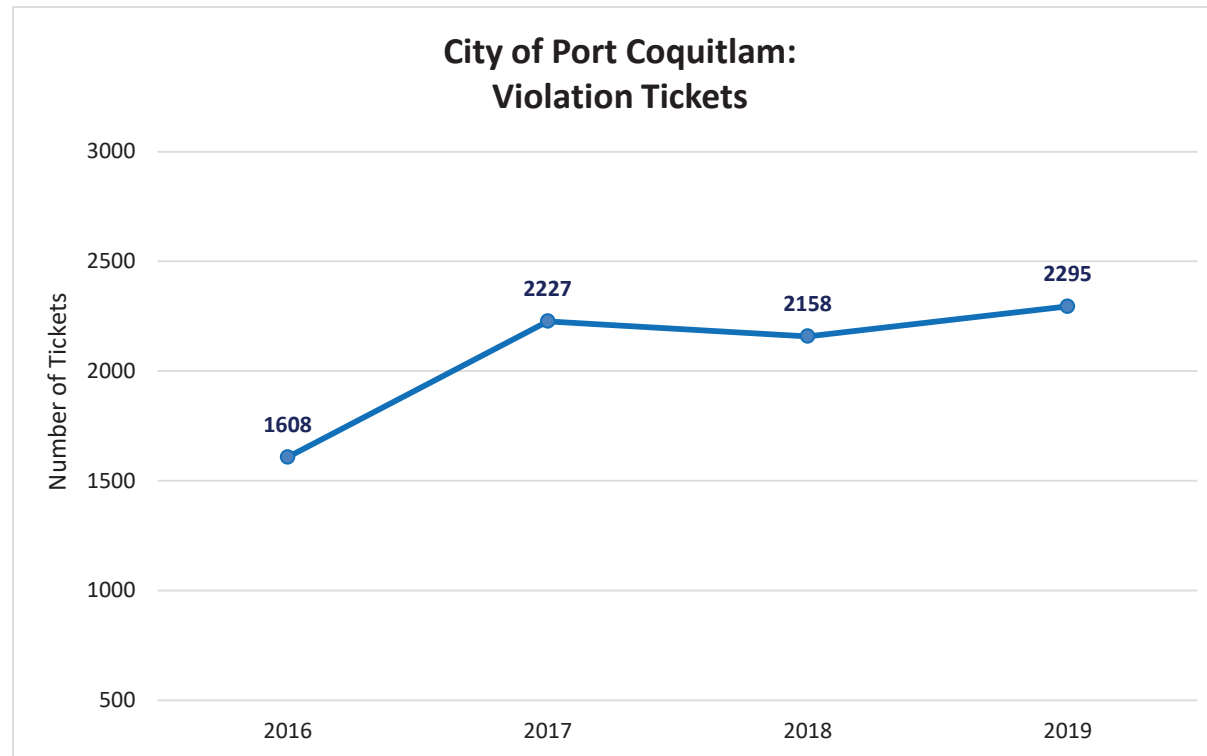
**City of Port Coquitlam: Property Crimes**



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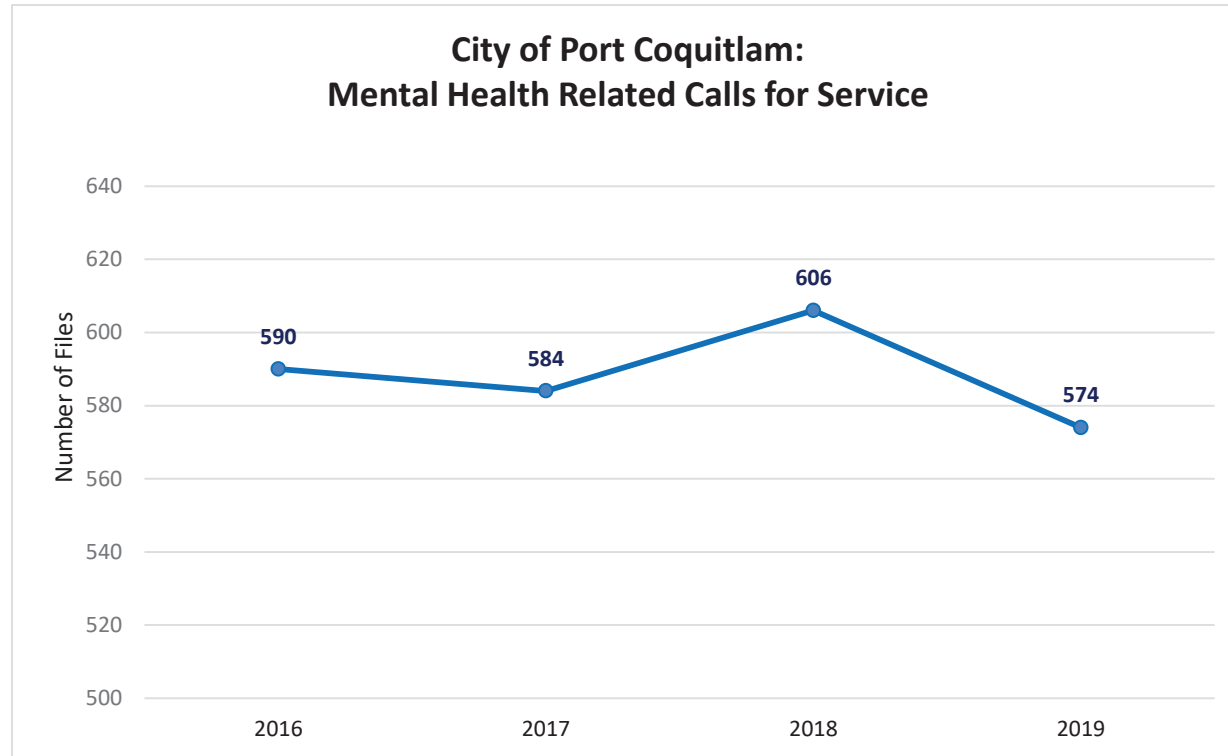




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## Questions?



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# RCMP 2019-T3 Trimester and 2019 Annual Report

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City of Port Coquitlam







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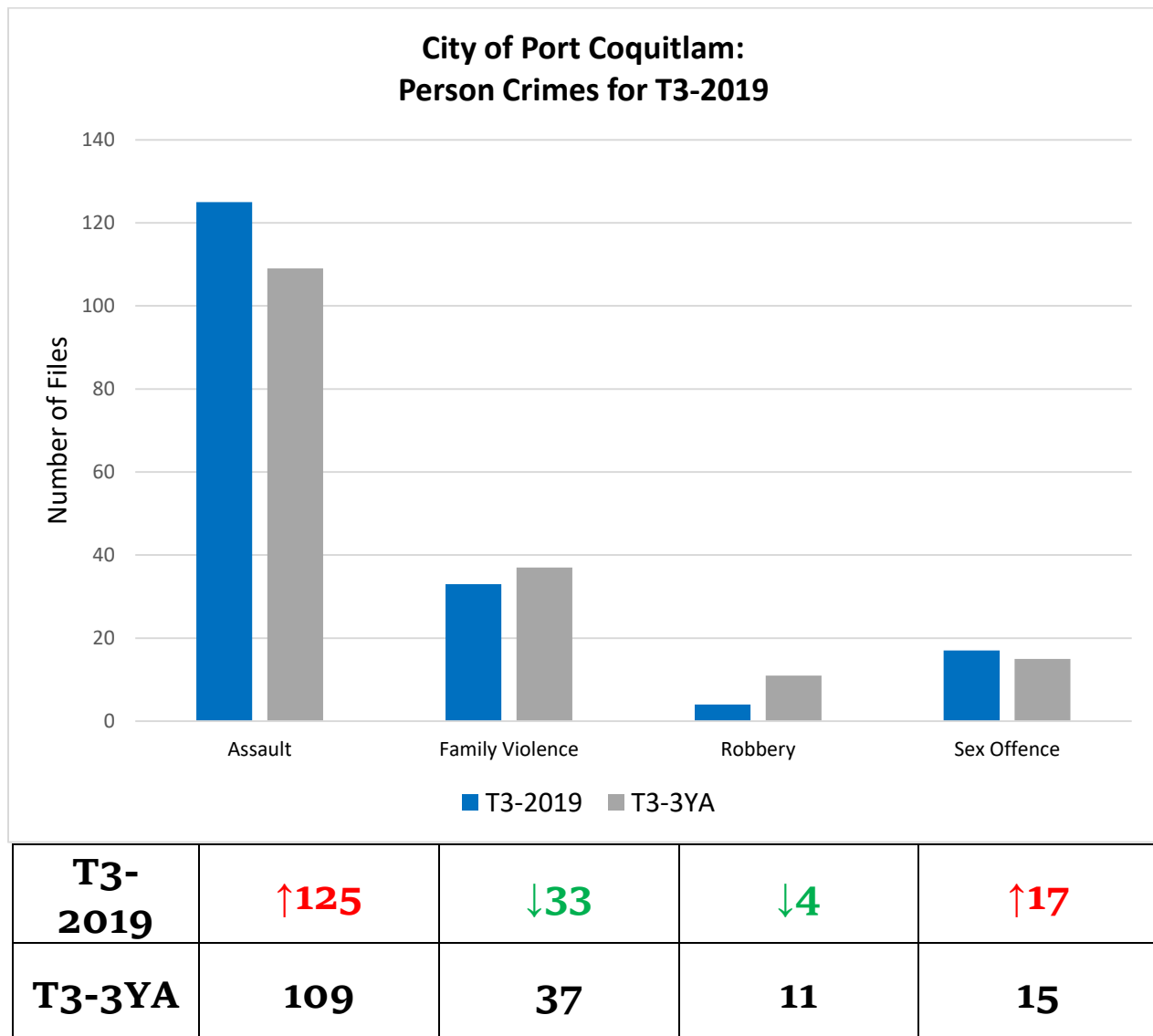




## 2019-T3 TRIMESTER REPORT

### 2019-T3: PERSON CRIMES

**Appendix 1:** Family violence and robbery were reduced in T3-2019 compared to the three year average whereas assault and sex offences were increased.

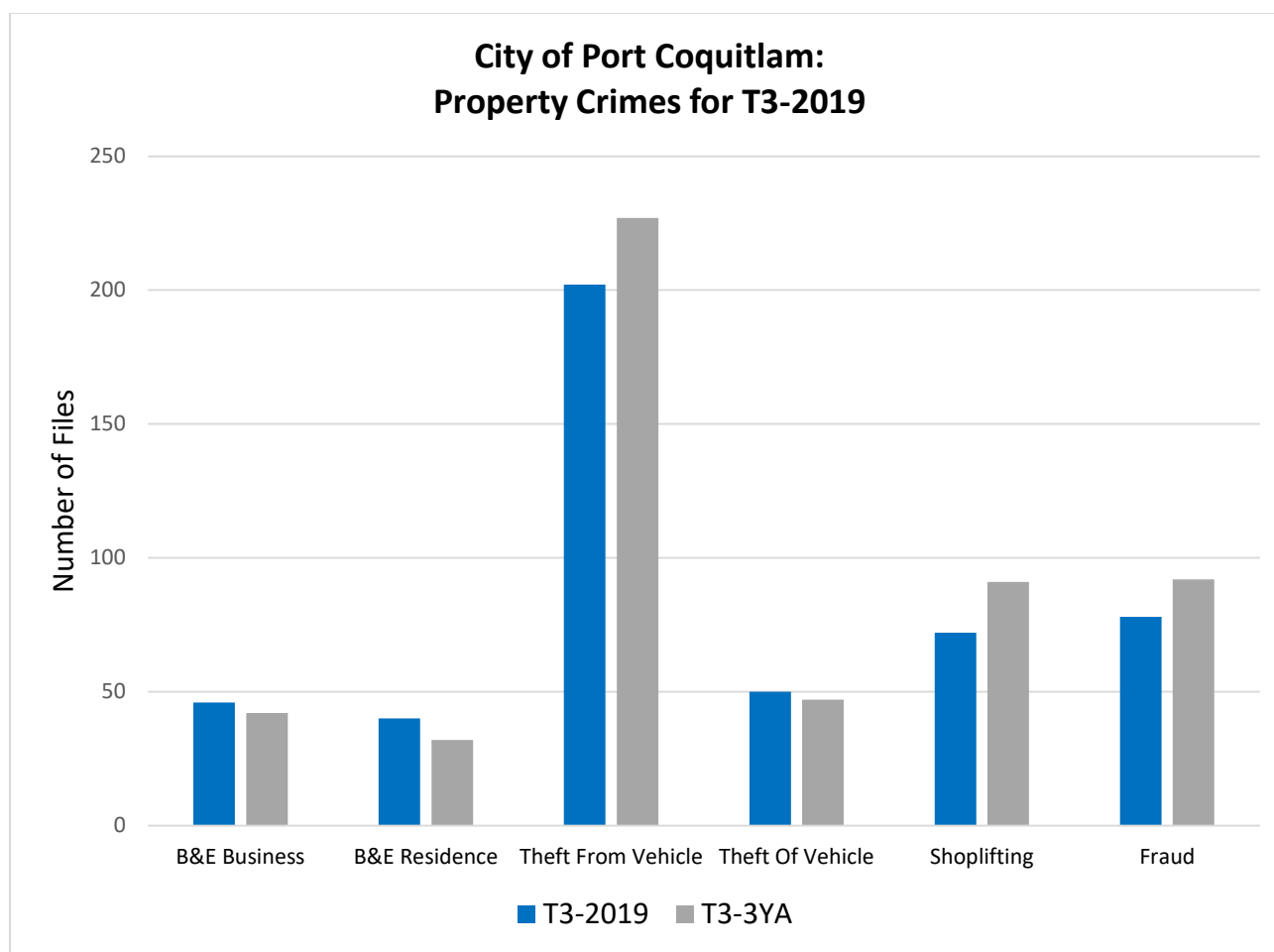






## 2019-T3: PROPERTY CRIMES

**Appendix 1:** Property crimes in T3-2019 were similar to the three year average with the exception of a decrease in theft from vehicle files, shoplifting and fraud.



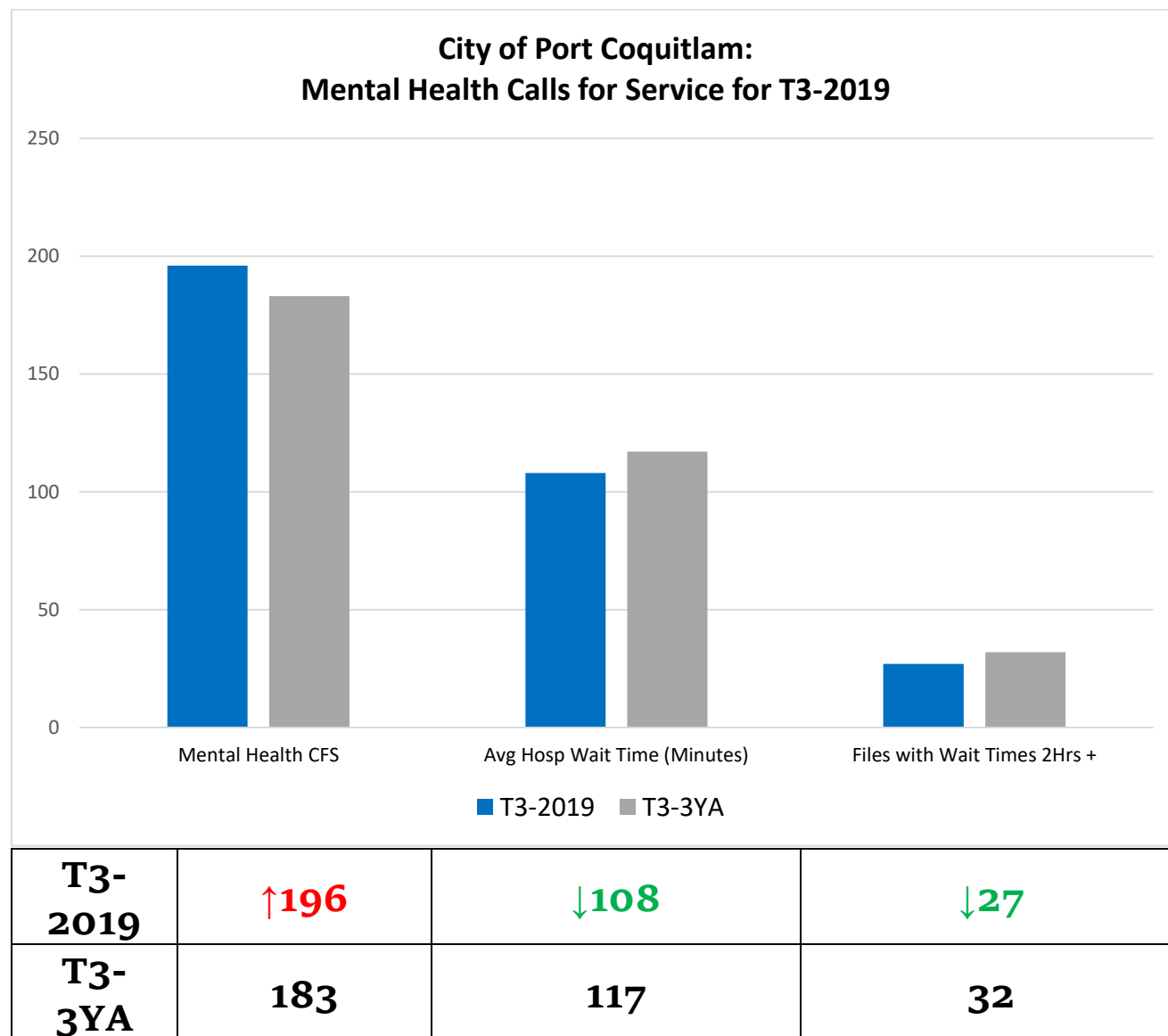
<b>T3-2019</b>	<b>↑46</b>	<b>↑40</b>	<b>↓202</b>	<b>↑50</b>	<b>↓72</b>	<b>↓78</b>
<b>T3-3YA</b>	<b>42</b>	<b>32</b>	<b>227</b>	<b>47</b>	<b>91</b>	<b>92</b>





### 2019-T3: MENTAL HEALTH-RELATED CALLS FOR SERVICE

**Appendix 2:** There was a small increase in mental health calls for service in T3-2019 compared to the three year average. There was a small reduction in average wait times and the number of files with wait times greater than or equal to two hours.

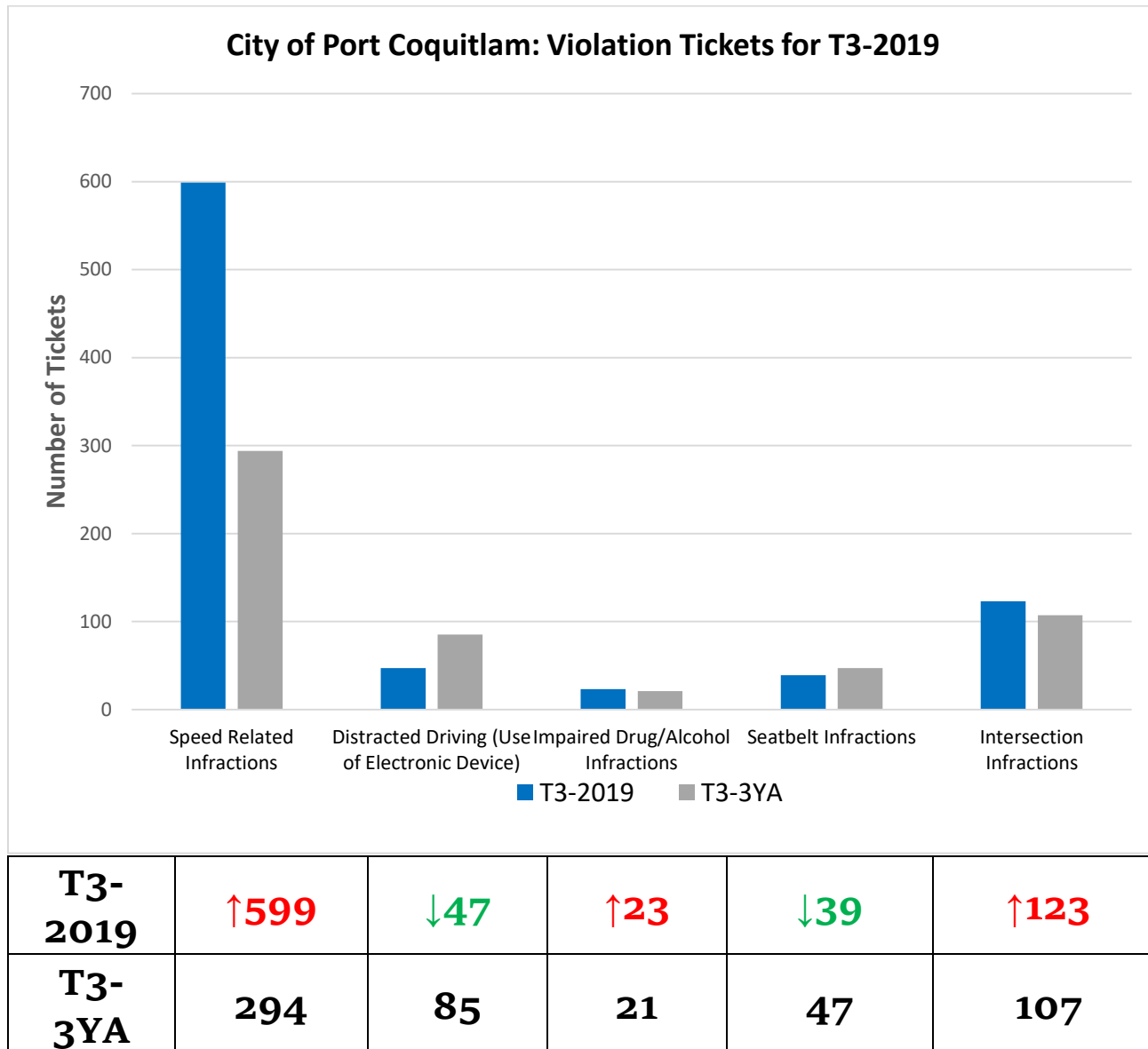






### 2019-T3 VIOLATION TICKETS

**Appendix 3:** There was a marked increase in traffic speeding violation tickets in T3-2019 compared to the three year average. There was also an increase in intersection infractions and a reduction in distracted driving violations.







***2019-T3 SELECTED COMMUNITY EVENTS***

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- September: Back to School Speed Watch Campaign
- October: Coffee with a Cop
- November: Violence in Relationships Workshop
- December: Volunteer Recognition Dinner
- December: 9-1-1 We Care Toy Drive
- December: Operation Tracking Santa



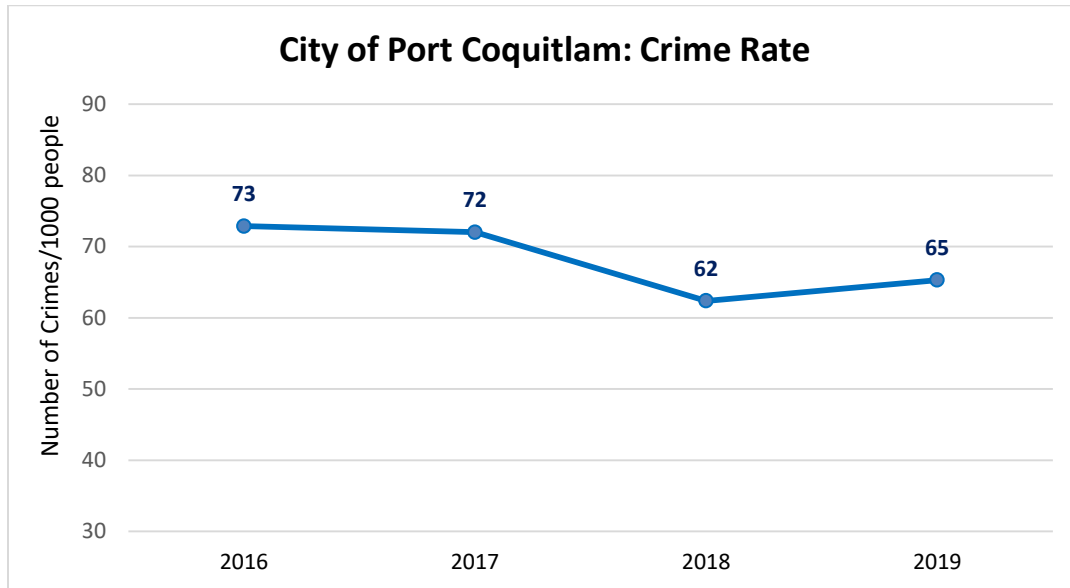


## 2019 ANNUAL REPORT

### 2016-2019: CRIME RATE

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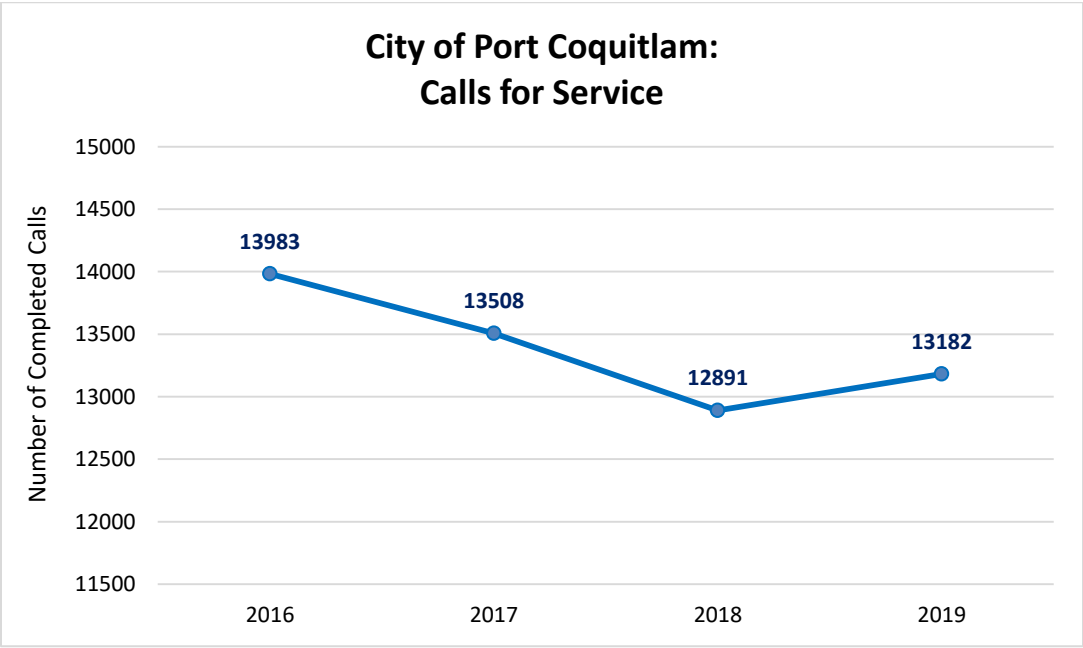
After a three year decline there was small increase in crime rate and calls for service in Port Coquitlam.



### 2016-2019: CALLS FOR SERVICE

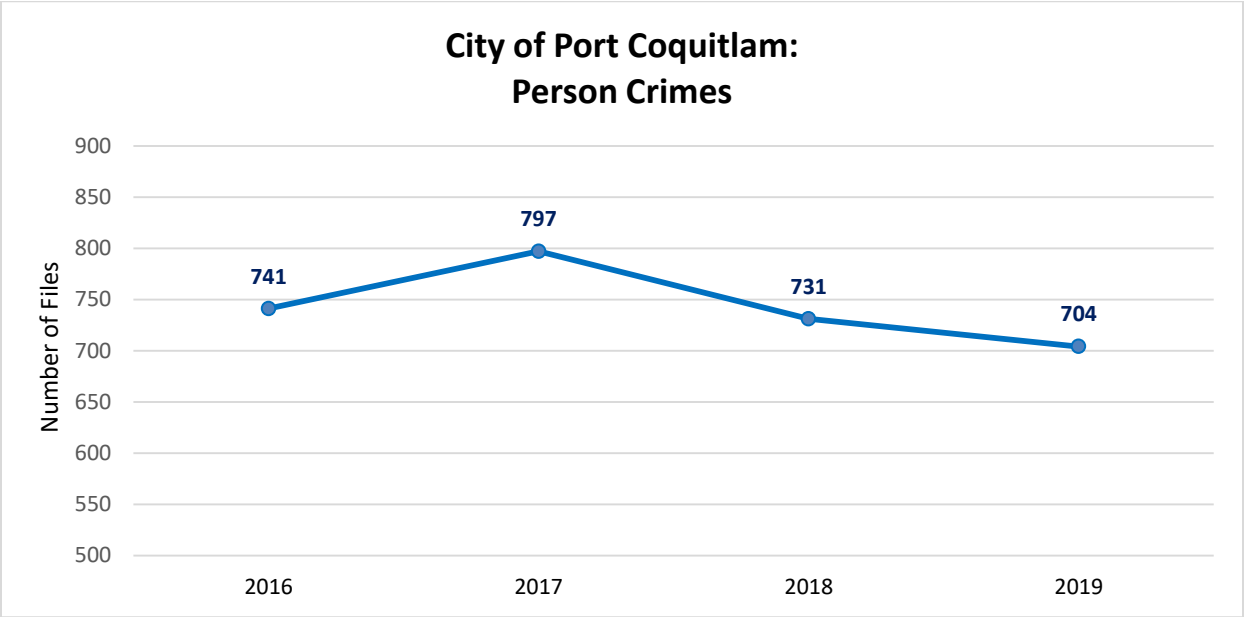
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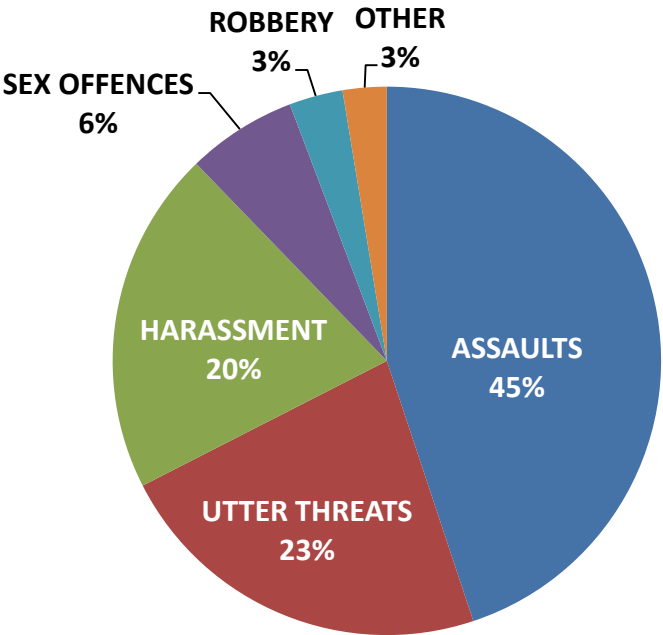


**2016-2019: PERSON CRIMES**

Person crimes have declined in number in the past three years in Port Coquitlam.

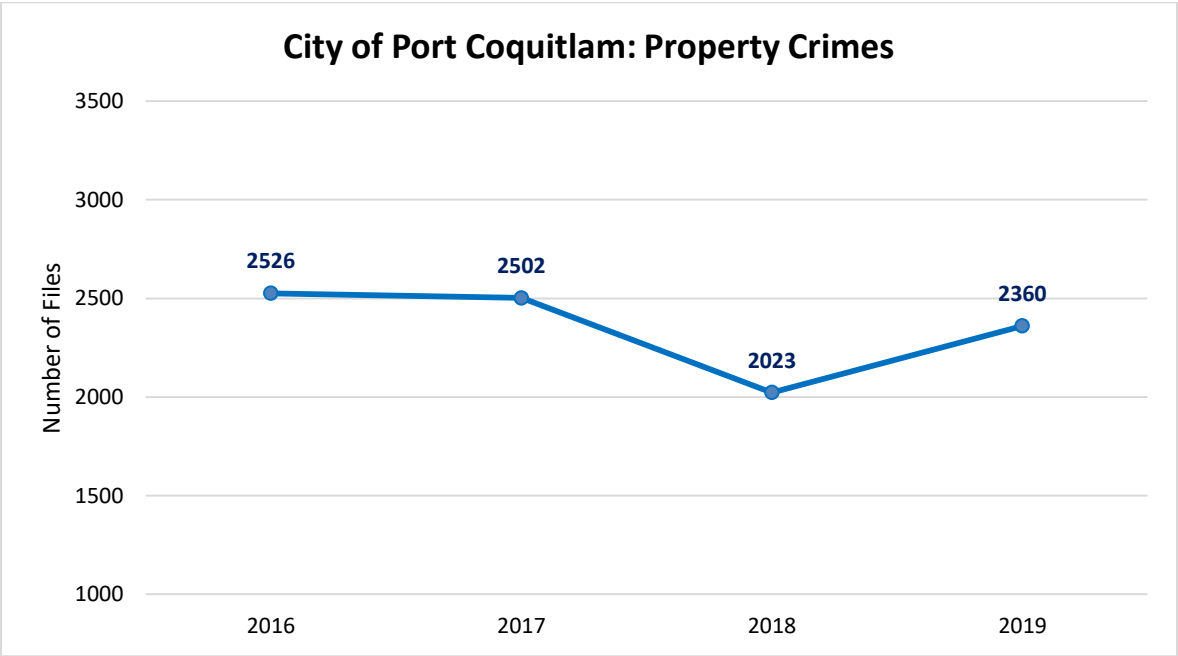




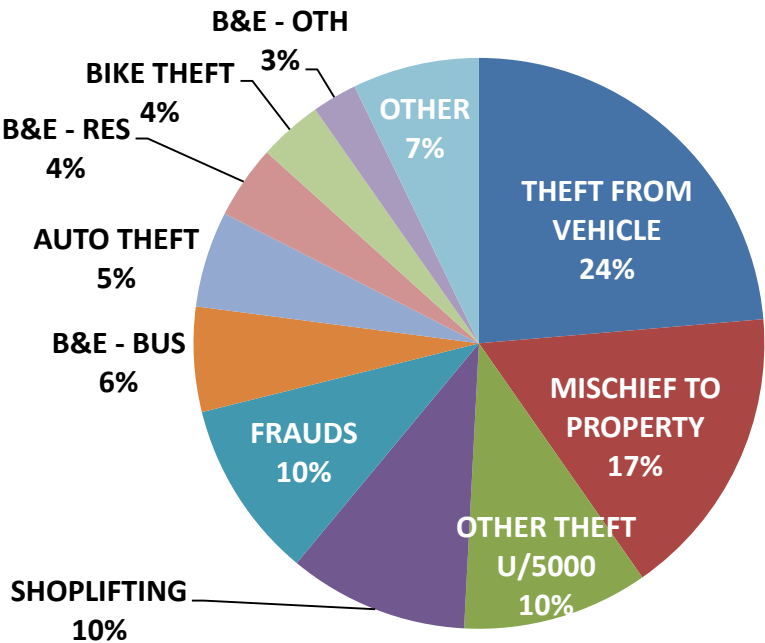


**2016-2019: PROPERTY CIMES**

After a three year decline there was an increase in the number of property crimes in 2019.





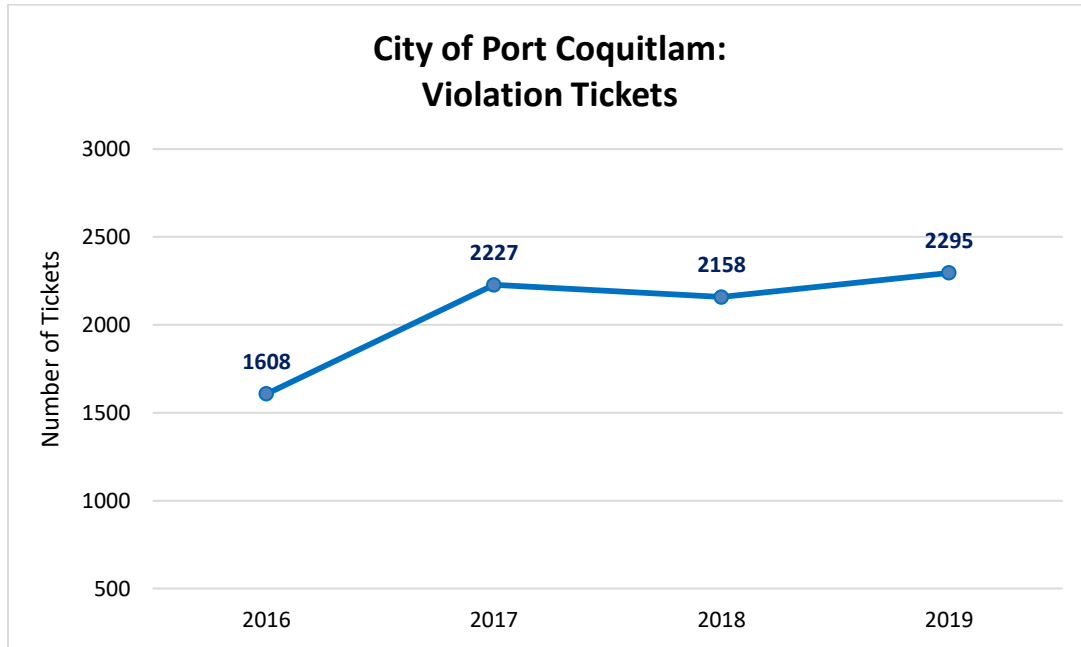






**2016-2019: VIOLATION TICKETS**

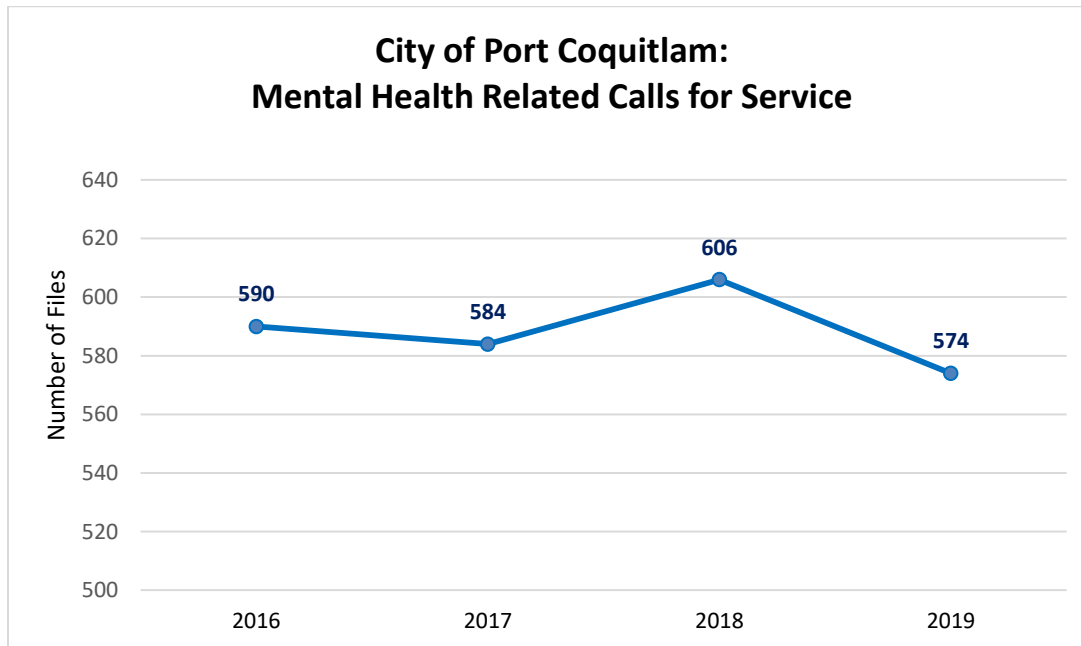
The total number of violation tickets in Port Coquitlam has remained similar in the past three years.



**2016-2019: MENTAL HEALTH-RELATED CALLS FOR SERVICE**

Mental health calls for service declined by 32 files in 2019 compared to 2018 but still remains high.





### Appendix 1: Crime Statistics

		T1	T2	T3	3-year T3 Average	% change
<b>PERSONS</b>	Assault	83	115	125	109	15%
	Family Violence	26	26	33	37	-10%
	Robbery	6	11	4	11	-65%
	Sex Offence	11	18	17	15	13%
	<b>All Persons Crimes (1000 Series)</b>	<b>216</b>	<b>248</b>	<b>240</b>	<b>253</b>	<b>-5%</b>
<b>PROPERTY</b>	B&E Business	47	48	46	42	9%
	B&E Residence	18	46	40	32	24%
	Theft From Vehicle	193	181	202	227	-11%
	Theft Of Vehicle	33	49	50	47	6%



# RCMP 2019-T3 Trimester and 2019 Annual Report: City of Port Coquitlam



	Shoplifting	91	94	72	91	-21%
	Fraud	69	92	78	92	-15%
	All Property Crimes (2000 Series)	685	877	798	827	-4%

## Appendix 2: Mental Health Calls for Service

	T1	T2	T3	3-year T3 Average	% change
Mental Health Related Files	170	208	196	183	7%
Average Hospital Wait Time (minutes)	102	114	108	117	-8%
Hospital Wait Times 2 hours +	25	29	27	32	-17%

## Appendix 3: Traffic Statistics



# RCMP 2019-T3 Trimester and 2019 Annual Report: City of Port Coquitlam



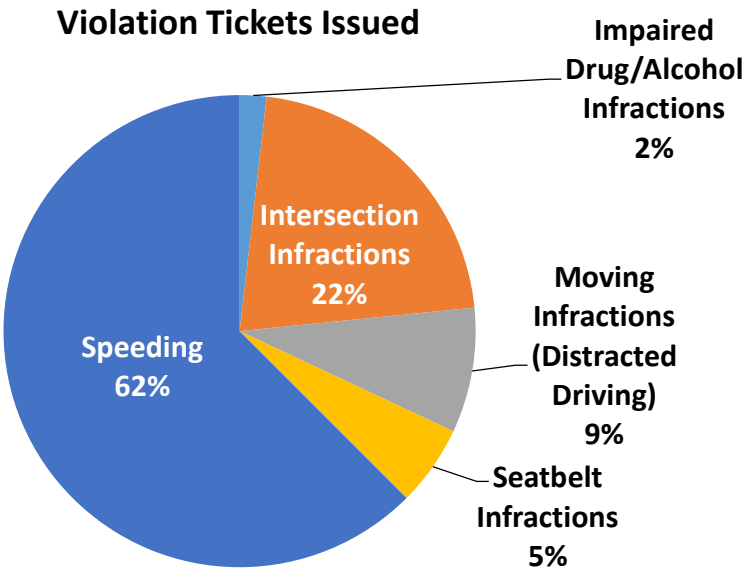
	T1	T2	T3	3-year T3 Average	% change
Speed Related Infractions	543	389	599	294	+104%
Distracted Driving (Use of Electronic Device)	59	38	47	85	-45%
Impaired Drug/Alcohol Infractions	23	32	23	21	+10%
Seatbelt Infractions	47	41	39	47	-17%
Intersection Infractions	111	181	123	107	+15%



RCMP Year in Review – Tri-City News Charts for the Detachment

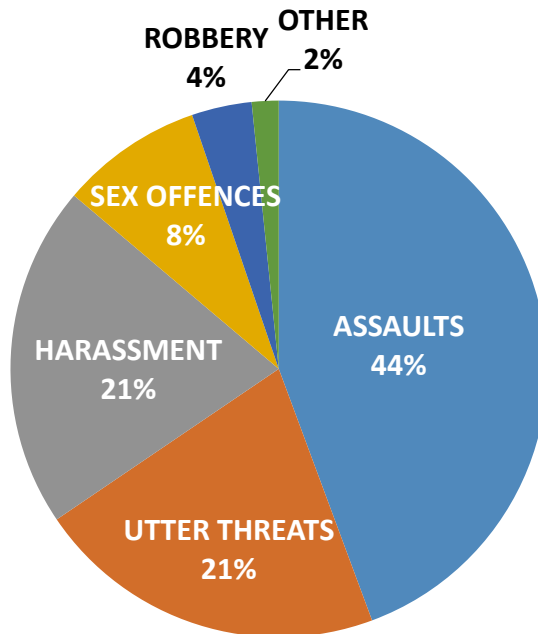
STATS & FACTS

ROAD SAFETY

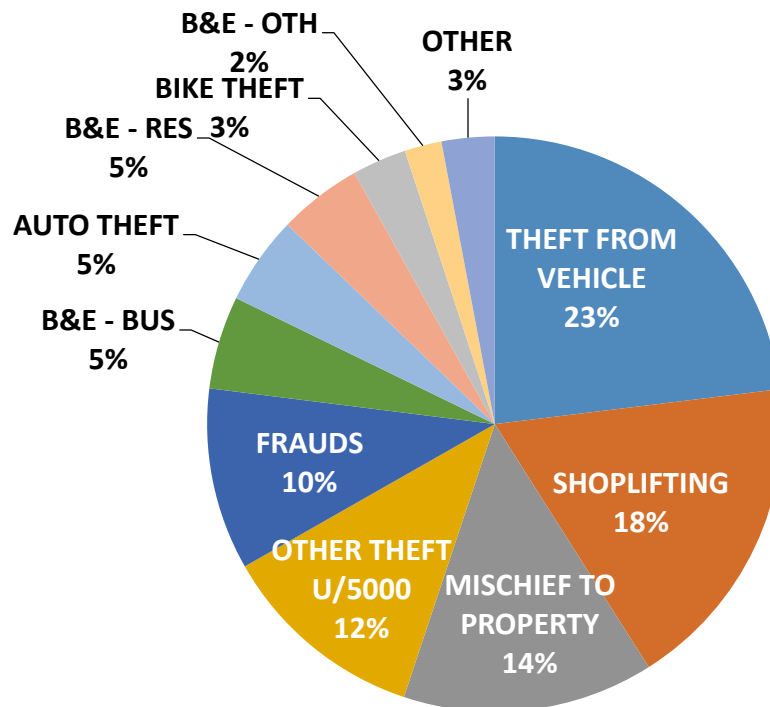


PERSON OFFENSES





#### PROPERTY OFFENSES





## Coach House Development Permit Application – 3766 Somerset Street

### RECOMMENDATION:

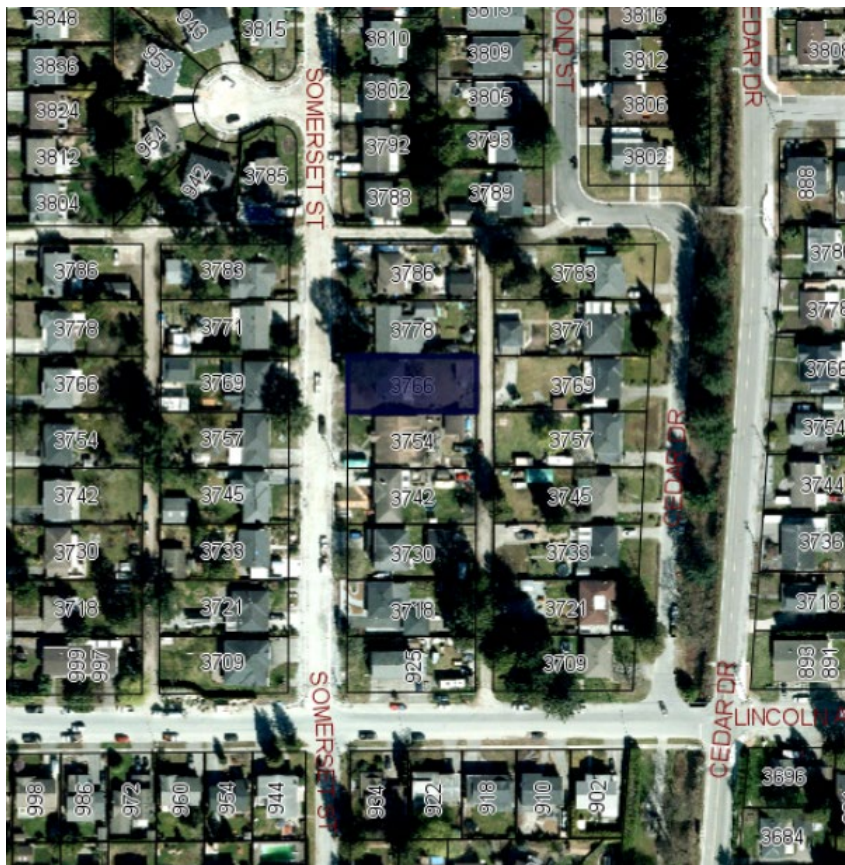
That Committee of Council approve Development Permit DP000408 to regulate a coach house development at 3766 Somerset Street.

### REPORT SUMMARY

This report describes a proposed coach house to be located at 3766 Somerset Street. The application complies with the City's guidelines and regulations and is recommended for approval.

### BACKGROUND

A two-bedroom two-storey, coach house is proposed to be developed on a large lot with an existing single residential house in a predominately single residential neighbourhood. The coach house is located at the rear of the lot and is accessed via the rear lane. Parking for the principal dwelling will be provided within the two car garage on the first floor of the building, while the coach house parking will be provided within an attached carport.



The attached summary sheet describes and illustrates how the application conforms to Zoning Bylaw regulations and Official Community Plan design landscaping, and environmental conservation guidelines.



### **DISCUSSION**

The floor area of the second floor is integrated within a sloping roof and articulated with a shed-style dormer. Also incorporated into the upper roof is a recessed balcony which is oriented to overlook onto the lane, and is designed to maximize the visual privacy between the principal residence, the adjacent neighbours and the suite itself. This also promotes more natural light to the living areas within the coach house.

The existing principal dwelling is a 1970's basement entry, 2-storey home and the coach house design is a more modern architectural style. To ensure compatibility between the two dwellings, the applicants will be coordinating building colours as well as siding orientation and shingle colour and style.

Proposed landscaping includes two planters containing various shrubs/plants that will serve to buffer the neighbouring property from the coach house and outdoor area; two existing trees will be retained and two additional trees will be planted on site between the house and the coach house. The coach house is further separated from the adjacent property to the north by a 6' high cedar fence.


The proposal conforms to Zoning Bylaw regulations and meets Development Permit guidelines; staff recommend approval.

### **PUBLIC CONSULTATION**

A development sign was posted on site at the time of application, and the owners/residents of adjoining properties have been notified of their opportunity to comment on the application at the Committee of Council meeting.

The applicants advise that, prior to applying for the Development Permit, they consulted with their immediate neighbours and no concerns were raised regarding their proposed coach house development. To date, staff have not received any feedback from surrounding residents.

### **OPTIONS**

#	Description
1 	Approve issuance of Development Permit DP000408
2	Request amendments to the application or additional information prior to a decision
3	Refuse to approve Development Permit DP000408, if Committee is of the opinion that the proposal does not comply with the OCP objectives and design guidelines. Pursuant to the Delegation Bylaw, the applicant may appeal the decision to Council

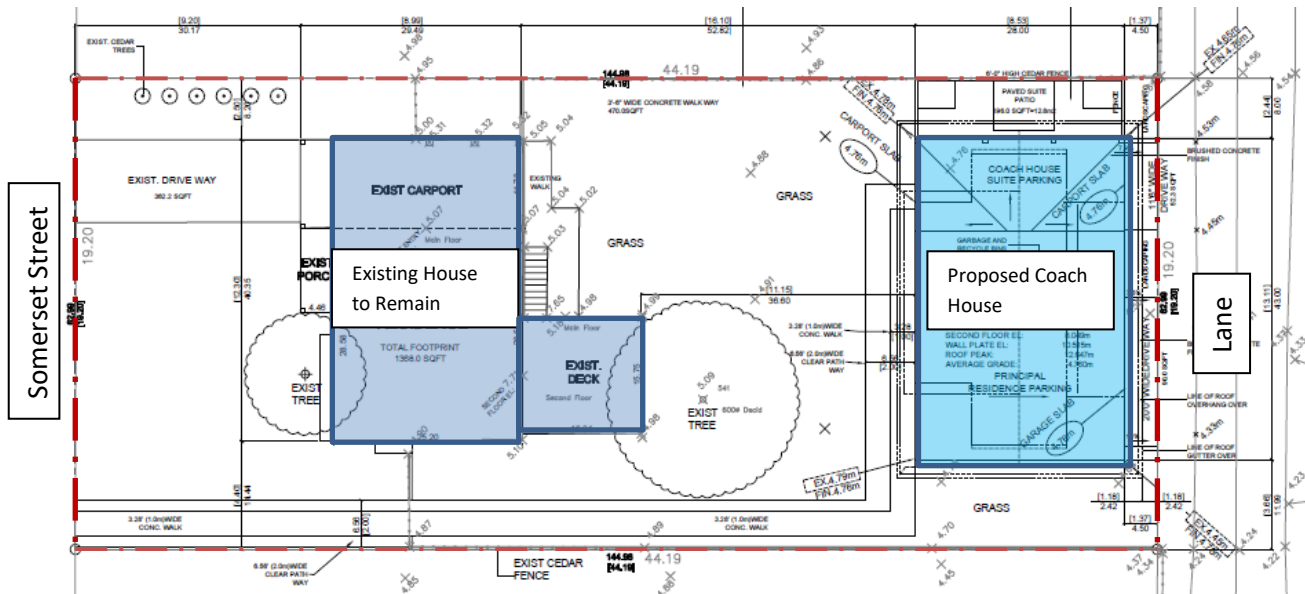
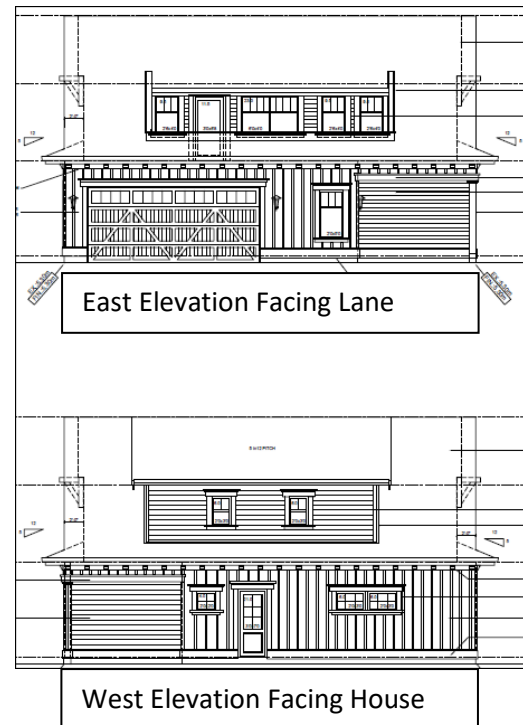
### **ATTACHMENTS**

Attachment #1: Coach House Summary Sheet

Attachment #2: Draft Development Permit with Drawings Appended and Schedule A



## Coach House Summary Sheet – 3766 Somerset Street





### Summary of Compliance with OCP Objectives & Guidelines

Guideline <sup>1</sup>	Evaluation
Scale secondary or accessory to principal dwelling	The smaller design makes the building accessory and the appearance of the coach house unit is minimised by incorporating the dwelling unit into the slope of the roof.
Design compatibility with principal dwelling	The existing house is a 2 level 70's design while the coach house is designed in the west coast craftsman style. The existing house will be revised to match the colours of the new coach house, thereby updating the exterior of the existing house.
Design promotes natural lighting and visual privacy between adjoining properties	Overlook is minimized through orientation of windows to face the lane and into the subject property.
Landscaped path to connect to street	Path connects from the coach house to the street
There are at least two trees on the lot	There are two existing trees on the site as well as cedar shrubs and trees between this property and the property to the north. An additional two trees will be planted in the rear yard between the coach house and the existing house. Two additional landscape planters and a 6' high cedar fence are being provided between the coach house car port/patio area and the adjacent property to the north.
Garbage/recycling space is provided	Enclosed within the garage
Environmental conservation components	High efficiency appliances, low-flow toilets, Energy Star rated windows, and drought tolerant landscaping

### Summary of Compliance with Zoning Bylaw Regulations

	Regulation <sup>2</sup>	Proposed <sup>3</sup>	Comments/Variations
Maximum coach house size	70 m <sup>2</sup> (753.5ft <sup>2</sup> )	70 m <sup>2</sup> (753ft <sup>2</sup> )	The lot is sufficiently large to allow for a conforming coach house.
Minimum lot size for secondary suite and coach house	740 m <sup>2</sup> (7965.3 ft <sup>2</sup> )	848.4m <sup>2</sup> (9132 ft <sup>2</sup> )	
Building height	Up to 8.5 m	7.91 m (25.9ft)	
Coach house siting:			
Distance between coach house and principal dwelling	6 m	11.15 m	
Setback from rear	1.2 m	1.37 m	
Setback from interior property line (south)	1.8 m	3.66 m	
Setback from interior property line (north)	1.8 m	2.44 m	
Private open space area	15 m <sup>2</sup>	18.2 m <sup>2</sup> (196ft <sup>2</sup> )	Patio provided outside of main entry to coach house
Lot coverage	40%	40%	
Impervious surface area	65%	42%	
On-site parking	1 space	1 space in single car carport	Parking is provided within a single car carport. The garage under the coach house provides 2 parking stalls for the main house.

<sup>1</sup> Please refer to the Official Community Plan for complete objectives and guidelines applicable to coach houses.

<sup>2</sup> Please refer to the Zoning Bylaw for complete regulations applicable to a coach house in the RS1 Zone.

<sup>3</sup> Information provided by the applicant; this information would be confirmed in issuance of a building permit.



THE CORPORATION OF THE CITY OF PORT COQUITLAM

"DEVELOPMENT PROCEDURES BYLAW, 2013, NO. 3849"

DEVELOPMENT PERMIT

NO. DP000408

Issued to: Michael Forsberg and Michelle Forsberg  
(Owner as defined in the Local Government Act,  
hereinafter referred to as the Permittee)

Address: 19860 114B Avenue Pitt Meadows BC V3Y 1N6

1. This Development Permit is issued subject to compliance with all of the Bylaws of the Municipality applicable thereto, except as specifically varied by this Permit.
2. This Development Permit applies to and only to those lands within the Municipality described below, and any and all buildings, structures and other development thereon:

Address: 3766 Somerset Street, Port Coquitlam, BC

Legal  
Description: LOT 4, SECTION 7, TOWNSHIP 40, NEW WEST  
DISTRICT, PLAN 20776

P.I.D.: 009-528-024

3. The above property has been designated as a Development Permit Area under Section 9.0 – Development Permit Area in the "Official Community Plan Bylaw, 2013, No. 3838".
4. "Port Coquitlam Zoning Bylaw, 2008, No. 3630" is varied or supplemented as follows:
  - a. The form and character of the coach house building, including the siting, height and general design, and landscaping shall be as shown on drawings numbered DP000408(1) to DP000408(7) which are attached hereto and form part of this permit.
  - b. The building and landscaping shall provide the energy conservation, water conservation and GHG emission reduction elements as shown on Schedule A to the drawings which are attached hereto and form part of this permit.
5. The following standards for landscaping are imposed:



- (a) All landscaping works and planting materials shall be provided in accordance with the landscaping plan and specifications thereon, which forms part of this permit and is attached hereto as Drawing Number DP000408(7).

6. Landscape Security

- (a) As a condition of the issuance of this permit, the security set out below is held by the Municipality prior to the issuance of a building permit to ensure satisfactory provision of landscaping in accordance with the terms and conditions as set forth in Clause 5 above. There is filed accordingly an irrevocable Letter of Credit or cash security in the amount \$2,500.00 for the purpose of landscaping.
- (b) Should any interest be earned upon the security, it shall accrue to the Permittee and be paid to the Permittee if the security is returned. A condition of the posing of the security is that should the Permittee fail to carry out the works or services as hereinabove stated, according to the terms and conditions of this permit within the time provided, the Municipality may use the security to complete these works or services by its servants, agents or contractors, and any surplus shall be paid over to the Permittee.
- (c) The Permittee shall complete the landscaping works required by this permit within six months of the final inspection for the coach house. Within the six month period, the required landscaping must be installed by the Permittee, and inspected and approved by the Municipality.

If the landscaping is not approved within the six month period, the Municipality has the option of continuing to hold the security until the required landscaping is completed or has the option of drawing the security and using the funds to complete the required landscaping. In such a case, the Municipality or its agents have the irrevocable right to enter into the property to undertake the required landscaping for which the security was submitted.

- (d) Should the Permittee carry out the works and services permitted by this permit within the time set out above, the security shall be returned to the Permittee. Should the Permittee fail to remedy any aspect of the landscaping not in accordance with the approved plan, the Municipality may deduct the cost of remedying the defect from the said deposit and recoup additional costs from the Permittee if necessary.

- 7. The land described herein shall be developed strictly in accordance with the terms and conditions and provisions of this permit and any plans and specifications attached to this permit, which shall form a part hereof.
- 8. This permit shall lapse if the Permittee does not substantially commence the construction permitted by this permit within two years of the (issuance) date of this permit.



9. The terms of this permit or any amendment to it, are binding on all persons who acquire an interest in the land affected by this permit.
10. This permit is not a building permit.

ISSUED BY THE COMMITTEE OF COUNCIL THE \_\_\_\_ DAY OF \_\_\_\_\_, 2020.

SIGNED THIS \_\_\_\_ DAY \_\_\_\_\_, 2020.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Corporate Officer

I ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THE TERMS AND  
CONDITIONS UPON WHICH THIS PERMIT IS ISSUED.

\_\_\_\_\_  
Applicant (or Authorized Agent or  
Representative of Applicant)









- NOTE:
- a) ELECTRICAL VEHICLE CHARGE- IN BOX FOR ONE PARKING SPACE PER UNIT. SEE LOCATION OF COACH HOUSE ELITE PARKING ON FIRST FLOOR PLAN
  - a) INDEPENDENT BREAKER
  - b) WITHIN 3m OF ASSOCIATED PARKING SPACE
  - c) SITE PLAN FOR LOCATION OF OUTLET
  - d) SPRINKLER SYSTEM TO BE DESIGNED, CONSTRUCTED, INSTALLED AND TESTED IN CONFORMANCE WITH NFPA 1310 INSTALLATION OF SPRINKLER SYSTEM FOR RESIDENTIAL OCCUPANCIES
  - e) PROVIDE 50/6FT LIGHTING TO THE FASCIAE FACING THE LAKE ONLY

ENTRY AREA:	37.4 SQFT
GARAGE AREA:	601.4 SQFT
CARPORT AREA:	208.0 SQFT
RECYCLING GARAGE AREA:	49.3 SQFT
TOTAL FOOTPRINT AREA:	1204.0 SQFT

**NOTE:**  
OUTSIDE DIMENSIONS REFER TO  
OUTSIDE FACE OF STUDIE INTERIE  
DIMENSIONS REFER TO INTERIE  
FACE OF STUDIE

**LEGEND:**

EXTRACT FAN/ LIGHT CONTROLS ON INTERVIEW TABLE (NOT HIGHLIGHTED)

SINGLE ALARM CO DETECTORS BY BATTERY SMOKE  
HARDWIRED AND INTERCONNECTED TO EACH ALARM IN  
BACH BEDROOM

ALL LUMINER TO BE DOUBLE FIRE RATED OR BETTER  
UNLESS NOTED OTHERWISE

CONTENT IN RED: BACH HOTEL CAN PLAN VIEW

CONTRACTOR WILL MAKE SURE THAT ROOM OPENINGS  
SIZES MEET PREPARED DRAWINGS AND DOOR SIZES

GYPSUM WALL BOARD SHALL BE WATERPROOF  
REARCE BY 1/4" HIPS ABOVE DOORS AND WINDOWS

SEE STRUCTURAL INFORMATION ON STRUCTURAL PLANS

**MINIMUM ENERGY REQUIREMENTS:**

MAXIMUM THERMAL TRANSMITTANCE  
FLOOR: 0.18  
FLOOR/CEILING: 0.40  
OUTSIDE WALL: 0.18  
FLOOR: 0.18



**oscar woodman design**  
1782 view street, port moody.  
british columbia . V3H3Y2  
604-937-7640

project title  
RESIDENCE-  
FORSBERG  
Proposed Coach House

3766 SOMERSET AVE  
PORT COQUITLAM, B.C.

sheet title

### First/Second Floor Plan

First Floor Area: 1204.00 SQ'  
Garage Area: 801.40 SQFT

Date: 17 Jun 2019 issue-revision:

job no.

drawn: Tamas chkd.

scale 1/4" = 1'-0"

sheet no.

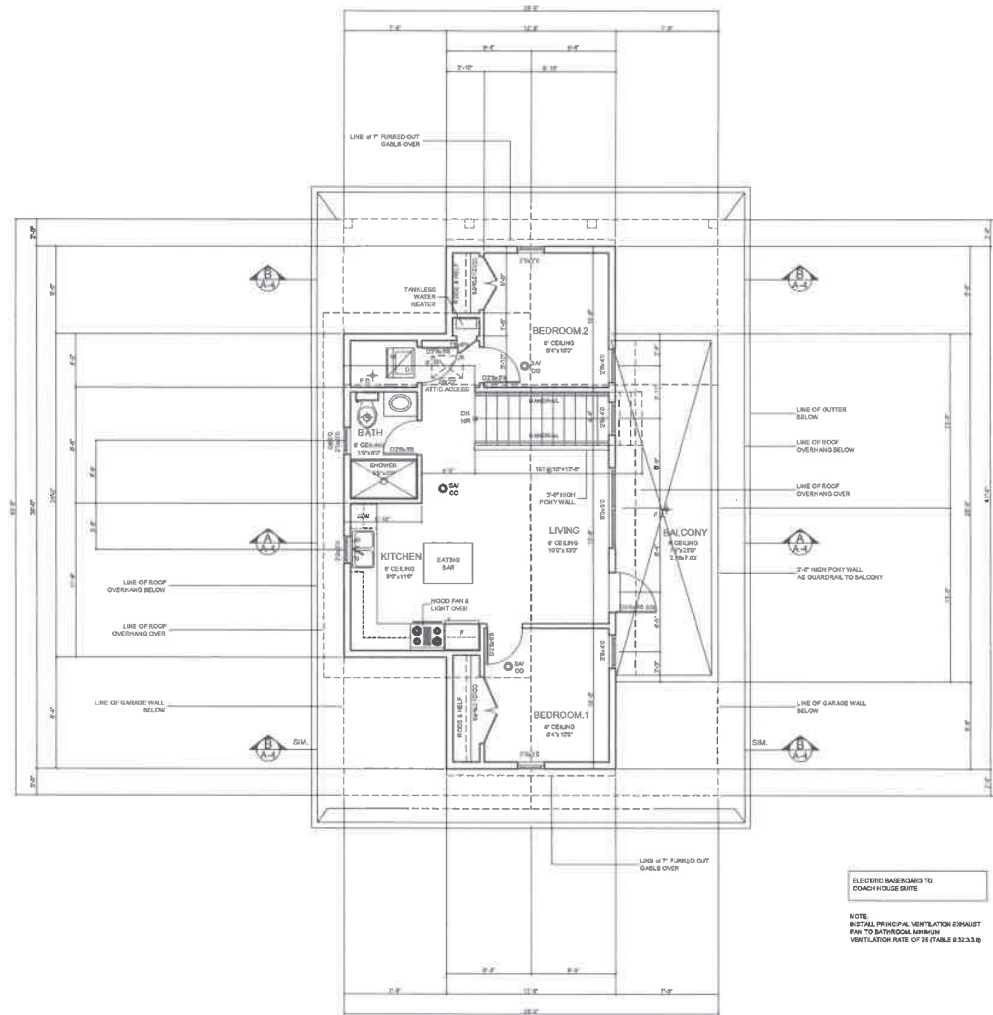
A2



of 7

D000408(2)





SECOND FLOOR PLAN  
AREA: 669.0 SQFT



oscar woodman design  
1782 view street, port moody.  
british columbia . V3H3Y2  
604-937-7640

project title  
**RESIDENCE-  
FORSBERG**  
**Proposed Coach House**  
3766 SOMERSET AVE,  
PORT COQUITLAM, B.C.  
sheet title

**Second Floor Plan**  
Second floor Area: 667.0 SQFT

Date: 17 Jun 2019 issue-revision:  
job no.  
drawn: Tamas chkd.  
scale 1/4" = 1'-0"  
sheet no.



**A3**

of 7

D000408(3)



NOTES:  
ALL DIMENSIONS IN MILLIMETERS  
UNLESS OTHERWISE STATED

① ROOF: NORMAL SHINGLES

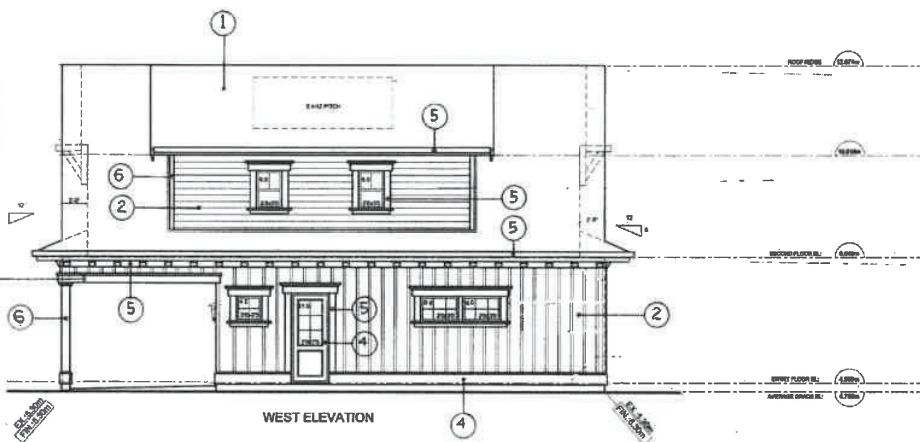
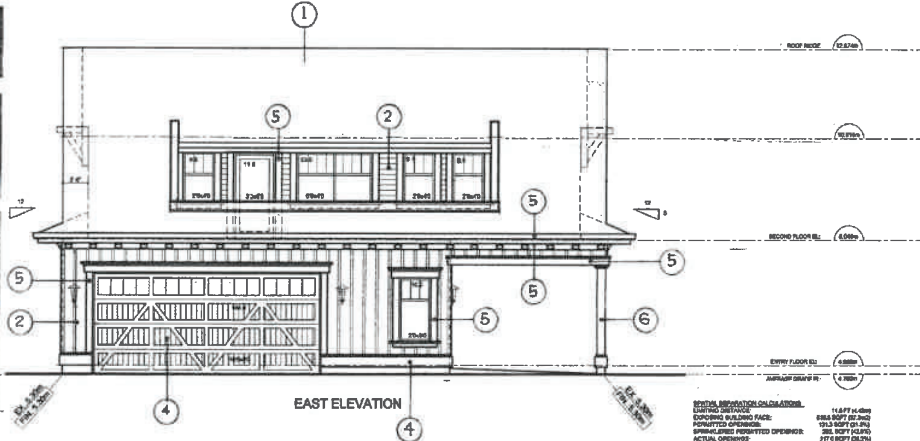
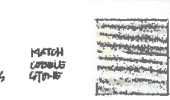
② HARDIE WALL SIDING  
HORIZONTAL & VERTICAL

③ HARDIE WALL SHINGLE

④ GARAGE DOOR  
EXTERIOR SHINGLE DOORS  
BASE TRIM TO EXTERIOR WALLS

⑤ WINDOWS,  
WINDOW TRIM  
DOOR TRIM  
SOFFIT DENTIL CROWN  
PASCIA BOARDS  
GUTTER

⑥ CORNER TRIM  
POSTS.



NOTES:  
ALL DIMENSIONS IN MILLIMETERS  
UNLESS OTHERWISE STATED

NOTES:  
ALL DIMENSIONS IN MILLIMETERS  
UNLESS OTHERWISE STATED



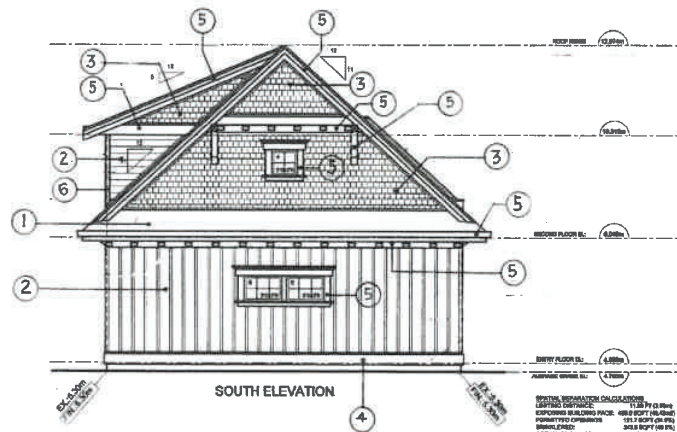
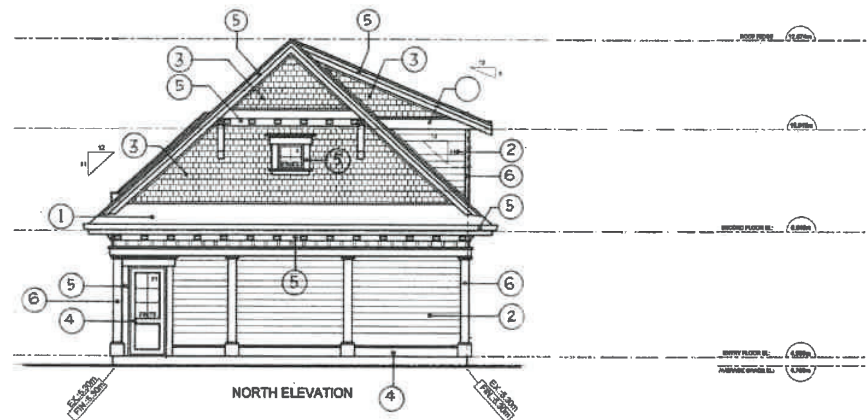
oscar woodman design  
1782 view street, port moody.  
british columbia . V3H5Y2  
604-637-7840

project title  
**RESIDENCE-  
FORSBERG**  
Proposed Coach House  
3708 SOMERSET AVE  
PORT COQUITLAM, B.C.  
sheet title  
**Elevations**  
North Elevation  
South Elevation

Date: 17 Jun 2019 issue-revision:  
job no.  
drawn: Tames chkd.  
scale 1/4" = 1'-0"  
sheet no. **A5**

D000408(4)





oscar woodman design  
1782 view street, port moody,  
british columbia . V3H3Y2  
604-837-7840

project title  
**RESIDENCE-  
FORSBERG**  
Proposed Coach House  
3780 SOMERSET AVE  
PORT COQUITLAM, B.C.  
sheet title  
**Elevations**  
East Elevation  
West Elevation

Date: 17 Jun 2019 issue-revision:  
job no.  
drawn: Tamas chkd.  
scale 1/4" = 1'-0"  
sheet no.

A6

of 7

DP000408(5)



① ROOF: ASPHALT SHINGLES  
EXISTING.



② CEDAR WALL SIDING.  
STUCCO.



④ EXTERIOR SINGLE DOORS.  
WINDOW SHUTTERS.



⑤ EXISTING WINDOWS,  
EXISTING GUTTER/FASCIA.  
EXISTING POSTS.



oscar woodman design  
1762 view street, port moody.  
british columbia . V3H3Y2  
604-937-7840

project title

**RESIDENCE-  
FORSBERG**  
Proposed Coach House

3786 SOMERSET AVE  
PORT COQUITLAM, B.C.

sheet title

FRONT VIEW OF EXISTING  
PRINCIPAL RESIDENCE.

Date: issue-revision:

job no.

drawn: chld.

scale

sheet no.

of 7

DP000403(6)



PLANTER BOXS (1-2)  
 V - Roseg low  
 R - Rhododendron

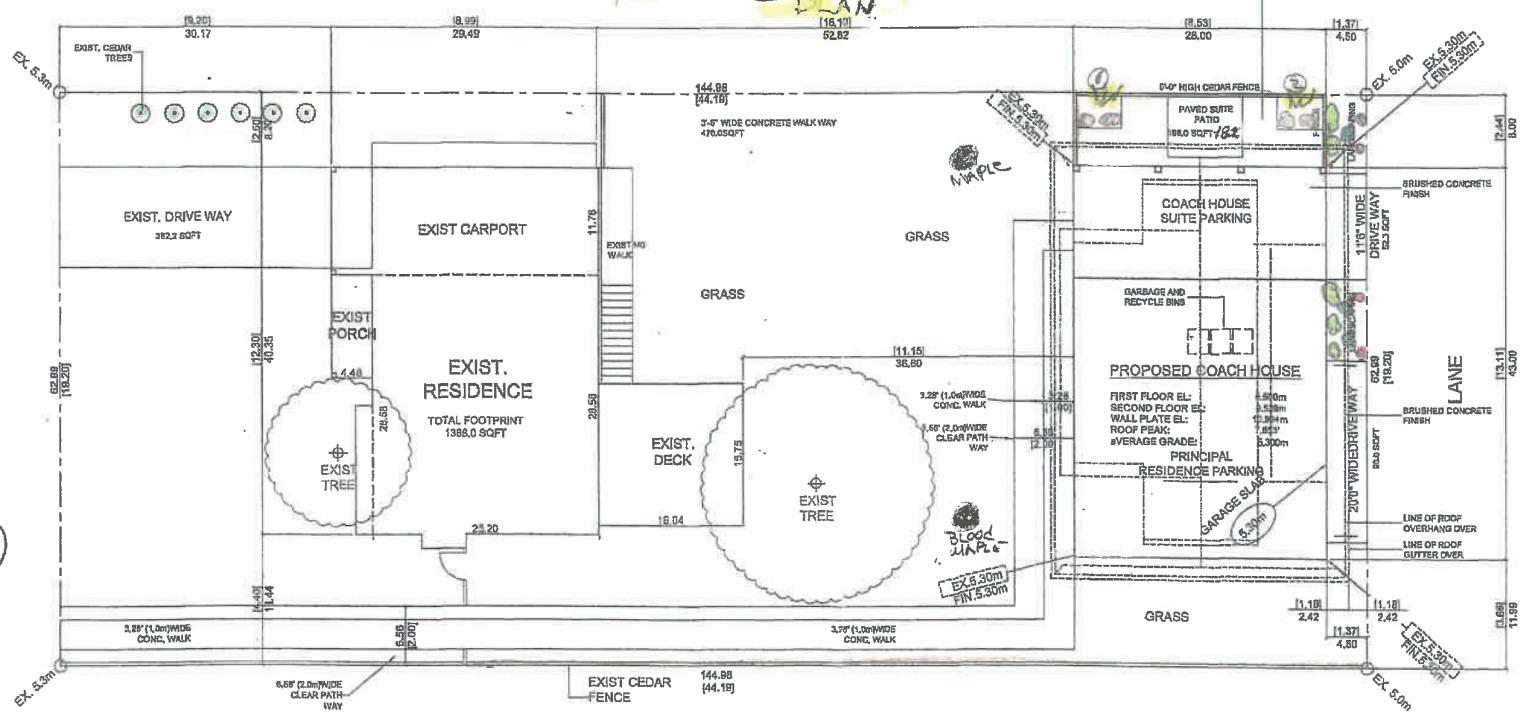
- ✿ - AZALEZ
- ✿ - Concord
- ✿ - Midgit Cedar
- ✿ - NEW TREES X2

— FENCE

- LEGEND**
- 188.885m EXIST. GRADE EL.
  - FIN GRADE EL.
  - TOP OF CONC. SLAB
  - TOP OF CONC. FOUNDATION WALL EL.
  - TOP OF FLOOR EL.
  - DIRECTION OF DRAINAGE

NEW PROPOSED LANDSCAPING PLAN

NOTE:  
 - ADDRESS OF THE COACH HOUSE TO BE DISPLAYED FROM THE LANE AND THE STREET  
 - PROVIDE SODDIT LIGHTING TO THE PARADE FACING THE LANE ONLY



oscar woodman design  
 1782 view street, port moody.  
 british columbia . V3H3Y2  
 604-937-7640

project title  
**RESIDENCE-  
 FORSBERG**  
 Proposed Coach H

3766 SOMERSET AVE,  
 PORT COQUITLAM, B.C.

sheet title  
**Site Plan**

Date: 17 Jun 2019 Issue-revisi  
 Job no.  
 drawn: Tamas chkd.  
 scale 1/8"= 1'-0"  
 sheet no.

**A1**

of 6

3766 SOMERSET STREET



18000.908(7)



### Schedule A

**Energy Conservation:**

Conservation Measure	Verification Method
Energy Star rated windows	BP stage; written confirmation by applicant along with staff review of BP submission
LED Light Fixtures	BP stage; written confirmation by applicant along with staff review of BP submission

**Water conservation:**

Conservation Measure	Verification Method
Low flow toilets	BP stage; written confirmation by consultant along with staff review of BP submission

**GHG Reduction:**

Conservation Measure	Verification Method
Accessible storage space for garbage, recycling and organic waste will be provided	DP and BP stage; staff review of building plans

per OCP Sec. 9.11 Environmental Conservation DPA designation



[REDACTED]

---

**Subject:**

FW: Coach Home for 3766 Somerset Street

-----Original Message-----

From: [REDACTED]

Sent: Monday, April 6, 2020 8:54 AM

To: Lisa Grant

Subject: Coach Home for 3766 Somerset Street

Dear Lisa,

I am the neighbour to the [REDACTED] of this property. I have a few requests in response to your notice of development permit. We have owned our home/property since [REDACTED] and purchased this home in large part for the privacy and peacefulness that the size of this lot offers. This development drastically changes the feel of our property. With that I'm mind, we hope for the following;

-Copy of the layout plans

-Land surveyor reports.

-Copy of any/all changes to the development permit -Fence dividing property to be constructed on the property making application for change.

The fence be constructed with the same materials and specifications as the Coach Home off Sussex Avenue, Port Coquitlam.

-Future maintenance and replacement of the fence will be done in a timely manner and cost born by the said property owner.

Thank you in advance for considering our above request.

[REDACTED]  
[REDACTED]  
Port Coquitlam, BC

[REDACTED]  
[REDACTED]

Sent from my iPhone



**RECOMMENDATION:**

That Committee of Council recommend to Council to:

1. Authorize the Mayor and Clerk to execute on behalf of the City of Port Coquitlam an agreement with the City of Coquitlam for the maintenance of municipal boundary locations described in the attached document titled "Coquitlam/Port Coquitlam Infrastructure Maintenance and Cost Sharing Agreement;" and
2. Pursuant to Section 13 of the Community Charter, SBC 2003, C26, consent to the City of Coquitlam providing maintenance services in Port Coquitlam as described in the agreement.

**PREVIOUS COUNCIL/COMMITTEE ACTION**

This item was included in the 2019 corporate work plan.

**REPORT SUMMARY**

The purpose of this report is to seek Council's authorization to execute an agreement with the City of Coquitlam to share duties and costs related to the operation and maintenance of municipal assets along municipal boundaries.

**BACKGROUND**

The Cities of Coquitlam and Port Coquitlam share extensive municipal boundaries, with the most recognized section being Westwood Street. Although Westwood Street is a relatively straight forward municipal boundary, there are many other sections of the municipal boundary that are more complex.

Although there is an existing intermunicipal agreement between the cities that was executed in 1976 the considerable growth and increased infrastructure that has been installed in the past 44 years has left the agreement somewhat outdated.

Having an updated agreement is important for several reasons, including:

- Increasing efficiencies and effectiveness of crews performing work by eliminating crews performing similar work in the same locations
- Ensuring that no assets (surface and subsurface) are being overlooked for required maintenance activities
- Reducing potential liabilities on both cities by having clearly defined responsibilities.
- Fairness and equity of associated costs



## **DISCUSSION**

The intermunicipal agreement has a 5 year term with a 6 month termination clause for either party, and addresses all jurisdictional boundaries. The agreement covers all assets along these boundaries, with the most complex boundary being Westwood Street.

### **Westwood Street:**

Westwood Street is comprised of a number of assets including roads, sidewalks, medians, traffic signals, etc. Some of these assets, such as medians and traffic signals, are shared assets as they are located on both sides of the municipal boundary (which for the most part goes down the centre of Westwood Street), and in the case of traffic signals, work in conjunction on both sides of the boundary. Other assets such as road surfaces and sidewalks are non-shared assets and are clearly delineated as to which municipality is responsible for the maintenance.

For consistency and optimization of signal timing, Coquitlam will assume responsibility for the operation and maintenance of all the traffic signals on Westwood Street, with the exception of the signal at Kingsway Avenue, which will be shared responsibility due to the railway crossing in Port Coquitlam. With respect to maintaining the centre median islands, Coquitlam will provide maintenance North of Lougheed Highway and Port Coquitlam will provide maintenance South of Lougheed Highway. All costs are balanced between the two, except for the operation and maintenance of signals. Therefore Coquitlam will invoice Port Coquitlam for these services as outlined in Schedule B of the agreement (see attachment 1).

### **Other boundaries:**

The remainder of the proposed agreement covers details of assets along the remaining municipal boundaries, along with delegation of maintenance responsibilities. These assets are not only surface assets, but also utility assets which in several cases serve one of the cities, but ultimately exist or terminate in the other city. In some of these cases, it has been determined that it is more cost effective to have responsibility for maintenance of the assets completed by the city that is served by the asset, which results in crews from that city working in the other city.

As another example, there are several areas where due to road configurations; it is more efficient for crews from one city to perform snow clearing operations on short road segments in the other city (ex. the dead end of Devon Road which is in Coquitlam, but only accessible through Port Coquitlam). All of these specific details are outlined in Schedule A of the agreement.

In addition, the level of service for each class of infrastructure is included in Schedule C of the Agreement. While Port Coquitlam and Coquitlam's service levels are very closely aligned, it was determined that adoption of one municipality's service level would be most appropriate to ensure consistency along corridors.




## Port Coquitlam/Coquitlam Intermunicipal Maintenance Agreement

It should be noted that Coquitlam Council has approved the City of Port Coquitlam providing maintenance services in Coquitlam as outlined in the agreement.

### **FINANCIAL IMPLICATIONS**

The proposed agreement is not anticipated to have any significant changes to Port Coquitlam's current costs and largely aligns with current practices. Costs of maintaining the intermunicipal assets as outlined in the proposed agreement will be borne by the city designated as being responsible for them.

### **OPTIONS** (✓ = Staff Recommendation)

	#	Description
	1	Authorize the Mayor and Clerk to execute on behalf of the City of Port Coquitlam an agreement with the City of Coquitlam for the maintenance of assets on Westwood Street and other municipal boundary locations described in the attached document titled "Coquitlam/Port Coquitlam Infrastructure Maintenance and Cost Sharing Agreement"
	2	Defer back to staff to incorporate changes as identified by Committee of Council
	3	Other

### **ATTACHMENTS**

Att#1: Coquitlam/Port Coquitlam Infrastructure Maintenance Agreement

**Lead author(s):** Dave Kidd



**COQUITLAM / PORT COQUITLAM**  
**INFRASTRUCTURE MAINTENANCE AND COST**  
**SHARING AGREEMENT**

THIS AGREEMENT made as of the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_.

BETWEEN:

**CITY OF COQUITLAM**, a Municipal Corporation  
3000 Guildford Way  
Coquitlam, B.C. V3B 7N2  
("Coquitlam")

OF THE FIRST  
PART

AND:

**CITY OF PORT COQUITLAM**, a Municipal Corporation  
2580 Shaughnessy Street  
Port Coquitlam, B.C. V3C 2A8  
("Port Coquitlam")

OF THE SECOND

PART

WHEREAS:

- A. Municipal infrastructure straddles and/or traverses the jurisdictional boundary between Coquitlam and Port Coquitlam;
- B. The jurisdictional boundary between Coquitlam and Port Coquitlam is variable and encompasses a number of roads and municipal infrastructure;
- C. Coquitlam and Port Coquitlam (together the "Municipalities" and individually a "Municipality") wish to share responsibility for the maintenance of municipal infrastructure that straddle and/or traverse the Municipalities and are entering into this Agreement to better define each party's responsibilities regarding the Maintenance of the infrastructure;

NOW THEREFORE in consideration of the premises and the mutual covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Municipalities agree as follows:

**DEFINITIONS**



1. In this Agreement, the following words have the following meaning:

“Agreed Boundaries” means the road segments described in Schedule “A” that form the boundaries between the Municipalities;

“Assets” means the municipal infrastructure assets described in Schedule “A”;

“Maintenance” means all surface repairs, utility repairs, inspections, repaving, sanding, salting, snow removal, street cleaning, landscaping, line painting, grass cutting, litter clean-up, signal relamping and testing, and similar type of maintenance work must be completed as described in Schedule “C”;

“Street Lighting” means street lighting poles, luminaires, conduits, service panels and all associated wiring;

“Traffic Signals” means all existing traffic and pedestrian signals identified in Schedule “B”, including the signal controller and cabinet, all signal poles and heads, wiring and power supply (including UPS if so equipped), detection equipment (vehicle, pedestrian and pre-emption), communication systems (radios and fibre optics and switches), illuminated signs and all equipment required to operate the signal at that location;

“Utilities” means all existing water mains and services, sanitary mains and services, storm mains and services including inspection chambers and ditches, outfalls, manholes, headwalls, catch basins, catch basin leads.

## **TERM**

2. This Agreement will commence on \_\_\_\_\_, 2020 and will continue in full force and effect for five (5) years until \_\_\_\_\_, 2025, subject to earlier termination pursuant to the terms of this Agreement.

## **MAINTENANCE RESPONSIBILITIES & AUTHORIZATION**

3. During the term of this Agreement, the Municipalities agree that:

(a) Maintenance of the Street Lighting on either side of the Agreed Boundaries and the costs associated with the operation of Street Lighting will be the responsibility of the Municipality in which the Street Lighting is located;



- (b) Maintenance of the existing Signals identified in Schedule “B”, will be the responsibility of Coquitlam, and Coquitlam may invoice Port Coquitlam for the actual cost of Maintenance in accordance with section 7 with the exception of the traffic signal at Westwood/Kingsway;
  - (c) Maintenance of the Assets will be the responsibility of the Municipality (or both Municipalities) as identified in Schedule “A”, except that any Assets that straddle the Agreed Boundaries may, where it is considered expedient, be undertaken by either party provided that authorization and agreement to pay the costs associated with such Maintenance is obtained in writing, in advance, from the party that owns the Asset in question. If authorization is not obtained, the party that owns the Asset is under no obligation to pay any costs associated with such Maintenance and the party that does not own the Asset is under no obligation to undertake the Maintenance.
4. Coquitlam and Port Coquitlam hereby reciprocally grant, each to the other, their respective contractors, sub-contractors, employees, agent and officials the right to enter, labour, pass, repass, work and be in, on, under and over the other’s property with or without vehicles, tools, supplies, materials and equipment for the purposes of carrying out their respective Maintenance responsibilities as outlined in section 3(a) though (c) of this Agreement.
  5. Coquitlam and Port Coquitlam agree to perform their respective Maintenance obligations:
    - a. in accordance with all applicable statutes, regulations and bylaws;
    - b. in accordance with sound engineering and construction practices, in a good and workmanlike manner;
    - c. to a standard equivalent to that which each of the Municipalities maintains for a similar class of road;
    - d. in a manner that will not interfere with, injure, or impair the operating efficiency of the Asset;
    - e. in a manner that will not require the excavation or drilling of the Asset owned by the other party without first obtaining the written consent of the owning party, which consent will not be unreasonably withheld; and



- f. with respect to Utilities, and Assets by adhering to the Levels of Service Specification attached as Schedule “C”.

#### **TRAFFIC SIGNAL TIMING**

6. Notwithstanding anything to the contrary in this Agreement, Coquitlam, as part of its responsibility for Maintenance of Traffic Signals as described in section 3(b), may make minor adjustments to the operation and timing of the Traffic Signals where necessary to facilitate the flow of traffic, but signal timing plans for all Traffic Signals will be subject to mutual approval by the Municipalities.

#### **COST ALLOCATION & INVOICE ITEMIZATION**

7. The cost of Maintenance associated with any Traffic Signals will be invoiced 50/50 for a four-legged intersection and 66/33 for a “tee” intersection depending on the intersection configuration. The invoice will be itemized separating electrical charges from Maintenance in accordance with section 11.
8. The costs associated with Maintenance responsibilities as described in section 3(c) will be borne solely by the Municipality responsible for such Maintenance and there will be no reconciliation of costs unless the Municipalities mutually agree otherwise.
9. The Municipalities agree that, notwithstanding the location of the dividing line, the cost of Maintenance associated with the Assets should be borne by the Municipality responsible for such Maintenance and there will be no reconciliation of costs unless the Municipalities mutually agree otherwise.
10. The Municipalities agree that any costs payable in connection with this Agreement will be invoiced on a quarterly basis and be payable within sixty (60) days of receipt.
11. Any invoice delivered by one Municipality to the other will be itemized and include the following:
  - (a) labour based on wage rates plus benefits and other compensation;
  - (b) material and equipment;
  - (c) payments to contractors;



(d) electricity costs for the Traffic Signals;

(e) normal overhead charges calculated at the prevailing rate of the invoicing Municipality, to a maximum of 20%;

(f) all applicable taxes including any Goods and Services Tax payable.

#### **APPROVALS AND DOCUMENTATION**

12. Each party agrees to obtain any permits, approvals or other authorizations required for the completion of their respective Maintenance obligations in advance of undertaking the Maintenance, and to provide evidence of such permits, approvals or authorizations at the request of the other party and within 7 days.

#### **DEFAULT AND INDEMNITY**

13. If either party is in default of any of its obligations under this Agreement, then the non-defaulting party must give written notice of such default to the defaulting party and the latter will have 10 business days in which to rectify the default, except in the case of an emergency the defaulting party will promptly rectify the default. If the default is not rectified within the 10 day period or promptly in the case of an emergency, then, and without limiting any other remedy which it may have, the non-defaulting party will have the right, but is not obligated, to remedy any such default. This may include taking any action necessary to cure the default and such things as may be incidental thereto. The defaulting party will reimburse the non-defaulting party for any expenses incurred by the non-defaulting party required to remedy the default. The non-defaulting party will not incur any liability to the defaulting party for any action or omission in the course of its remedying or attempting to remedy any such default unless such act amounts to intentional misconduct or gross negligence on the part of the non-defaulting party.
14. Except as provided in section 13 of this Agreement, Coquitlam will indemnify and hold harmless Port Coquitlam and its employees and agents from and against all losses, damages, debts, costs, expenses, action, causes of action, claims, demands and judgments (collectively referred to in this section as "Losses") suffered or incurred by Port Coquitlam, or made or instituted by any person against Port Coquitlam, in any way connected with this Agreement as a result of Coquitlam's failure to carry out the Maintenance obligations set out herein, or any Losses



caused by the negligent performance by Coquitlam of its Maintenance obligations pursuant to this Agreement. This indemnity will survive the expiry or termination of this Agreement.

15. Except as provided in section 13 of this Agreement, Port Coquitlam will indemnify and hold harmless Coquitlam and its employees and agents from and against all losses, damages, debts, costs, expenses, action, causes of action, claims, demands and judgments (collectively referred to in this section as "Losses") suffered or incurred by Coquitlam, or made or instituted by any person against Coquitlam, in any way connected with this Agreement as a result of Port Coquitlam's failure to carry out the Maintenance obligation set out herein, or any Losses caused by the negligent performance by Port Coquitlam of its Maintenance obligations pursuant to this Agreement. This indemnity will survive the expiry or termination of this Agreement.

#### **DISPUTE RESOLUTION**

16. If any dispute as to the intent of this Agreement should arise between the Municipalities, such dispute will be formalized by written notice delivered by one party to the other, and upon receipt of such notice, the General Manager or Director Engineering for each Municipality will meet within ten (10) business days to attempt to resolve the dispute.

#### **TERMINATION & NOTICE**

17. Either party may terminate this Agreement at any time upon giving the other party six (6) months written notice of such termination and no compensation shall be payable by either party on account of such termination. Notwithstanding the above, any costs payable by either party to the other as a result of or incidental to any Maintenance work completed prior to the effective date of the termination shall continue to be due and owing and shall survive the termination of this Agreement.
18. Any notice, approval or request given under this Agreement may be delivered by mailed by prepared registered mail from any post office in British Columbia and in the case of Coquitlam addressed to it at:

City of Coquitlam  
3000 Guildford Way  
Coquitlam, B.C. V3B 7N2  
Fax: (604) 927-3505



Attn: City Clerk, with a copy to the General Manager, Engineering and Public Works

and in the case of Port Coquitlam addressed to it at:

City of Port Coquitlam  
2580 Shaughnessy Street  
Port Coquitlam, B.C. V3C 2A8  
Fax: 604 xxx-yyyy

Attn: City Clerk, with a copy to the Director Engineering

or at such other address as the Municipalities may from time to time advise by notice in writing. The date of receipt of any such notice, approval or request shall be deemed to be the date of delivery of such notice, approval or request if served personally or by facsimile, or on the third business day next following the date of such mailing if mailed, provided that if mailed should there be, between mailing and the actual receipt of such notice, approval or request, a mail strike, slowdown or other labour dispute which might affect the delivery of such notice, approval or request, such notice, approval or request shall only be affected if actually delivered.

## **MISCELLANEOUS**

19. If any portion of any section of this Agreement or if any section of this Agreement is declared by a court of competent jurisdiction to be void or unenforceable then that portion of that section or that section shall be severed from the balance of this Agreement and the balance of this Agreement shall survive and be enforceable.
20. Neither party may assign this Agreement or any of its rights hereunder without the prior written consent of the other, which consent will not be unreasonably withheld.
21. This Agreement shall be binding upon the parties and their respective successors, administrators and permitted assigns.
22. This Agreement may be modified if mutually agreed upon in writing by both Municipalities.



23. This Agreement will be governed by and construed in accordance with the laws of the Province of British Columbia and the Municipalities agree to attorn to the courts of British Columbia.
24. This Agreement may be executed in counterpart and delivered personally, by mail, or by electronic means.
25. The parties to this Agreement will do and cause to be done all things and execute and cause to be executed all documents which may be necessary to give proper effect to the intention of this Agreement.
26. The Municipalities acknowledge and agree that no failure on the part of either party hereto to exercise and no delay in exercising any right under this Agreement will operate as a waiver thereof nor will any single or partial exercise by either party of any right under this Agreement preclude any other or future exercise thereof or the exercise of any other right. The remedies in this Agreement provided will be cumulative and not exclusive of any other remedies provided by law and all remedies stipulated for either party in this Agreement will be deemed to be in addition to and not, except as expressly stated in this Agreement, restrictive of the remedies of either party hereto at law or in equity
27. Nothing contained or implied in this Agreement shall fetter in any way the discretion of the Municipalities or the Councils of the Municipalities. Further, nothing contained or implied in this Agreement shall derogate from the obligations of each Municipality under any other agreement with the other Municipality or, if a Municipality so elects, prejudice or affect that Municipality's rights, powers, duties or obligation in the exercise of its functions pursuant to the *Community Charter* or the *Local Government Act*, as amended or replaced from time to time, or act to fetter or otherwise affect that Municipality's discretion, and the rights, powers, duties and obligations of that Municipality under all public and private statutes, by-laws, orders and regulations, which may be, if that Municipality so elects, as fully and effectively exercised as if this Agreement had not been executed and delivered by the Municipalities.

IN WITNESS WHEREOF the Municipalities hereto have executed this Agreement as of the day and year first above written.

**CITY OF PORT COQUITLAM**



Per: \_\_\_\_\_

\_\_\_\_\_  
Name:

Title:

## **CITY OF COQUITLAM**

Per: \_\_\_\_\_

\_\_\_\_\_  
Name:

Title:



## SCHEDULE "A"

## Port Coquitlam / Coquitlam Municipal Infrastructure Asset Inventory

<u>Road Segment No.</u>	<u>Road Name</u>	<u>From</u>	<u>To</u>	<u>Details</u>	<u>Area of Pavement (Sq m)</u>	<u>Length of Sidewalk (LnM)</u>	<u>Notes</u>	<u>Utility Notes</u>		
1	Pitt River Road	Municipal Boundary, middle of Coquitlam River	Lougheed Highway	Both directions including pavement, signage, boulevards and sidewalks.	4,610	671	Located in Coquitlam, but currently Maintained by Port Coquitlam, no change proposed	None.		
2a	Westwood Street	Kingsway Intersection	Municipal Boundary just south of Lincoln Avenue	N/B Direction	12,614	1,114	Located in Port Coquitlam, currently maintained by Port Coquitlam, proposed both municipalities maintain.	Asset	Maintain By	Map ID
								Storm main in Port Coquitlam from Lougheed Hwy to Anson Ave	Port Coquitlam	Segment 2 Map 1
								Storm main and outfall crossing Westwood St @ Davies / CP Rail	Coquitlam	Segment 2 Map 2
								Ditch on Davies is a shared asset and is in Port Coquitlam.	Port Coquitlam	Segment 2 Map 2
								Storm main and outfall at Westwood / Kingsway	Port Coquitlam	Segment 2 Map 3
								All CB's and Leads maintained by respective municipality based on location of CB.	Both	
								All sanitary infrastructure maintained by the municipality it is located in.	Both	
								All water infrastructure maintained by the municipality it is located in with the exception of Port Coquitlam's connections to Metro Vancouver, Westwood @ Kingsway	Port Coquitlam	Segment 2 Map 4
								Centre island medians located on Westwood south of Lougheed Hwy to Kingsway Avenue	Port Coquitlam	
								Centre island medians located on Westwood north of Lougheed Hwy to Lincoln Avenue	Coquitlam	
2b	Westwood Street	Municipal Boundary just south of Lincoln Avenue	Kingsway Intersection	S/B Direction	12,007	1,302	Located in Coquitlam, currently Maintained by Port Coquitlam, proposed to be maintained by Coquitlam	See Utility Notes For Segment 2a		
3	Lincoln Avenue	Shaughnessy Street	Oxford Street	Both directions	3,738	0	Located in Coquitlam, currently Maintained by Port Coquitlam, no change proposed	Asset	Maintain By	Map ID
								Port Coquitlam storm main and ditch it discharges to in Coquitlam east of Shaughnessy	Port Coquitlam	Segment 3 Map 1
								Port Coquitlam sanitary main in Coquitlam at Lincoln Ave, West off Oxford St	Port Coquitlam	Segment 3 Map 2



<u>Road Segment No.</u>	<u>Road Name</u>	<u>From</u>	<u>To</u>	<u>Details</u>	<u>Area of Pavement (Sq m)</u>	<u>Length of Sidewalk (LnM)</u>	<u>Notes</u>	<u>Utility Notes</u>		
								Coquitlam sanitary in main in Coquitlam to Metro Vancouver trunk in Port Coquitlam.	Coquitlam	
								All water infrastructure maintained by the municipality it is located in.	Both	
4	Oxford Street	Lincoln Avenue	First bend at north edge of Cemetery	Both directions	7,379	80	Located in Port Coquitlam, currently maintained by Port Coquitlam, ditch to be maintained by Coquitlam.	<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
								CB's and leads from Port Coquitlam to ditch in Coquitlam	Port Coquitlam	
								Storm outfall in Coquitlam west of Clematis Cres. from Port Coquitlam system	Port Coquitlam	Segment 4 Map 1
								Storm outfall in Coquitlam at Galer Way from Port Coquitlam system	Port Coquitlam	Segment 4 Map 2
								CB's and leads in Lincoln Ave. and Oxford St. intersection.	Port Coquitlam	Segment 4 Map 3
								Shared ditch on the west side of Oxford located in Coquitlam.	Coquitlam	Segment 4 Map 4
								All water infrastructure maintained by the municipality it is located in.		
5	Oxford Street	First bend at north edge of Cemetery	Mason Avenue	Both directions	2,902	7	Located in Port Coquitlam, currently maintained by Coquitlam, to be maintained by Port Coquitlam	<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
								Storm main and outfall in Port Coquitlam from Coquitlam system.	Coquitlam	Segment 5 Map 1
								Coquitlam water flow station and associated mains in Port Coquitlam west of Oxford	Coquitlam	Segment 5 Map 2
								All other water, sanitary, and storm infrastructure to be maintained by Municipality it is in.	Both	
6	Mason Avenue	Oxford Street	Wellington Street	Both Directions	846	118	Located in both Coquitlam and Port Coquitlam, currently maintained by Coquitlam, no change proposed	<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
								Each Municipality maintains utilities that they reside in.	Both	
7	Wellington Street	Mason Avenue	Municipal Boundary	Both Directions	2632	228	Located in both Coquitlam and Port Coquitlam, currently maintained by Coquitlam. To be maintained by Coquitlam.	<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
								Coquitlam maintains storm up to first manhole south of the municipal boundary including the manhole (STMH 17578)	Coquitlam	Segment 7 Map 1
								Sanitary to last manhole north of the municipal boundary including the manhole (SNMH14697 to be maintained by Coquitlam	Coquitlam	Segment 7, Map 2
								All water infrastructure maintained by the municipality it is located in.	Both	
8a	Victoria Drive	Coast Meridian Road	Cedar Drive	E/B Direction	7035	1146	Located in Port Coquitlam, currently maintained by	<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
								Storm main from Coast Meridian to Watkins Creek and Watkins Creek culvert to be	Coquitlam	Segment 8 Map 1

File #: 06-2210-01/000/2019-1 Doc #: 3541737.v1



<u>Road Segment No.</u>	<u>Road Name</u>	<u>From</u>	<u>To</u>	<u>Details</u>	<u>Area of Pavement (Sq m)</u>	<u>Length of Sidewalk (LnM)</u>	<u>Notes</u>	<u>Utility Notes</u>		
							Coquitlam To be maintained by Port Coquitlam	maintained by Coquitlam up to the culvert outlet headwall		
								Storm at Victoria and Apel/Soball. Port Coquitlam to maintain from the first manhole south of the municipal boundary.	Port Coquitlam	Segment 8 Map 2
								Port Coquitlam storm main in Coquitlam at Wedgewood St to be maintained by Port Coquitlam south of the manhole on Coast Meridian	Port Coquitlam	Segment 8 Map 3
								Smiling Creek and West Smiling Creek culverts to be maintained by Coquitlam up to the culvert outlet headwalls.	Coquitlam	Segment 8 Map 4
								Burke Mountain Creek (Tributary 11) storm main to be maintained by Coquitlam up to the first manhole in Port Coquitlam	Coquitlam	Segment 8 Map 5
								All CB's and leads to be maintained by the City in which they reside based on the CB location.	Both	
								All other utilities to be maintained by the City in which they reside.	Both	
8b	Victoria Drive	Cedar Drive	Coast Meridian Road	W/B Direction	7873	428	Located in Coquitlam. To be maintained by Coquitlam.	See utility comments for segment 8a.		
9	Lincoln Avenue	Fremont Street	East End of Road	Both Directions	9086	0	Located in Coquitlam. To be maintained by Coquitlam.	<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
								Culvert leading ditch flows into Port Coquitlam private ditch on south side of Lincoln Ave to be maintained by Coquitlam	Coquitlam	Segment 9 Map 1
10	Lincoln Avenue	Pipeline Road	Kensal Place	Both Directions	4475	805	Currently maintained by Coquitlam. Coquitlam to maintain with the exception of the sidewalk on south side of Lincoln running east to west along north side of Port Coquitlam properties from Woodland Drive to East end of Sidewalk. The north side of Lincoln sidewalks and south side sidewalk adjacent to Lincoln Avenue to be	<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
								All utilities to be maintained by the municipality in which they reside including CB and leads based on the location of the CB	Both	

File #: 06-2210-01/000/2019-1 Doc #: 3541737.v1

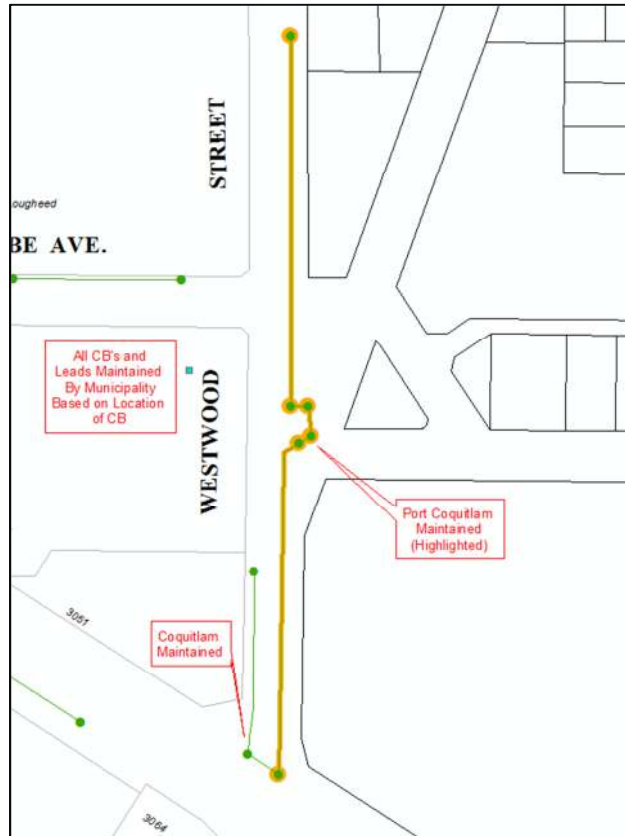


<u>Road Segment No.</u>	<u>Road Name</u>	<u>From</u>	<u>To</u>	<u>Details</u>	<u>Area of Pavement (Sq m)</u>	<u>Length of Sidewalk (LnM)</u>	<u>Notes</u>	<u>Utility Notes</u>		
11	Shaughnessy Street	Frontage of Ecole Coquitlam River Elementary School		Both Directions	1866	301	maintained by Coquitlam. See Segment 10, Map 1 Maintained by Coquitlam.			
								<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
								CB's located in Port Coquitlam inclusive of their leads.	Coquitlam	Segment 11 Map 1
							All other utilities including water and sanitary.	Coquitlam		
12	Liverpool Street	Municipal Boundary	North End	Both Directions	389	96	Maintained by Coquitlam north of the municipal boundary.			
								<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
							Sanitary main maintained by Coquitlam up to the first manhole south of the municipal boundary.	Coquitlam	Segment 12 Map 1	
<u>Trail Segment No.</u>	<u>Trail Name</u>	<u>From</u>	<u>To</u>	<u>Details</u>	<u>Length of Dike Trail (LnM)</u>	<u>Number of parking Stalls</u>	<u>Notes</u>	<u>Utility Notes</u>		
P1	Traboulay Trail	Cedar Drive	Lincoln Avenue	South Dike and Parking Lot	2001	6	Located in Coquitlam, currently maintained by Port Coquitlam, not covered under the 1976 Agreement			
								<b>Asset</b>	<b>Maintain By</b>	<b>Map ID</b>
							Culverts at Cedar Drive across municipal boundary up to and including the outlet headwalls.	Port Coquitlam	Segment P1 Map 1	

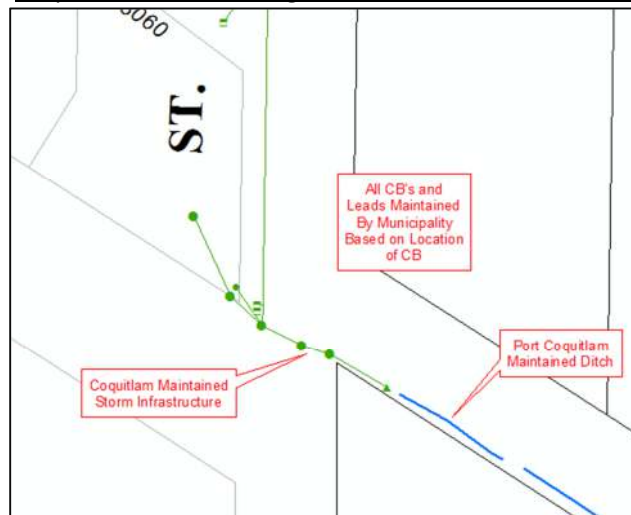


<b>Utilities Maps and Detail – Segment 2</b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Westwood Street	Kingsway Intersection	Municipal Boundary just south of Lincoln Avenue

**Map 1 – Storm Mains Lougheed Hwy To Anson**



**Map 2 – Storm Crossing Westwood St. at Davies Ave**



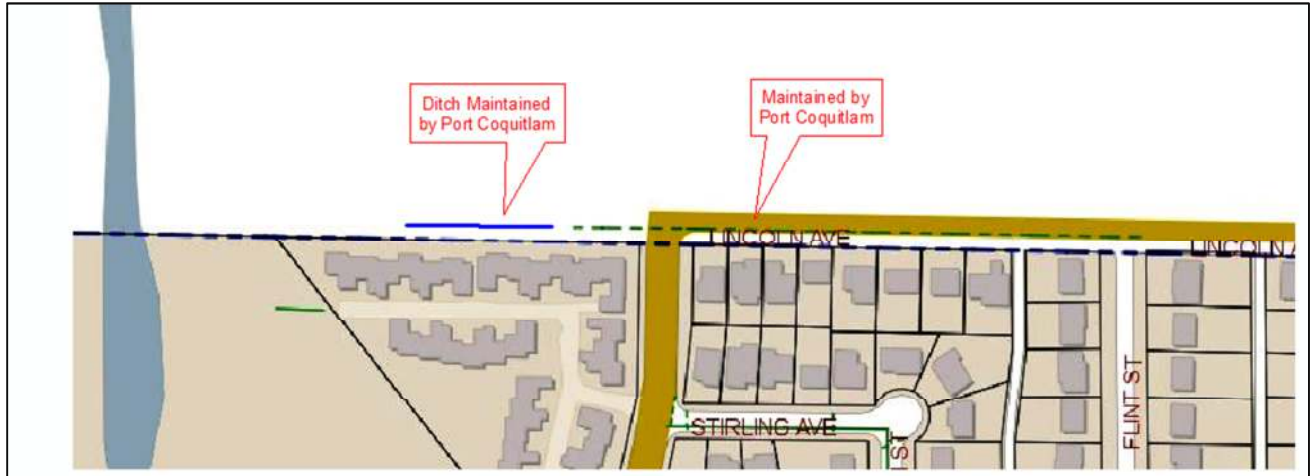




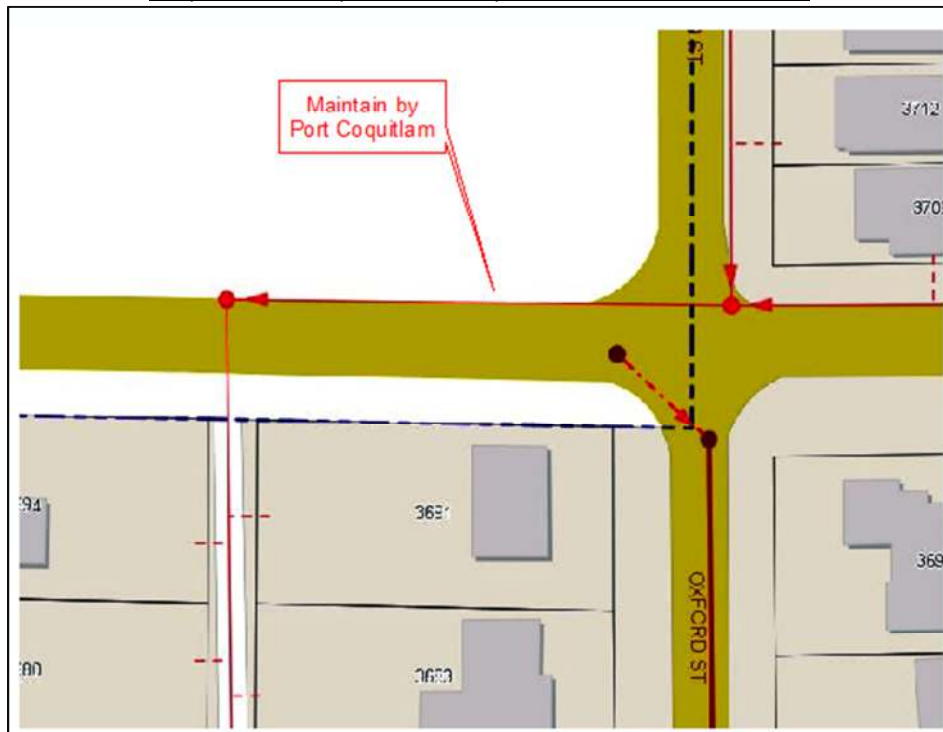


<b>Utilities Maps and Detail – Segment 3</b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Lincoln Avenue	Shaughnessy Street	Oxford Street

Map 1 – Storm Main and Ditch in Coquitlam, East of Shaughnessy St.



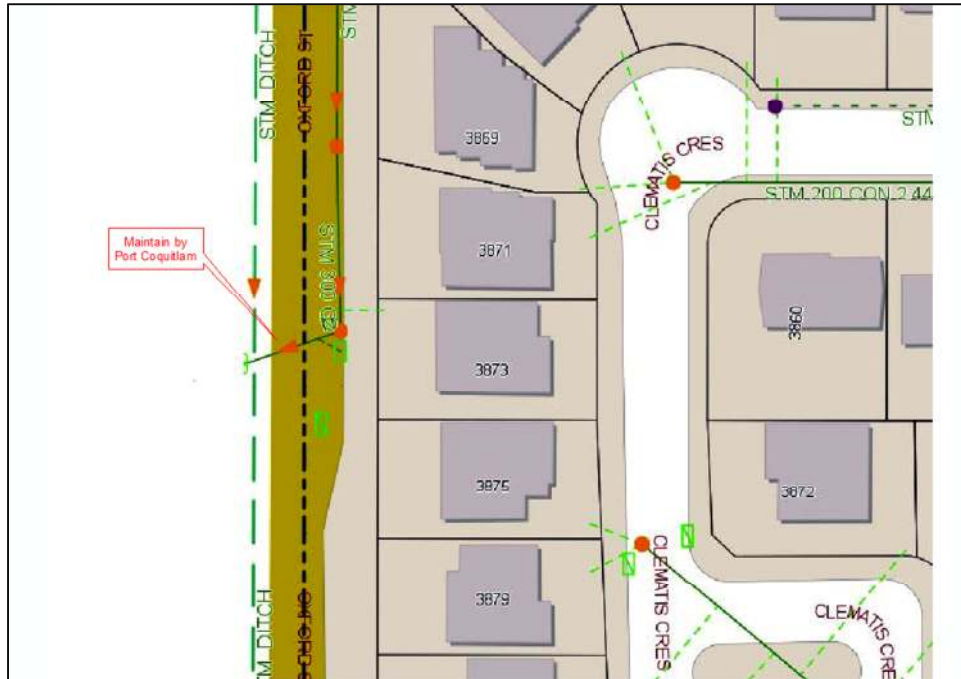
Map 2 – Sanitary Main in Coquitlam, West of Oxford St.



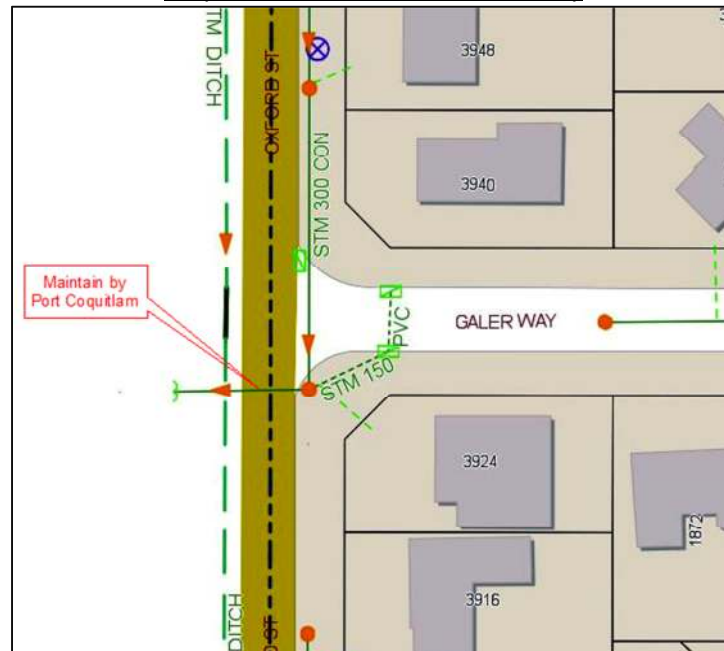


<b>Utilities Maps and Detail – Segment 4</b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Oxford St.	Lincoln Ave	First Bend at North Edge of Cemetery

Map 1 – Storm Outfall West of Clematis Cres



Map 2 – Storm Outfall at Galer Way





Map 3 – CB's and Leads in Lincoln Ave. and Oxford St. Intersection



Map 4 – Ditch on the West Side of Oxford St.



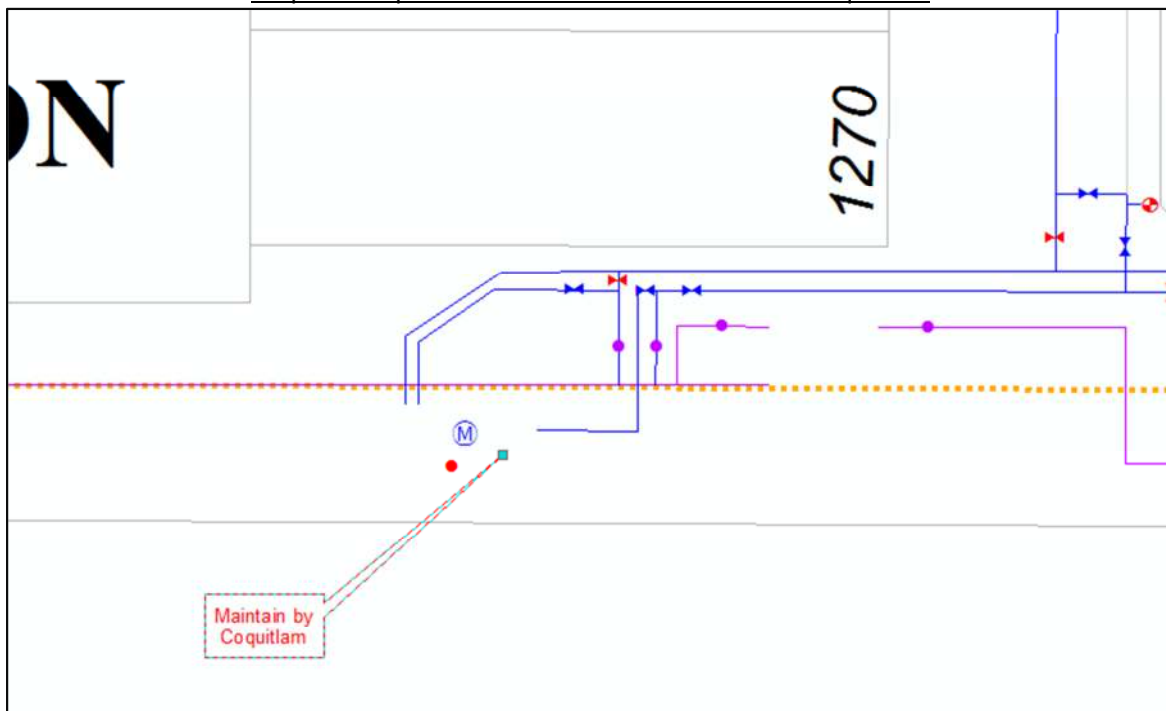


<b>Utilities Maps and Detail – Segment 5</b>		
<b>Road Name</b>	<b>From</b>	<b>To</b>
Oxford St.	First Bend at North Edge of Cemetery	Mason Ave

Map 1 – Storm Main and Outfall In Port Coquitlam



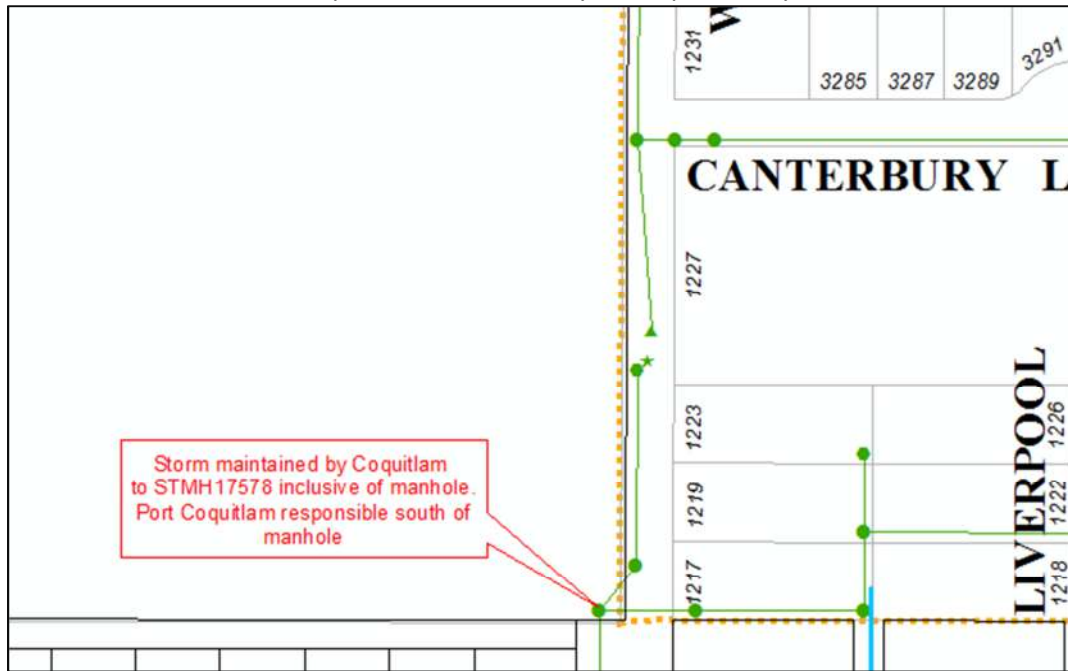
Map 2 – Coquitlam Water Flow Station in Port Coquitlam



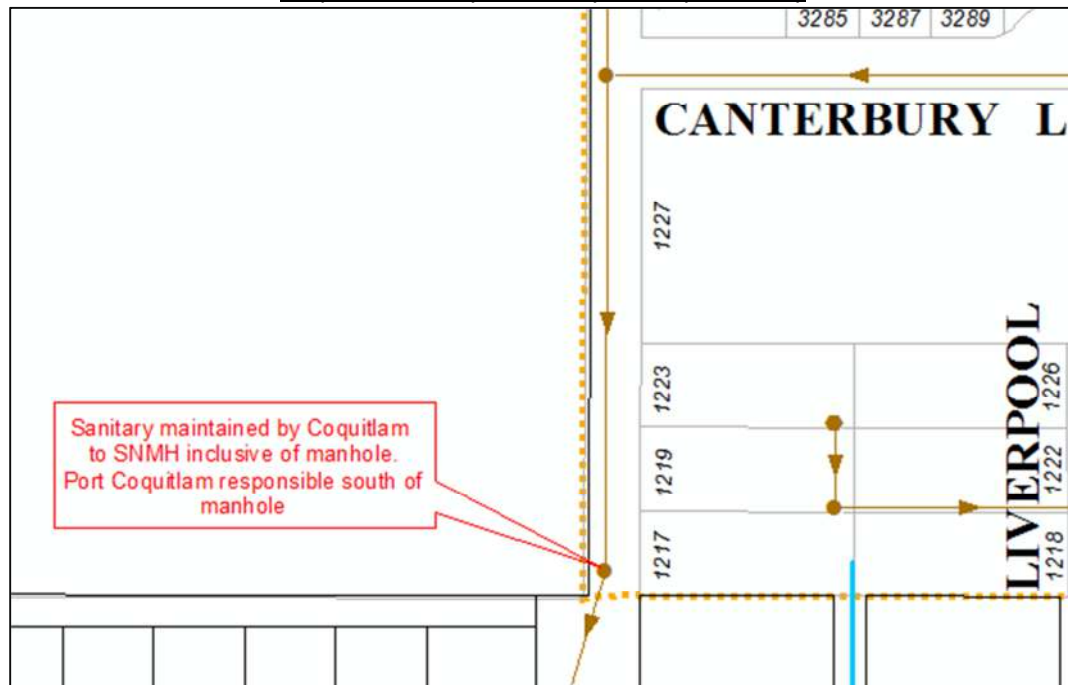


<b>Utilities Maps and Detail – Segment 7</b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Wellington Street	Municipal Boundary	Mason Ave

Map 1 – Storm Boundary of Responsibility



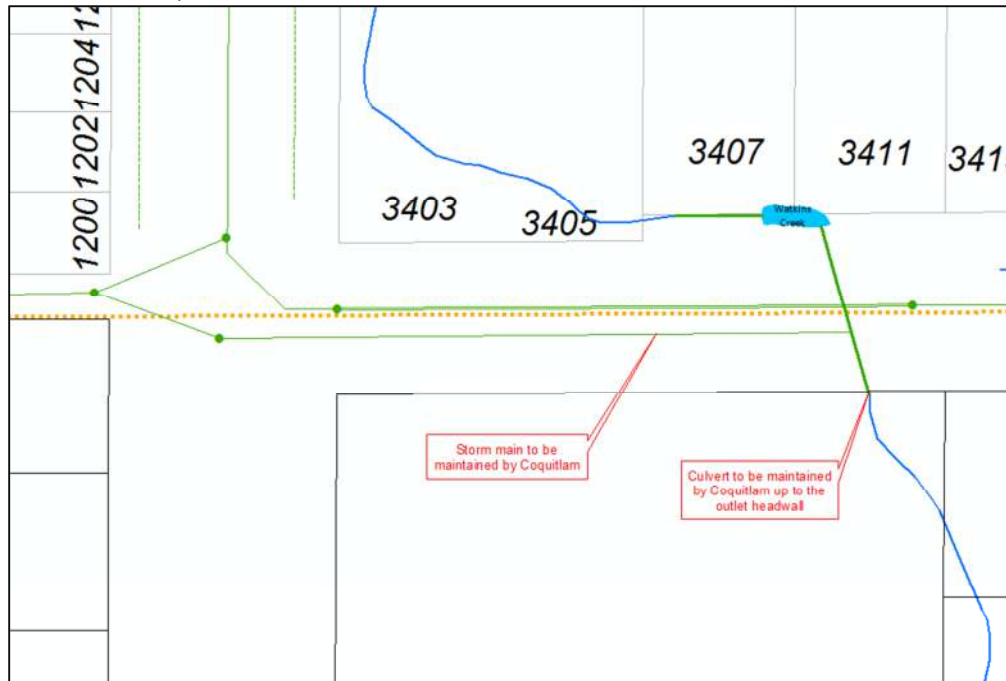
Map 2 – Sanitary Boundary of Responsibility



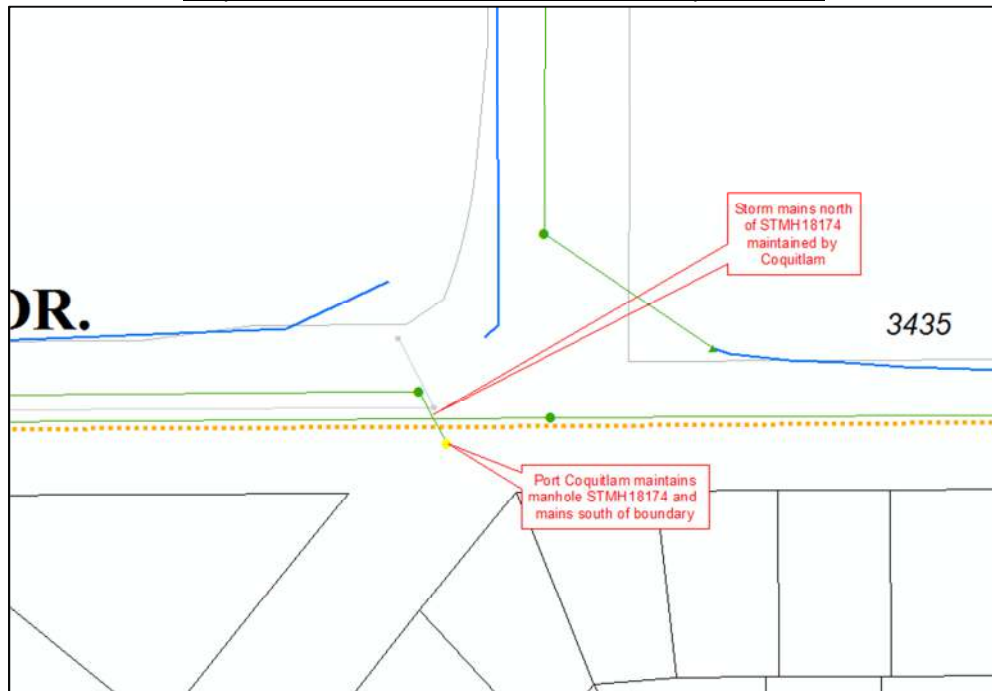


<b>Utilities Maps and Detail – Segment 8</b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Victoria Drive	Coast Meridian Road	Cedar Drive

Map 1 – Storm Infrastructure Coast Meridian to Watkins Creek

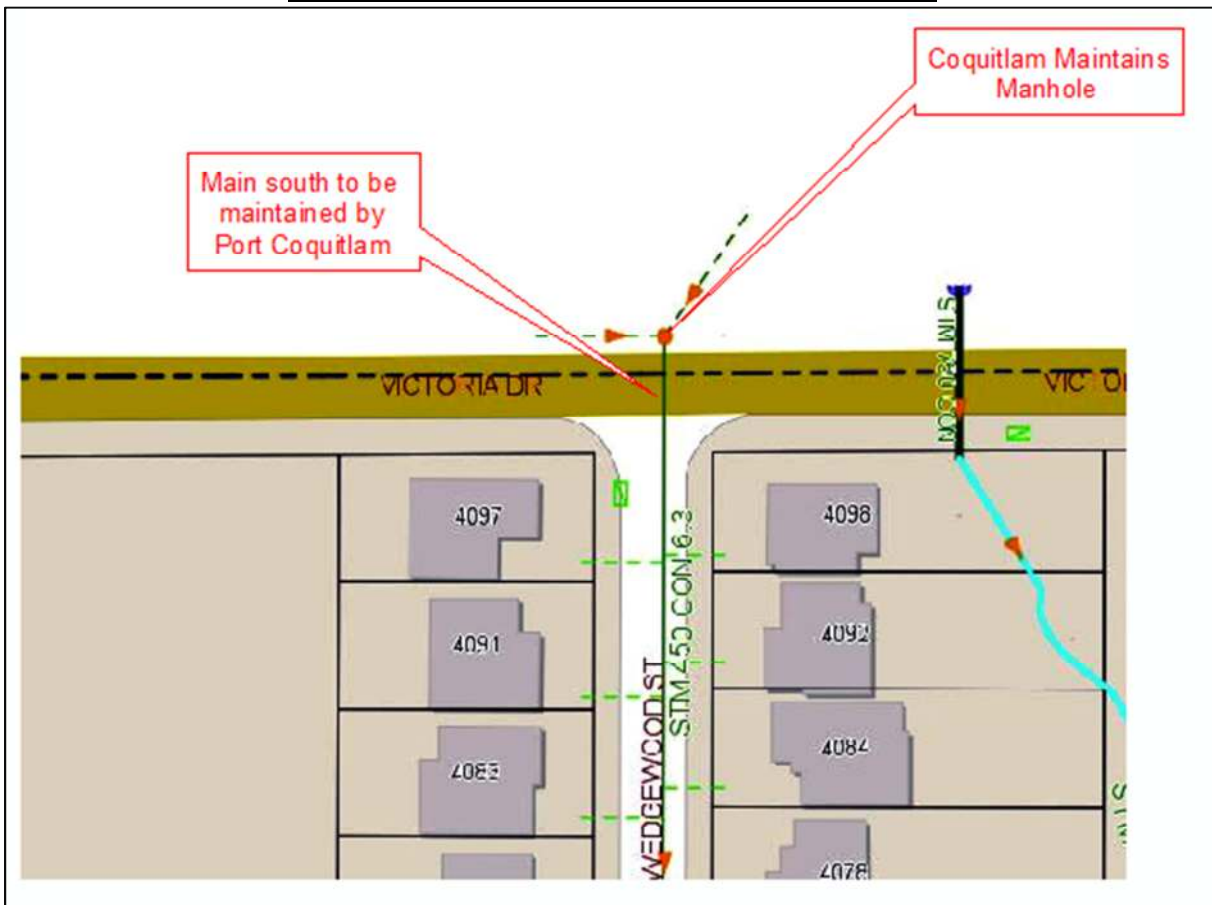


Map 2 – Storm Infrastructure, Victoria at Apel / Soball

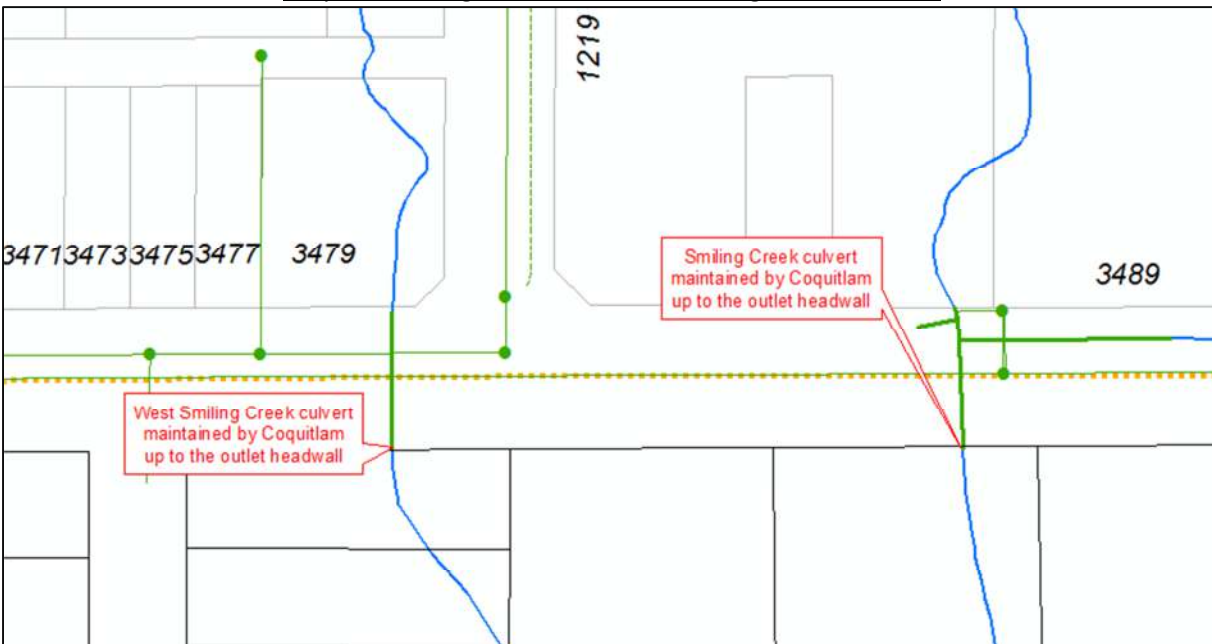




Map 3 – Storm Main at Victoria Dr and Wedgewood St

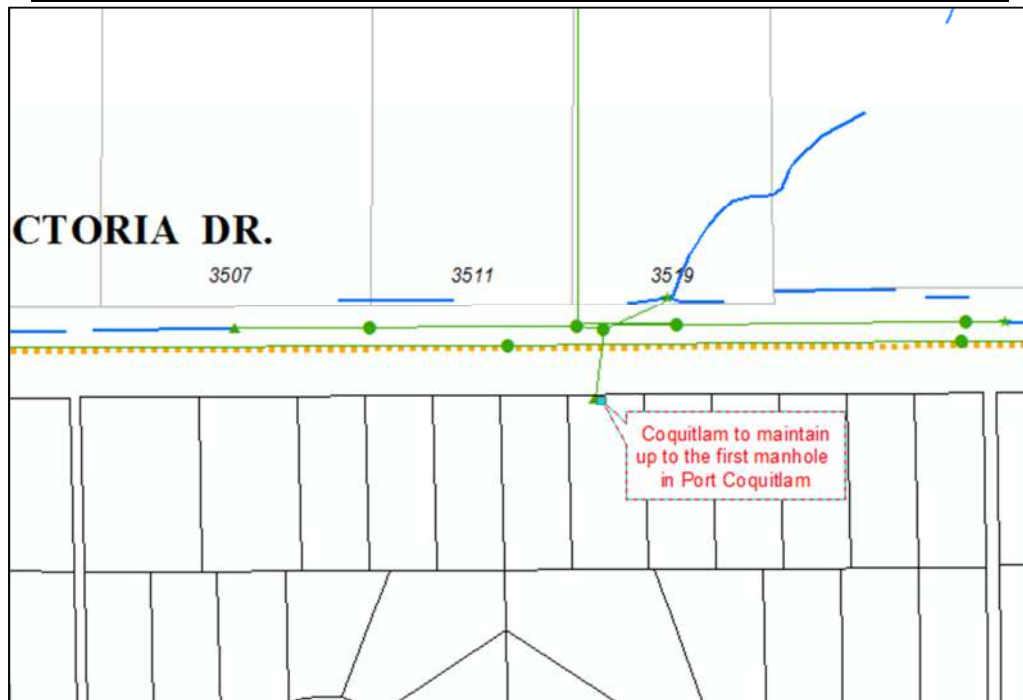


Map 4 – Smiling Creek and West Smiling Creek Culverts





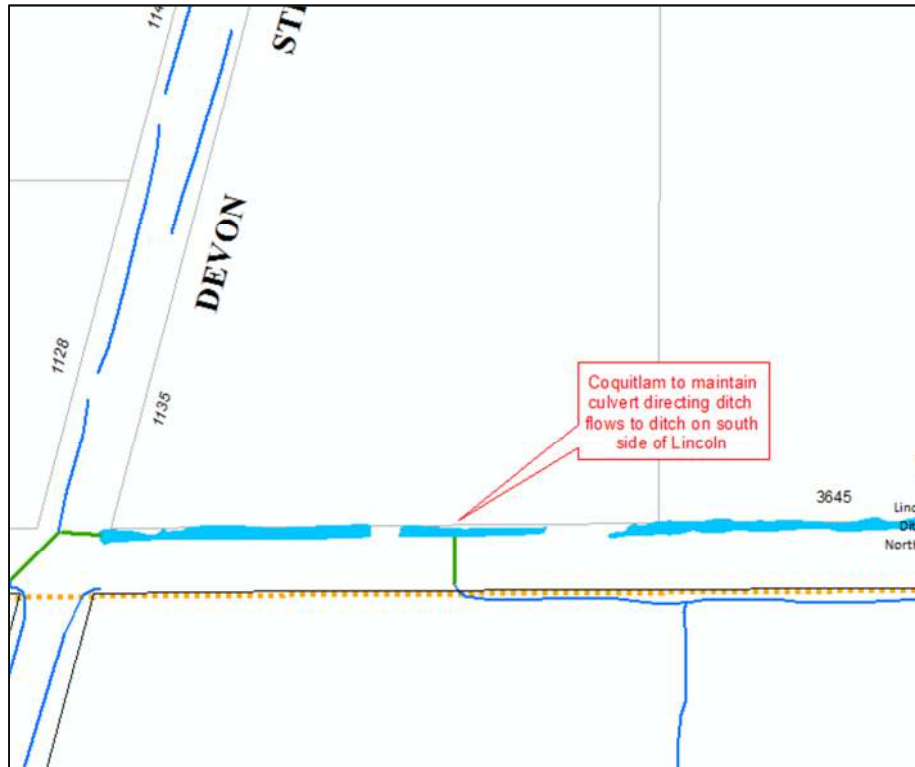
Map 5 – Burke Mountain Creek Tributary, Storm Main to Outfall in Port Coquitlam





<b>Utilities Maps and Detail – Segment 9</b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Lincoln Ave	Fremont Street	East End of Road

**Map 1 – Culvert East of Devon for Ditch Flows**





<b>Utilities Maps and Detail – Segment 10</b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Lincoln Ave	Pipeline Road	East End of Road

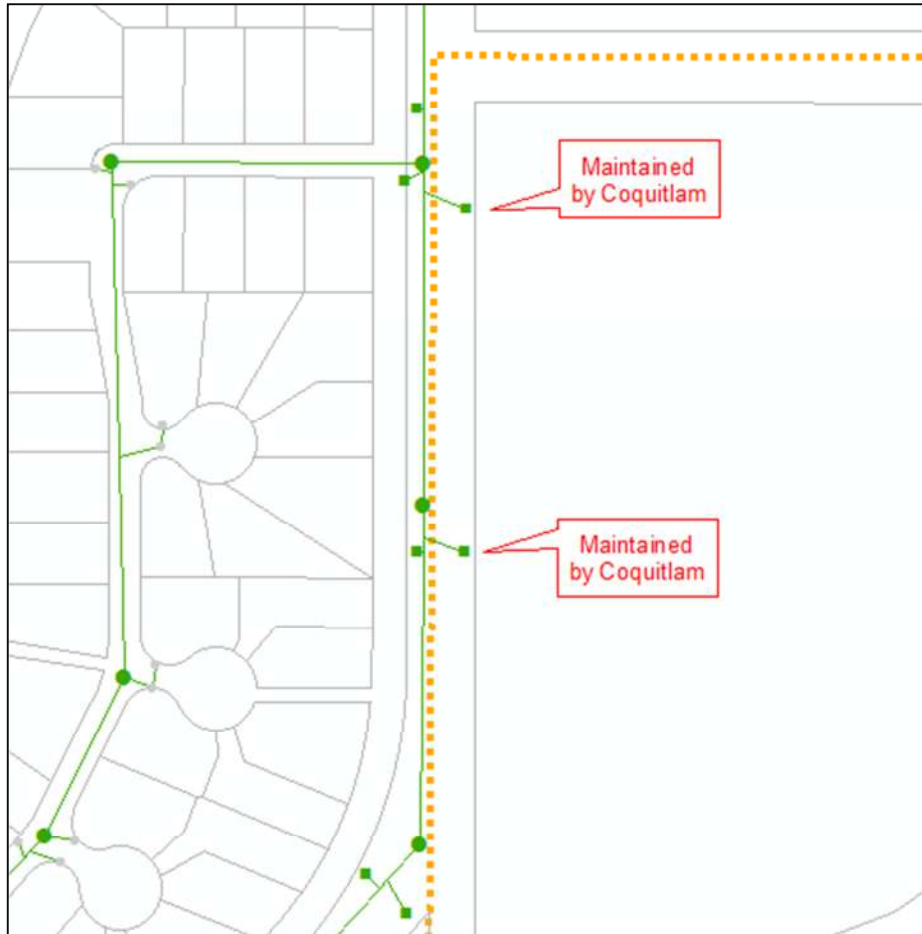
**Map 1 – Lincoln Ave Sidewalk Responsibilities**





<b>Utilities Maps and Detail – Segment 11</b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Shaughnessy Street	Fronting Ecole Coquitlam River Elementary	

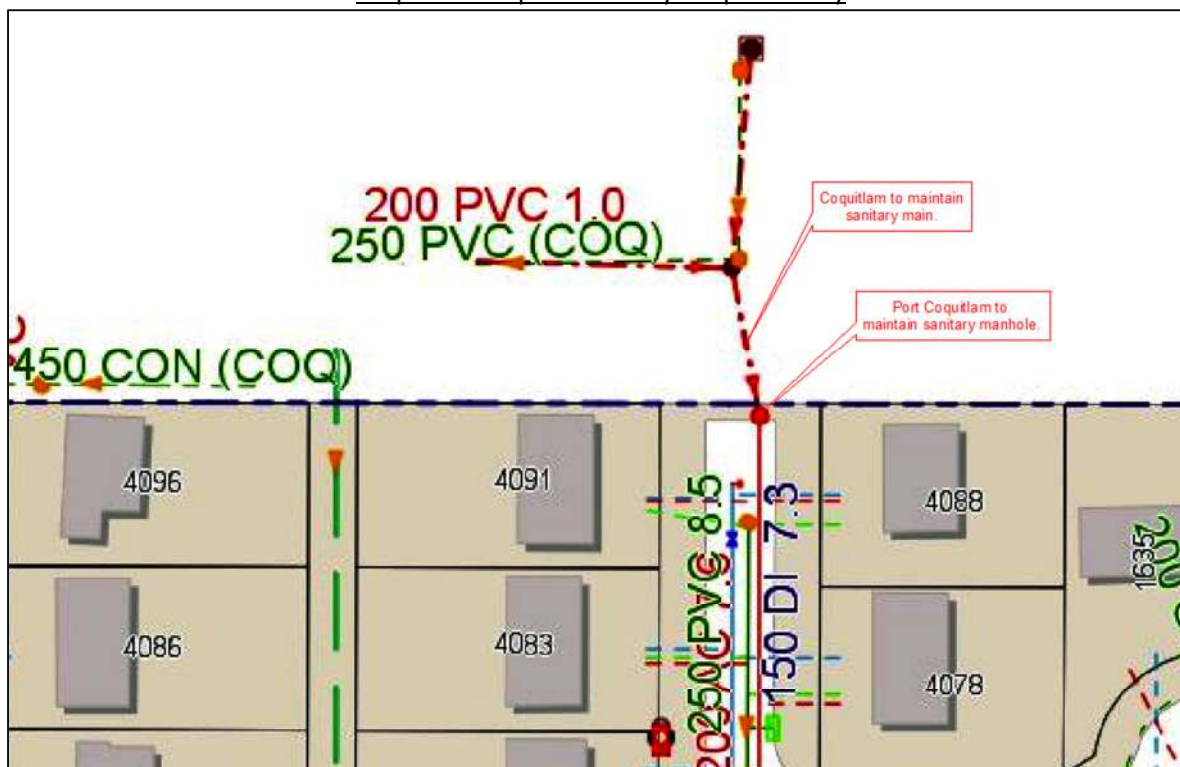
Map 1 – Catch Basins and Leads





<b><u>Utilities Maps and Detail – Segment 12</u></b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Liverpool Street	Municipal Boundary	North End

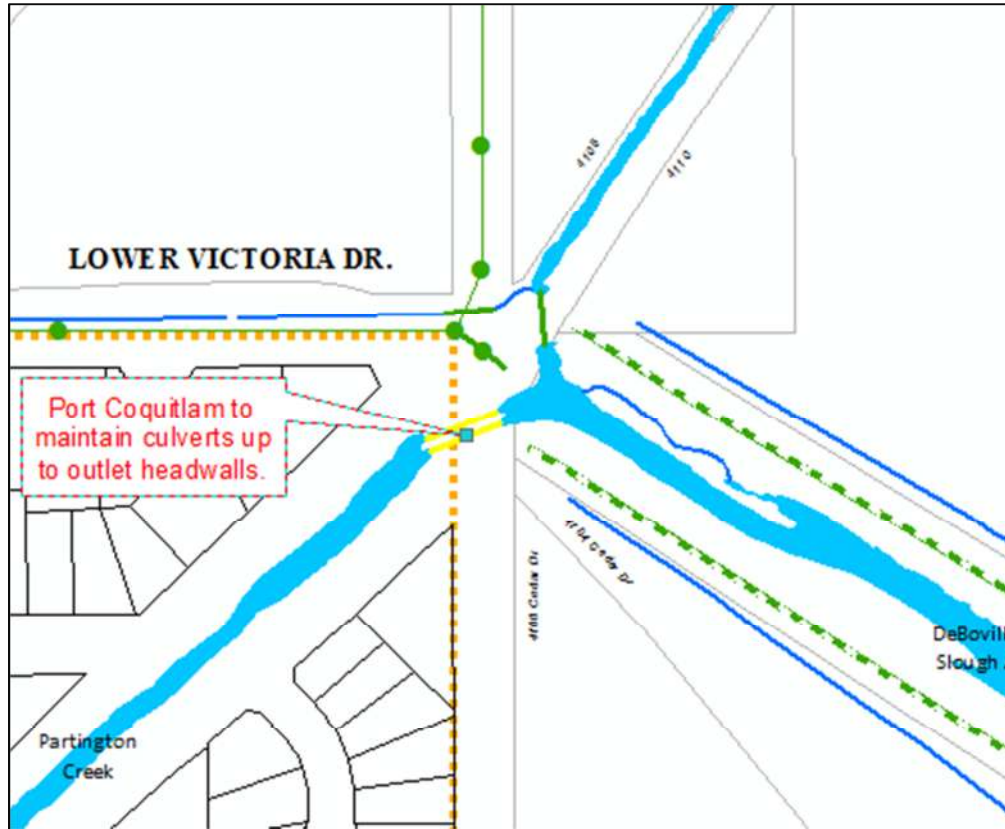
### Map 1 – Liverpool Sanitary Responsibility





<b>Utilities Maps and Detail – Segment P1</b>		
<b><u>Road Name</u></b>	<b><u>From</u></b>	<b><u>To</u></b>
Traboulay Trail	Cedar Drive	Lincoln Ave

Map 1 – Culverts at Cedar Drive





**SCHEDULE “B”****TRAFFIC SIGNALS**

<b>Intersection (Future)</b>	<b>Responsibility</b>	<b>Cost Sharing (CoC/PoCo)</b>
Victoria/Mitchell	Coquitlam	66/33
Lower Victoria/Rocklin	Coquitlam	66/33
Lower Victoria-Mars/Upper Victoria	Coquitlam	50/50
Lincoln/Kensal	Coquitlam	66/33
Lincoln/Ozada	Coquitlam	66/33
<b>Intersection (Current)</b>		
Westwood/Anson	Coquitlam	66/33
Westwood/Crabbe/Kitchener	Coquitlam	50/50
Westwood/Lougheed	Coquitlam	50/50
Westwood/Christmas	Coquitlam	50/50
Westwood/Dewdney Trunk	Coquitlam	66/33
Westwood/Kingsway	Coquitlam/Poco	50/50
Victoria/Coast Meridian	Coquitlam	50/50
Victoria/Soball/Apel	Coquitlam	50/50



## Schedule C

## Levels of Service



<b>CEDMS</b>	<b>Department</b>	<b>Chapter</b>	<b>Policy</b>
2233737	Roads	R-02	Other Pedestrian Facilities
2233719	Roads	R-03	Road Surface Maintenance
2233712	Roads	R-04	Pavement Markings
2233738	Roads	R-05	Sidewalks
2233717	Roads	R-06	Sign Maintenance
2171818	Roads	R-07	Street Cleaning
2233710	Roads	R-08	Vegetation Control
1686707	Roads	R-10	Ice Patrol
1568589	Sewer	S-01	Drainage Mains
1935169	Sewer	S-02	Sanitary Mains
1560163	Sewer	S-03	Drainage and Sanitary Manholes
2237134	Sewer	S-04	Drainage Service Connections
2237129	Sewer	S-05	Sanitary Service Connections
1564955	Sewer	S-08	Drainage Catch Basins
1568302	Sewer	S-10	Drainage Intakes and Outfalls
1939461	Sewer	S-12	Surface Drainage
1571207	Sewer	S-13	Watercourses
1935143	Water	W-01	Water Hydrants
1541965	Water	W-02	Water Mains
2237121	Water	W-06	Water Service Connections



**Engineering and Public Works  
Level of Service Policy**

Chapter: R-02 Other Pedestrian Facilities

Council Adoption Date:

Revision Date:

**Policy Asset**

Pedestrian Facilities

**Asset Description**

City-owned asphalt and gravel Walkways, fences and stairs, walkway litter bins (not including City Multi-Use-Pathways)

**Reason for Policy**

To provide a safe walking surface for pedestrians free of hazards.

**Asset Maintenance Activity**

Walkways are inspected for trip hazards and other defects and are cleaned throughout the year. Weed scraping is performed, and walkway litter bins are emptied and maintained on a regular schedule. Work Orders for additional inspection and maintenance may be created from the Inspection Report or through public requests.



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Walkways	Inspection and Cleaning	Once every six weeks, provided that resources are available.
Walkways	Scheduled Weed Scraping	Once every calendar year.
Fences and Stairs	Inspection and Cleaning	Once every six weeks in conjunction with adjacent Walkways, provided that resources are available.
Walkway Litter Bins	Scheduled Maintenance	Once every three weeks provided that resources are available.
Walkways, Fences and Stairs, Litter Bins	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff.
Walkways, Fences and Stairs, Litter Bins	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: R-02 Other Pedestrian Facilities

Engineering and Public Works  
Walkway Inventory



### Engineering and Public Works Level of Service Policy

Chapter: R-03 Road Surface Maintenance  
Council Adoption Date:  
Revision Date:

#### **Policy Asset**

Road Surface Maintenance

#### **Asset Description**

Asphalt and concrete Roads, Lanes, Drainage Curbs, Gravel Roads, Gravel Shoulders

#### **Reason for Policy**

Road Surface deficiencies may create hazards for traffic. Preventative Maintenance prolongs the lifecycle of all Road Surfaces.

#### **Asset Maintenance Activity**

Remove defects that could cause accidents and claims. Perform repairs on asphalt, curb repairs and curb installation. Carry out Utility Trench repairs for Water and Sewer-Drainage. Crack sealing is completed by contractors in the autumn. Larger pavement repairs are completed by contract.



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Asphalt and Concrete Roads	Unscheduled Inspection	Within 24 hours upon receipt of a complaint from the public or City staff.
Asphalt and Concrete Roads	Unscheduled Maintenance	Within 15 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.
Asphalt and Concrete Roads	Contract Paving	Once every calendar year, scheduled at the Road Superintendent's discretion provided that resources are available.
Asphalt and Concrete Roads	Contract Crack Sealing	Once every calendar scheduled at the Road Superintendent's discretion provided that resources are available.
Lanes	Scheduled Inspection	Once every calendar year.
Paved Lanes and Gravel Shoulders	Scheduled Maintenance	Determined by Inspection and scheduled at the Road Superintendent's discretion provided that resources are available.
Paved Lanes and Gravel Shoulders	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff.



Paved Lanes and Gravel Shoulders	Unscheduled Maintenance	Within 15 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.
Gravel Roads	Scheduled Grading	Each is graded eight times per calendar year.
Gravel Lanes	Scheduled Grading	Each is graded once every calendar year.
Gravel Roads	Unscheduled Grading	Within 5 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.
Gravel Lanes and Gravel Roads	Scheduled Dust Control	Scheduled during periods of hot weather according to defined parameters, and additionally at the Road Superintendent's discretion provided that resources are available.
Gravel Lanes and Gravel Roads	Unscheduled Dust Control	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: R-03 Road Surface Maintenance

Engineering and Public Works  
Road Inventory

Engineering and Public Works  
Lane Inventory



**Engineering and Public Works  
Level of Service Policy**

Chapter: R-04 Pavement Markings

Council Adoption Date:

Revision Date:

**Policy Asset**

Pavement Markings

**Asset Description**

Painted and thermoplastic centrelines and markings on Roads and Parking Lots, raised pavement markers

**Reason for Policy**

To provide safe routes for vehicular traffic through the regular maintenance of roadway centrelines and markings such that Pavement Markings are sufficiently visible to convey information and guidance to drivers.

**Asset Maintenance Activity**

The City is responsible for marking out and painting centrelines, lane lines, symbols, stop lines, arrows, hazard lines, crosswalks and parking stalls. Painted Pavement Markings have a lifespan of approximately six-months to a year depending on traffic volumes. Thermoplastic Pavement Markings are renewed every three-to-five years. Centreline painting and thermoplastic applications are done by the City and by contract. The City does not install or maintain centrelines on Local Class streets. Raised pavement markers are installed on some Arterial Routes, Collector Routes, and Highways. They are inspected in the spring and replaced as required. Pavement Markings are not inspected under a Preventative Maintenance Program, and are inspected on a complaints basis only.



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Painted Centrelines and Markings	Scheduled Painting	Once every calendar year.
Thermoplastic Centrelines and Markings	Scheduled Thermoplastic Application	Once every five calendar years.
Raised Pavement Markers	Inspection and Replacement Program	Once every calendar year.
All Pavement Markings	Unscheduled Inspection	Within 10 days upon receipt of a complaint from the public or City staff.
All Pavement Markings	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: R-04 Pavement Markings

Engineering and Public Works  
Road Inventory



## Engineering and Public Works Level of Service Policy

Chapter: R-05 Sidewalks  
Council Adoption Date:  
Revision Date:

### Policy Asset

Sidewalks

### Asset Description

Asphalt, Concrete and Paving-Stone Sidewalks

The 'Sidewalk' area is defined as the area between the lateral lines which form the improved pedestrian corridors intended for clear pedestrian movement generally parallel and adjacent to the roadway. The areas inspected under this policy do not include adjacent areas commonly referred to as the 'Utility Strip', 'Street Furnishing Zone', 'Boulevard', 'Building Frontage Zones', and similar areas. The areas included in this Inspection Policy do not include the areas pedestrians use to cross a roadway (whether within a marked crosswalk or not), nor facilities specifically designed and used for cycling, including multi-use pathways. The areas do include any wheelchair ramps which are used to connect sidewalks to roadway crossings.

### Reason for Policy

To provide a safe walking surface for pedestrians free of hazards.

### Asset Maintenance Activity

The following items shall be considered when undertaking a Sidewalk Inspection:

Defects or hazards identified are classified on a three level rating scale, as follows:

Minor defect	Level 1	No effect on service; no action required
Moderate defect	Level 2	Annual Monitoring
Major defect	Level 3	Requiring some form of action (i.e. marking or repair)



The inspection shall include checking for specific defects as set out below:

Hazard Types	Definitions	Hazard Ratings
<b>Cracks or Separations</b>	(a) Cracks and defects that do not result in displacement.	Generally cracks that do not result in displacement are cosmetic and are considered a level 1 defect with no action required.
	(b) Separations are cracks that have resulted in displacement either vertical or horizontal.	<b>Level 1:</b> less than 20mm height/width <b>Level 2:</b> 20-35mm height/width <b>Level 3:</b> more than 35mm height/width
<b>Heave or Settlement</b>	Heaving or settling occurs on an asphalt or flexible pavement surface and does not have separation; i.e. the surface is still continuous. Heave and settlements are rated by irregular (undulating) changes in the grade of asphalt sidewalk over a 1 m length.	<b>Level 1:</b> grade changes that result in less than 25mm gap or protrusion <b>Level 2:</b> grade changes that result in between 25-50mm gap or protrusion <b>Level 3:</b> grade changes that result in more than 50mm gap or protrusion
<b>Scaling</b>	Scaling is spalling or flaking of the surface of concrete, brick or paved sidewalks or walkways. Scaling is rated according to depth.  <b>Note:</b> The Engineer has discretion over the rating scales to reflect the size of the area that the scaling is occurring over. If the area is large, the cosmetic impact may be higher for a given depth. However, the rating is intended to be a reflection of the hazard, so if the area is smaller for the same depth, it could be a greater 'trip hazard' and warrant a higher level rating.	<b>Level 1:</b> less than 10mm in depth <b>Level 2:</b> 10-25mm in depth <b>Level 3:</b> more than 25mm in depth



Hazard Types	Definitions	Hazard Rating
<b>Obstacles</b>	<p>Obstacles are items set into the sidewalk which include water meter boxes, curb stops, tree grates, junction boxes, manhole lids, sign posts sleeves, street light poles and similar items, which affect the serviceability of the walkway or sidewalk. Ideally obstacles that encroach in the sidewalk area are flush with the sidewalk surface and are not considered a hazard. For obstacles that are surface mounted but not flush and vertical, difference in elevation would be assessed using the same criteria as cracks/separations above. For obstacles which protrude into the sidewalk area and extend above the surface (i.e. sign posts, street lights, etc.), the rating is based on the amount of sidewalk width which is left unobstructed.</p> <p><b>Note:</b> In cases involving equipment owned by a third party, the City may refer the matter to that third party to resolve or the City may co-ordinate with that third party on a joint solution.</p>	<p><b>Level 1:</b> 1.2m or more of unobstructed sidewalk width</p> <p><b>Level 2:</b> 1.2-0.9m of unobstructed sidewalk width</p> <p><b>Level 3:</b> less than 0.9m of unobstructed sidewalk width</p>

### Sidewalk Repair Schedule

All defects classified as Level 3 are scheduled for repair as soon as staff and equipment are readily available and, if possible, they will be marked for public notice.

All defects and hazards classified as Level 2 are placed on a list for annual monitoring.

No action will be taken with defects and hazards classified as Level 1.

Notwithstanding the above, the City shall not be restricted to following a scheduled order of repair. The intent is not to suggest that Level 3 defects shall be repaired by the City before addressing Level 2 defects, or that Level 1 defects will be addressed only after Level 2 defects are repaired. For example, the City shall have the option to repair a Level 1 sidewalk defect before attending to a Level 3 defect.



### **Level of Service**

For the purpose of inspections, Sidewalks within the City are designated as one of four zones as per the City's approved Strategic Transportation Plan (see Map #2 "Pedestrian Areas" within the STP). These four zones are based on the number and type of pedestrian traffic using the particular sidewalk, as per the following definitions:

- "Pedestrian Precinct" with high pedestrian volume;
- "School Pedestrian Area" with moderate pedestrian volume;
- "Community and Recreation Pedestrian Area" with low pedestrian volume; and
- "Other Streets" with low pedestrian volume.

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Pedestrian Precinct Zone Sidewalks	Scheduled Inspection	Once per year
School Pedestrian Area Zone Sidewalks	Scheduled Inspection	Once every three years
Community and Recreation Pedestrian Area Zones and Other Street Zones	Scheduled Inspection	Once every seven years
All Sidewalks	Scheduled Maintenance	Determined by Inspection and scheduled at the Engineer's discretion provided that staff and equipment are readily available and budget resources allow
All Sidewalks	Unscheduled Inspection	Within 3 days upon receipt of a complaint from the public or City staff



All Sidewalks	Unscheduled Maintenance to make safe	Determined by Inspection and scheduled at the Engineer's discretion provided that staff and equipment are readily available
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The Engineer shall prepare and maintain annual written documentation noting areas inspected, any observed defect or hazard in the sidewalks, the date of the observation and the repair work performed.

**Procedure Manual Reference**

Engineering and Public Works  
Level of Service Procedure Manual  
Chapter: R-05 Sidewalks

Strategic Transportation Plan Map 2 Pedestrian Areas

Engineering and Public Works  
Sidewalk Inventory



### Engineering and Public Works Level of Service Policy

Chapter: R-06 Sign Maintenance

Council Adoption Date:

Revision Date:

#### Policy Asset

Sign Maintenance

#### Asset Description

Regulatory, Warning, and Information Signs installed and maintained by Traffic and Public Works

#### Reason for Policy

To improve safety through the maintenance of legible Traffic Control and Regulatory Signs. Signs warn motorists and pedestrians of regulations, hazards and route information.

#### Asset Maintenance Activity

New installations, inspection, cleaning, replacement, new development signage, and temporary signage for activities such as construction. Respond to emergency calls for Traffic Control as well as Event Traffic Control for Parades, Runs, etc. The City Clerk will request the installation of Rezoning Signs.

#### Level of Service

Object	Task	Frequency
Large "Welcome to Coquitlam" signs	Scheduled Inspection	Once every month.
Large "Welcome to Coquitlam" signs	Scheduled Maintenance	Once every month.
Regulatory Signs	Unscheduled Inspection	Within 24 hours upon receipt of a complaint from the public or City staff.



Regulatory Signs	Unscheduled Maintenance	Within 24 hours upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.
All Non-Regulatory Signs	Unscheduled Inspection	Within 10 days upon receipt of a complaint from the public or City staff
All Non-Regulatory Signs	Unscheduled Maintenance	Within 10 days upon receipt of a complaint from the public or City staff provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.
All Signs	Scheduled Inspection and Maintenance	Once every calendar year. Signs are replaced or repaired according to their priority based on Road Classification. Stop Signs are given priority on any road.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: R-06 Sign Maintenance



### Engineering and Public Works Level of Service Policy

Chapter: R-07 Street Cleaning  
Council Adoption Date:  
Revision Date:

#### **Policy Asset**

Street Cleaning

#### **Asset Description**

Paved Roads, Lanes and Boulevards

#### **Reason for Policy**

Street sweeping helps prevent clogged drains and catch basins. It reduces the abrasion on pavement markings and reduces dust, which can affect visibility. Litter pickup enhances the appearance of the City as well as removes attractants for vectors and other wildlife.

#### **Asset Maintenance Activity**

Street cleaning activities include:

- Operation of vacuum sweepers
- Manual litter pick up
- Emptying litter bins



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Commercial Areas	Street Sweeping	Once every month.
Arterial and Collector Routes	Street Sweeping	November-January: weather dependent.  February-March: two times per month. April-August: once per month. September-October: two times per month.
Local Roads	Street Sweeping	Two times per calendar year.
Priority Streets	Street Sweeping	As required dependent on seasonal leaf accumulation.
Commercially Zoned Areas	Litter pick up	Four times per month.
Arterial and Collector Routes	Litter pick up	Two times per week.
Convenience Stores on Arterial and Collector Routes	Litter pick up	Once per week.
Bus Stops	Litter	Twice per month.
Litter Bins	Empty	Minimum once per week.
All Areas	Unscheduled street sweeping and litter pick up	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.  City streets are not inspected for the purposes of Street Cleaning as part of a Preventative Maintenance Program. Inspections are done on a complaints basis only.



## **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: R-07 Street Cleaning

Engineering and Public Works  
Road & Lane Inventory

Engineering and Public Works  
Priority Sweeping Routes Inventory



**Engineering and Public Works  
Level of Service Policy**

Chapter: R-08 Vegetation Control

Council Adoption Date:

Revision Date:

**Policy Asset**

Vegetation Control

**Asset Description**

Mowing of boulevards and medians, over-height vegetation, hazardous tree removal, sidewalk vegetation removal, cleaning medians

**Reason for Policy**

Mowing is performed along ditches, lanes, counter-flow sightlines, and some boulevards and medians to prevent vegetation from encroaching onto roadways, laneways, and sidewalks. Vegetation may also be removed to improve visibility for safety reasons. Hazardous trees in road rights of way are inspected by the City Arborist and removed as required. Sidewalk Vegetation is removed to prevent trip hazards and for aesthetic reasons.

**Asset Maintenance Activity**

This work involves monitoring vegetation and tree growth on the Road Rights of Way, Road Medians and Boulevards. Weed spraying (hot water, steam) is used by a contractor on Arterial Routes, and on some Collector Routes. Requests are dealt with using labour to remove.



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Boulevards, Ditches	Scheduled Mowing	Four times per calendar year.
Lanes	Contract Mowing	Once every calendar year contracted by Sewer-Drainage.
Medians	Scheduled Mowing and Maintenance	Two times per calendar year.
Arterial and Collector Routes	Contract Weed Spraying	Annually scheduled at the Road Superintendent's discretion provided that resources are available.
Hazard Trees	Unscheduled Inspection	Referred to City Arborist.
Hazard Trees	Unscheduled Maintenance	Determined by the City Arborist's inspection and scheduled at the Road Superintendent's discretion provided that resources are available.
Downed Trees	Trees are removed from roadways, sidewalks and walkways to allow for the safe flow of traffic. Work is then referred to the Arborist for clean-up.	As required.
Vegetation Originating from Private Property	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff.
Vegetation Originating from Private Property	Boulevard Maintenance Letter	Within 10 days after confirmation from the Road Superintendent that the concern falls under the Boulevard Maintenance Bylaw.
All Other Vegetation	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff.
All Other Vegetation	Unscheduled Maintenance	Within 10 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Road Superintendent, and provided that resources are available.



## **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: R-08 Vegetation Control

City of Coquitlam  
Bylaw Number 3214, 1998



### Engineering and Public Works Level of Service Policy

Chapter: R-10 Ice Patrol

Council Adoption Date:

Revision Date:

#### **Policy Asset**

Ice Patrol

#### **Asset Description**

Asphalt and concrete roadways

#### **Reason for Policy**

Reducing or removing ice and snow and monitoring Winter hazards on major road networks to improve travel safety.

#### **Asset Maintenance Activity**

During the winter months, major road networks are patrolled by over-night staff. Staff may use pick-up trucks to drive major routes as they assess whether brine is required. Alternatively, staff may use brine trucks in colder weather to reduce ice build-up on major road networks. The use of brine and snow-removal equipment falls under Coquitlam's Snow/Ice Response Plan.



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Roadways	Scheduled Ice Patrol	Between the months of November to March, scheduled at the Road Superintendent's discretion based on local weather reports, and provided that resources are available.
Roadways	Unscheduled Ice Patrol Inspection	Within 4 hours upon receipt of a complaint from the public or City staff at the Road Superintendent's discretion based on conditions.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: R-10 Ice Patrol

City of Coquitlam  
Snow/Ice Response Plan



**Engineering and Public Works  
Level of Service Policy**

Chapter: S-01 Drainage Mains

Council Adoption Date:

Revision Date:

**Policy Asset**

Drainage Mains

**Asset Description**

There are two types of drainage mains: gravity and siphon. All mains are designed to collect storm water and convey it to watercourses, lakes or wetlands.

**Reason for Policy**

Maintenance is required to keep drainage mains in good operating condition and to provide storm water collection in an efficient manner to:

- help prevent flooding of private and public properties
- help protect public investment in the drainage system
- effectively convey storm water

**Asset Maintenance Activity**

Main Video Inspection

Repeat Main Flushing

Flow Monitoring

Siphon Maintenance



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Drainage Gravity Mains	Flush, Video, Inspection	Approximately 5% of the total drainage main system every calendar year.
Drainage Gravity Mains	Repeat Main Flushing	Mains identified as having concerns with roots or low-grade once every calendar year.
Flow Monitors	Scheduled Maintenance	As resources are available.
Drainage Siphon Mains	Scheduled Chamber Inspection	Once every month.
Drainage Siphon Mains	Scheduled Chamber Maintenance and Over-Flow Manhole Inspection	Once every 3 months.
Drainage Siphon Mains	Scheduled ARV Maintenance	Once every 6 months.
Drainage Siphon Mains	Scheduled Major Maintenance	Once every calendar.
Drainage Gravity and Siphon Mains	Unscheduled Maintenance	Within 14 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: S-01 Drainage Mains

Engineering and Public Works  
Inventory of Identified Drainage Mains

Engineering and Public Works  
Drainage Main Inventory



**Engineering and Public Works  
Level of Service Policy**

Chapter: S-02 Sanitary Mains

Council Adoption Date:

Revision Date:

**Policy Asset**

Sanitary Mains

**Asset Description**

There are three types of sanitary mains: gravity, force main and siphon. All mains are designed to collect and transport sanitary sewage to the Greater Vancouver Sewerage & Drainage District sewerage system. The sewage is then transported to a Metro Vancouver sanitary sewer treatment plant.

**Reason for Policy**

Maintenance is required to keep sanitary mains in good operating condition and to provide sewer collection and transmission in an efficient manner.

Regular and scheduled maintenance of sewer mains is necessary to:

- protect the environment and public health
- protect public investment in the sewer main
- effectively convey sewage to the Greater Vancouver system

**Asset Maintenance Activity**

Main Video Inspection  
Repeat Main Flushing  
Flow Monitor Maintenance  
Siphon Maintenance



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Sanitary Gravity Mains	Flush, Video, Inspection	Approximately 5% of the total Sanitary Gravity Main system every calendar year.
Sanitary Gravity Mains	Repeat Main Flushing	Mains identified as having concerns with roots or low-grade a minimum of once every calendar year. Frequency may increase depending upon various contributing factors.
Sanitary Siphon Mains	Scheduled Chamber Inspection	Once every month.
Sanitary Siphon Mains	Scheduled Chamber Maintenance and Over-Flow Manhole Inspection	Once every 3 months.
Sanitary Siphon Mains	Scheduled ARV Maintenance	Once every 6 months.
Sanitary Siphon Mains	Scheduled Major Maintenance	Once every calendar year.
Sanitary Gravity, Force, and Siphon Mains	Unscheduled Inspection	Within 48 hours upon receipt of a complaint from the public or City staff.
Sanitary Gravity, Force, and Siphon Mains	Unscheduled Maintenance	Within 14 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.



## **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: S-02 Sanitary Mains

Engineering and Public Works  
Inventory of Identified Sanitary Mains

Engineering and Public Works  
Sanitary Main Inventory



**Engineering and Public Works  
Level of Service Policy**

Chapter: S-03 Drainage and Sanitary Manholes

Council Adoption Date:

Revision Date:

**Policy Asset**

Drainage and Sanitary Manholes

**Asset Description**

A manhole is a vertical access shaft from the ground surface to a sanitary or storm main. It is usually located at a change in main elevation or horizontal direction. Manholes allow access for cleaning, inspection, connections and repairs.

**Reason for Policy**

To maintain the integrity of the Manhole structure allowing access to the mains, thereby reducing ground settlement.

**Asset Maintenance Activity**

Manhole Location and Inspection in City Right of Ways



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Sanitary Manholes	Locate and Inspect in identified City ROWs	Once every calendar year.
Drainage Manholes	Locate and Inspect in identified City ROWs	As resources allow.
All Manholes	Unscheduled Locate and Inspect	Within 5 days upon receipt of a complaint from the public or City staff
All Manholes	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: S-03 Drainage and Sanitary Manholes

Engineering and Public Works  
Inventory of Identified ROWs

Engineering and Public Works  
Manhole Inventory



**Engineering and Public Works  
Level of Service Policy**

Chapter: S-04 Drainage Service Connections

Council Adoption Date:

Revision Date:

**Policy Asset**

Drainage Service Connections

**Asset Description**

Drainage service connections are pipes that convey storm water from the private drainage service to City drainage mains, culverts, or ditches.

**Reason for Policy**

Drainage service connections in good operating condition provide storm water collection and transmission in the most effective and efficient manner.

**Asset Maintenance Activity**

Repair or renew drainage service connections



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Drainage Service Connections	Planned Renewal and Replacement	If needed, at the same time as large projects such as road rehabilitation, property development, or drainage main replacement. This work is scheduled at the Sewer Superintendent's discretion provided that resources are available.
Drainage Service Connections	Unscheduled Inspection (suspected blockage or damage)	The drainage main to which the service connects will be inspected within 24 hours upon receipt of a complaint from the public or City staff. The service will be inspected in accordance with Coquitlam City Bylaws.
Drainage Service Connections	Unscheduled Inspection (other issues)	Within 5 days upon receipt of a complaint from the public or City staff, and in accordance with Coquitlam City Bylaws.
Drainage Service Connections	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, and in accordance with Coquitlam City Bylaws.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: S-04 Drainage Service Connections

City of Coquitlam  
Bylaw Number 4429, 2015



### **Engineering and Public Works Level of Service Policy**

**Chapter: S-05 Sanitary Service Connections**

**Council Adoption Date:**

**Revision Date:**

#### **Policy Asset**

Sanitary Service Connections

#### **Asset Description**

Sanitary service connections are pipes that convey sewage from the private sanitary service to City sanitary mains.

#### **Reason for Policy**

Sanitary service connections in good operating condition provide sewer collection and transmission in the most effective and efficient manner.

#### **Asset Maintenance Activity**

Repair or renew sanitary service connections.



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Sanitary Service Connections	Planned Renewal and Replacement	If needed at the same time as large projects such as road rehabilitation, property development, or sanitary main replacement. This work is scheduled at the Sewer Superintendent's discretion provided that resources are available.
Sanitary Service Connections	Unscheduled Inspection (suspected blockage or damage)	The Sanitary Main to which the Service connects will be inspected within 24 hours upon receipt of a complaint from the public or City staff. The Service will be inspected in accordance with Coquitlam City Bylaws.
Sanitary Service Connections	Unscheduled Inspection (other issues)	Within 5 days upon receipt of a complaint from the public or City staff, and in accordance with Coquitlam City Bylaws.
Sanitary Service Connections	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, and in accordance with Coquitlam City Bylaws.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: S-05 Sanitary Service Connections

City of Coquitlam  
Bylaw Number 4429, 2015



**Engineering and Public Works  
Level of Service Policy**

Chapter: S-08 Drainage Catch Basins

Council Adoption Date:

Revision Date:

**Policy Asset**

Drainage Catch Basins

**Asset Description**

Catch basins are openings for storm drain systems which capture surface water. They may also capture debris and sediments through a grate, curb inlet or sump. The purpose of a catch basin is to prevent items such as trash and other floatable materials from entering the drainage system and the waterways into which it empties.

Catch basins are typically covered with a slotted cast iron grate which prevents large items from being carried into the drainage system.

Critical catch basins are typically positioned to catch and direct excess run-off during heavy rainfall. They are defined as critical, because, should they become plugged, the direct result may be damage to private or public property.

**Reason for Policy**

Catch basin cleaning and maintenance is performed to reduce the risk of flooding of private and public property, and it is performed to remove the debris and sediment trapped in the sumps.

**Asset Maintenance Activity**

Catch Basin Cleaning

Catch Basin Maintenance

Critical Catch Basin Inspection and Cleaning



**Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
All Catch Basins	Scheduled Cleaning	Once every three calendar years.
All Catch Basins	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff.
All Catch Basins	Unscheduled Maintenance	Within 5 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.
Non-Critical Catch Basins	Unscheduled Maintenance	Within 5 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.
Critical Catch Basins	Inspection	Scheduled at the Sewer Superintendent's discretion prior to and during heavy rainfall events as predicted by Environment Canada.
Critical Catch Basins	Maintenance	Scheduled at the Sewer Superintendent's discretion prior to and during heavy rainfall events as predicted by Environment Canada, and provided that resources are available.

**Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: S-o8 Drainage Catch Basins

Engineering and Public Works  
Critical Catch Basin Inventory

Engineering and Public Works  
Catch Basin Inventory



## Engineering and Public Works Level of Service Policy

Chapter: S-10 Drainage Intakes and Outfalls

Council Adoption Date:

Revision Date:

### **Policy Asset**

Drainage Intakes and Outfalls

### **Asset Description**

The drainage system consists of a series of pipes, open channels and associated ancillary structures which convey surface run-off into streams and rivers.

Intakes are located at the starting point of a closed pipe section of the system and are typically a prefabricated concrete structure designed to collect surface runoff while limiting the entry of debris and mitigating erosion.

Outfalls are located at the discharge point of the closed pipe system where it enters an open channel. The outfall may be fabricated from concrete, large rock, or other appropriate materials. The purpose of the structure is to direct and/or diffuse flows, support adjacent infrastructure, and mitigate erosion.

Critical intakes and outfalls are typically positioned to catch and direct excess run-off during heavy rainfall. They are defined as critical, because, should they become plugged, the direct result may be damage to private or public property. This is based on the size of the watercourse catchment area, whether it is historically prone to flooding, and the type of ground cover.

### **Reason for Policy**

To mitigate flooding occurrences, to protect private and public property, to protect the environment, and to maintain continuous operation of the storm water system.

### **Asset Maintenance Activity**

Intake and Outfall Inspection  
Critical Intake and Outfall Inspection



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
All Intakes and Outfalls	Scheduled Inspection	Once every calendar year.
All Intakes and Outfalls	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff.
All Intakes and Outfalls	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.
Critical Intakes and Outfalls	Inspection	Scheduled at the Sewer Superintendent's discretion prior to and during heavy rainfall events as predicted by Environment Canada.
Critical Intakes and Outfalls	Unscheduled Maintenance	Scheduled at the Sewer Superintendent's discretion prior to and during heavy rainfall events as predicted by Environment Canada, and provided that resources are available.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: S-10 Drainage Intakes and Outfalls

Engineering and Public Works  
Inventory of Critical Intakes and Outfalls

Engineering and Public Works  
Inventory of Intakes and Outfalls



**Engineering and Public Works  
Level of Service Policy**

Chapter: S-12 Surface Drainage

Council Adoption Date:

Revision Date:

**Policy Asset**

Surface Drainage: culverts, ditches, storm water quality ponds

**Asset Description**

Ditches collect and convey storm water from the source to either the enclosed storm water system or directly to receiving waters.

Culverts act as a conduit for storm water contained in ditches under driveways and roadways. Culverts are designed and constructed to engineering standards. Critical Culverts are typically positioned to direct excess run-off during heavy rainfall. They are defined as critical, because, should they become plugged, the direct result may be damage to private or public property. This is based on the size of the watercourse catchment area, and whether it is historically prone to flooding.

As part of the storm water management plans for the development of the Northeast sector of Coquitlam, storm water quality ponds were installed. These ponds collect, treat and discharge storm water from development sites to reduce the impact of development on the receiving water courses.

**Reason for Policy**

A properly maintained drainage system will mitigate flooding of private and public property and excessive erosion while protecting the environment.

Culverts, ditches and storm water quality ponds in good operating condition provide storm water collection and transmission in the most effective and efficient manner.



### **Asset Maintenance Activity**

Culvert Inspections  
Culvert Maintenance  
Critical Culvert Inspections  
Ditch Inspections  
Ditch Stripping Maintenance  
Ditch Flail Mowing Maintenance  
Storm Water Quality Pond Inspections  
Storm Water Quality Pond Maintenance

### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Culverts on Watercourses	Inspection and Maintenance	Once every calendar year as part of watershed management planning exercises.
Critical Culverts	Inspection	Scheduled at the Sewer Superintendent's discretion prior to and during heavy rainfall events as predicted by Environment Canada, and provided that resources are available.
Critical Culverts	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.
Ditches	Scheduled Inspection	Once every calendar year.
Ditches in residential areas (Zones 1 and 2)	Scheduled Stripping and Maintenance	Once every three calendar years.
Ditches (other)	Unscheduled Stripping and Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.
Ditches in residential areas (Zones 1 and 2)	Scheduled Flail Mowing and Maintenance	Once every calendar year.



Ditches (other)	Unscheduled Flail Mowing and Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.
Storm Water Quality Pond	Scheduled Visual Inspections	Two times per calendar year.
Storm Water Quality Pond	Scheduled Maintenance	Determined by Inspection and scheduled at the Sewer Superintendent's discretion provided that resources are available.
Storm Water Quality Pond	Sediment Removal	Once every calendar year.
Stormceptor & Vortechincs	Scheduled Inspections and Maintenance	Once every calendar year.
Stormceptor & Vortechincs	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff
Stormceptor & Vortechincs	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.
Culverts, Ditches, and Storm Water Quality Ponds	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff.
Culverts, Ditches, and Storm Water Quality Ponds	Other Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.



## **Procedure Manual Reference**

Engineering and Public Works  
Level of Service Policy  
Chapter: S-12 Surface Drainage

Engineering and Public Works  
Inventory of Culverts, Ditches and Storm Water Quality Ponds

Engineering and Public Works  
Critical Culvert Inventory



### Engineering and Public Works Level of Service Policy

Chapter: S-13 Watercourses

Council Adoption Date:

Revision Date:

#### **Policy Asset**

Watercourses

#### **Asset Description**

After being conveyed through the open channel and closed pipe system, all drainage water eventually enters into one or more of the many creeks that traverse throughout public and private lands within the City.

#### **Reason for Policy**

To mitigate flooding occurrences, protect public and private property, to protect the environment and to maintain the continuous operation of the storm-water system.

#### **Asset Maintenance Activity**

Annual Watercourse Maintenance Program (Fisheries Work) at sites identified in annual Instream Maintenance & Enhancement Review Reports by Coquitlam's Sewer and Drainage Department may include but is not limited to:

- Cleaning Watercourses to restore capacity (vegetation & sediment)
- Fish Collection
- Cleaning Under Bridges
- Cleaning Box Culverts
- Clean Inlets
- Repair Headwalls
- Sandbar Removal
- Pond Cleaning



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Identified Watercourses	Scheduled Inspection	Once every calendar year in accordance with the Annual Watercourse Maintenance program.
Identified Watercourses	Scheduled Maintenance	Once every calendar year in accordance with the Annual Watercourse Maintenance program.
All Watercourses	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff.
All Watercourses	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff provided that the complaint is determined to be valid by the Sewer Superintendent, and provided that resources are available.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: S-13 Watercourses

City of Coquitlam  
Instream Maintenance & Enhancement Review

City of Coquitlam  
Annual Watercourse Maintenance Program

Engineering and Public Works  
Maintained Watercourse Inventory

Engineering and Public Works  
Watercourse Inventory



**Engineering and Public Works  
Level of Service Policy**

Chapter: W-01 Water Hydrants

Council Adoption Date:

Revision Date:

**Policy Asset**

Water Hydrants

**Asset Description**

A hydrant is a control valve in the water distribution system that allows water to be available in large quantities above ground level, primarily for public fire protection.

A hydrant may also be a source of water for activities conducted by City crews, and construction projects; however, hydrant use for any other purpose other than fire fighting is limited. Such uses are controlled by permits, in the interest of keeping the hydrant in good working order for fire fighting.

Hydrants in road allowances, City rights-of-way and City property are the responsibility of the City of Coquitlam. Hydrants on private property or outside of right-of-ways are the responsibility of the property owner.

**Reason for Policy**

To keep hydrants in good operating condition and visible for fire fighting purposes.

**Asset Maintenance Activity**

Hydrant re-painting  
Scheduled "A" Service  
Scheduled "B" Service



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Hydrant	Scheduled Painting Program	Once every three calendar years.
Hydrant	Scheduled Level 'A' Service	One-half of all hydrants every calendar year.
Hydrant	Scheduled Level 'B' Service	All get a minimum of once every calendar year. Hydrants that do not get a Level 'A' Service will get an additional 'B' Service instead.
Hydrant	Unscheduled Level 'A' Service	Within 30 days upon receipt of notification that a hydrant has been used.
Hydrant	Unscheduled Inspection	Within 48 hours upon receipt of a complaint from the public or City staff.
Hydrant	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Water Superintendent, and provided that resources are available.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: W-01 Water Hydrants

Engineering and Public Works  
Water Hydrant Inventory



**Engineering and Public Works  
Level of Service Policy**

Chapter: W-02 Water Mains

Council Adoption Date:

Revision Date:

**Policy Asset**

Water Mains

**Asset Description**

Water mains are large diameter (100mm and above) pipes located in the ground that convey potable water from Metro Vancouver connections to customers throughout the City. These mains supply water for both domestic purposes and fire protection purposes.

**Reason for Policy**

To provide adequate water supply to meet the demands for domestic, commercial, and fire-protection purposes.

**Asset Maintenance Activity**

Dead End Flushing Program  
Unidirectional Flushing Program  
Cathodic Protection Program  
Rectifier Program



### **Level of Service**

<b>Object</b>	<b>Task</b>	<b>Frequency</b>
Water Mains	Dead-End Flushing Program	Once every calendar year.
Water Mains	Unidirectional Flushing Program	Once every three calendar years.
Water Mains	Cathodic Protection Program	Once every three months.
Water Mains	Rectifier Program	Once every month.
Water Mains	Unscheduled Inspection	Within 48 hours upon receipt of a complaint from the public or City staff.
Water Mains	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, provided that the complaint is determined to be valid by the Water Superintendent, and provided that resources are available.

### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: W-02 Water Mains

Engineering and Public Works  
Water Main Inventory



## Engineering and Public Works Level of Service Policy

Chapter: W-06 Water Service Connections

Council Adoption Date:

Revision Date:

### Policy Asset

Water Service Connections

### Asset Description

Water services are pipes of various diameters (19mm-200mm) that convey potable water from City water mains to private water service connections. These services supply water for both domestic and fire protection purposes.

### Reason for Policy

The planned inspection, repair and renewal of water service connections helps maintain water quality in compliance with regulatory requirements and minimizes water loss through leakage.

### Asset Maintenance Activity

Repair or renew water service connections

### Level of Service

Object	Task	Frequency
Water Service Connections	Scheduled Renewal and Replacement	If needed, at the same time as large projects such as road rehabilitation, property development, or water main replacement. This work is scheduled at the Water Superintendent's discretion provided that resources are available.
Water Service Connections	Unscheduled Inspection	Within 5 days upon receipt of a complaint from the public or City staff.



Water Service Connections	Unscheduled Maintenance	Within 30 days upon receipt of a complaint from the public or City staff, and in accordance with Coquitlam City Bylaws.
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### **Procedure Manual Reference**

Engineering and Public Works  
Procedure Manual  
Chapter: W-06 Water Service Connections

City of Coquitlam  
Bylaw Number 4428, 2015



## McAllister Streetscape Design Options

### **RECOMMENDATION:**

*That Committee of Council direct staff to proceed with detailed design for option two, of the McAllister Avenue Streetscape.*

### **PREVIOUS COUNCIL/COMMITTEE ACTION**

*Committee of Council has authorize staff to proceed with developing a streetscape design and costing for McAllister Avenue, including undergrounding of the current overhead wiring as part of the 2020-2021 capital works budget approval.*

### **REPORT SUMMARY**

Technical evaluation and design concepts are now complete for the McAllister Avenue Streetscape Design project. This included traffic analysis of the four intersections in the study area, and current and future performance of the road network system. The four design options included one-way and two-way traffic flow options, a mix of parking options, and a range of pedestrian and boulevard design widths. Overall the four design options were determined to have limited impact on current and future traffic volumes and road/intersection performance. The report recommends design option two, which provides for the largest pedestrian and boulevard area, while maintaining a large portion of on-street parking.

### **BACKGROUND**

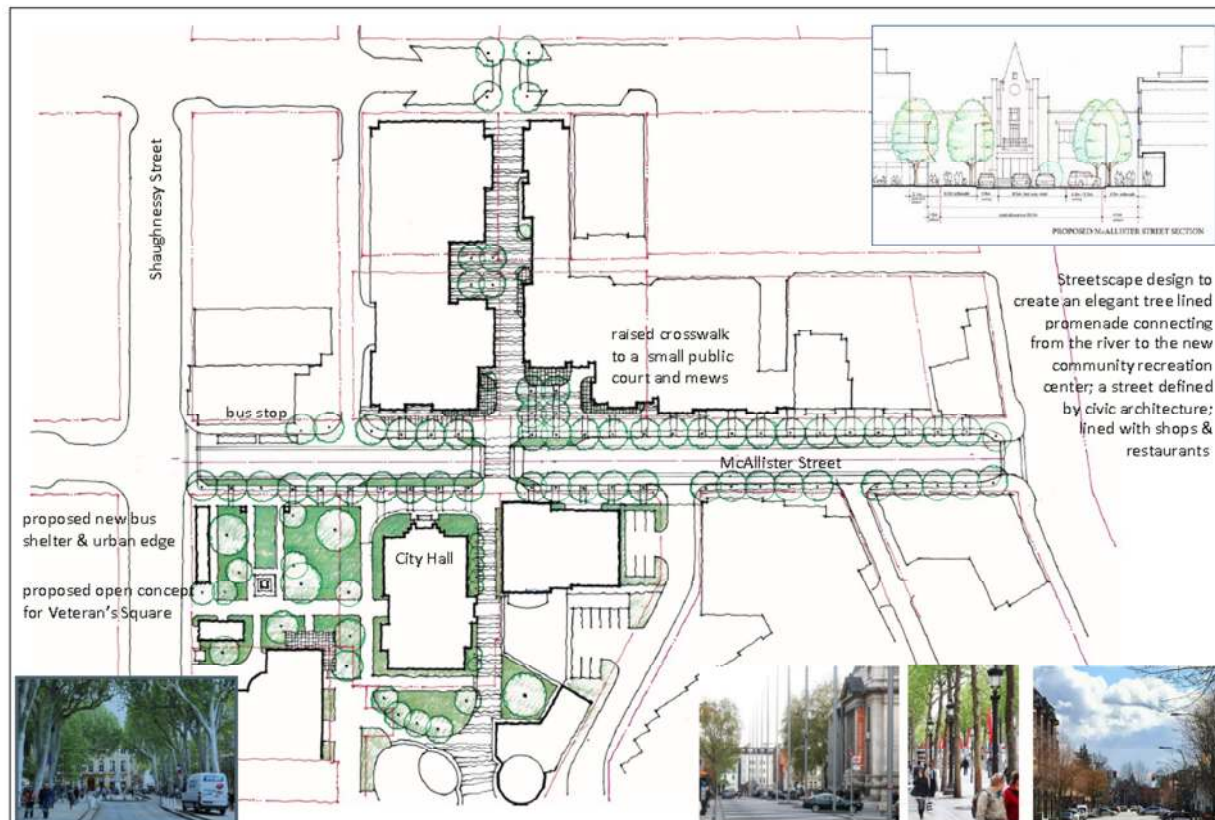
The streetscape concept for McAllister Avenue is envisaged as a tree-lined promenade as shown on the sketch below. Further, it will be a main pedestrian connection linking the Port Coquitlam Community Centre with the heart of the City's downtown, provide flexibility for events and commercial encroachment to promote lively animation of the corridor.

To achieve this vision, the City has planned to reconstruct McAllister Avenue, including undergrounding the current overhead wiring, widening the pedestrian corridors, and planting street trees along the entire corridor.



# McAllister Streetscape Design Options

## Sketch 1



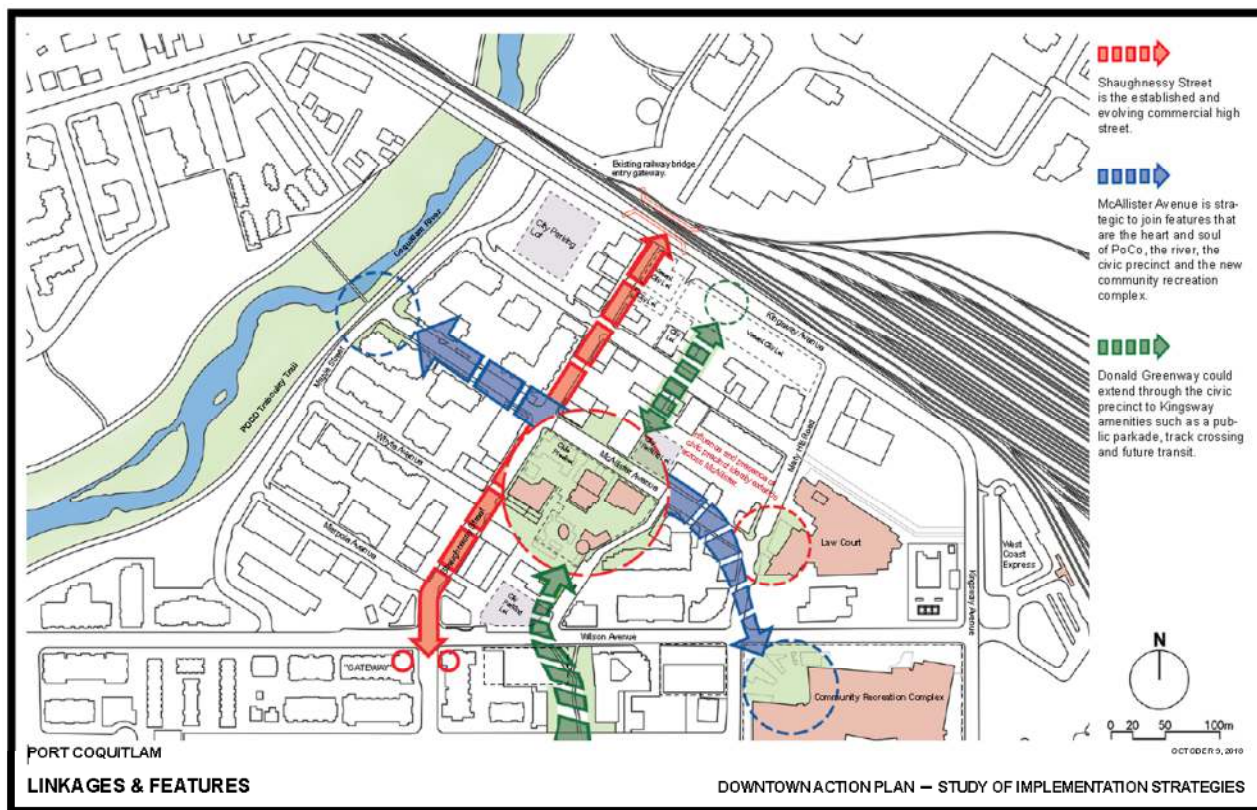
Furthermore, the downtown action plan contemplated one-way traffic on McAllister Ave in order to repurpose road right-of-way to ancillary uses such as wider pedestrian areas, multi-use paths, street trees and café spaces.

### Current Conditions:

McAllister Avenue is a two-way street fronting Veterans' Park, provides connections to PoCo Traboulay trail, the PCCC, the future extension of the Donald Pathway, and is anchored by City Hall and the Port Coquitlam Provincial Court (illustrated in Figure 1 below). Currently, the street provides parking (58 total spaces) on the north (angled) and south (parallel) sides, and is comprised of predominantly ground floor commercial developments from Shaughnessy Street to Mary Hill Road.



Figure 1



## DISCUSSION

The following section provides analysis of four streetscape design options for McAllister Ave. and considers pedestrian improvement options along the Shaughnessy St. corridor.

### Streetscape Designs

To ensure maximum flexibility for space utilization, all design options incorporate a level cross section without curb and gutter (shared street). This is achieved by sinking drainage infrastructure below the road surface and delineating travel lanes with material variations and physical barriers such as concrete banding and removable bollards or planters.

This means that the entire road cross section is available for special event planning and provides greater flexibility of use. In addition, all options include setting new developments back from the property line and incorporating alcoves to promote patio and pedestrian uses.



## McAllister Streetscape Design Options

To assist with visualizing the shared street concept, staff have included renderings from a similar shared street project in Chicago below.



<https://www.asce.org/magazine/20160802-chicago-builds-new-type-of-shared-street/>

Furthermore all streetscape designs will incorporate:

- Multi-use pathway on south side (3m), pedestrian area on the north side (varying width)
- Raised mid-block pedestrian crossing and new public plaza on north side of the street
- Street trees, bollards, planting pockets and furnishings in the boulevards spaces



# McAllister Streetscape Design Options

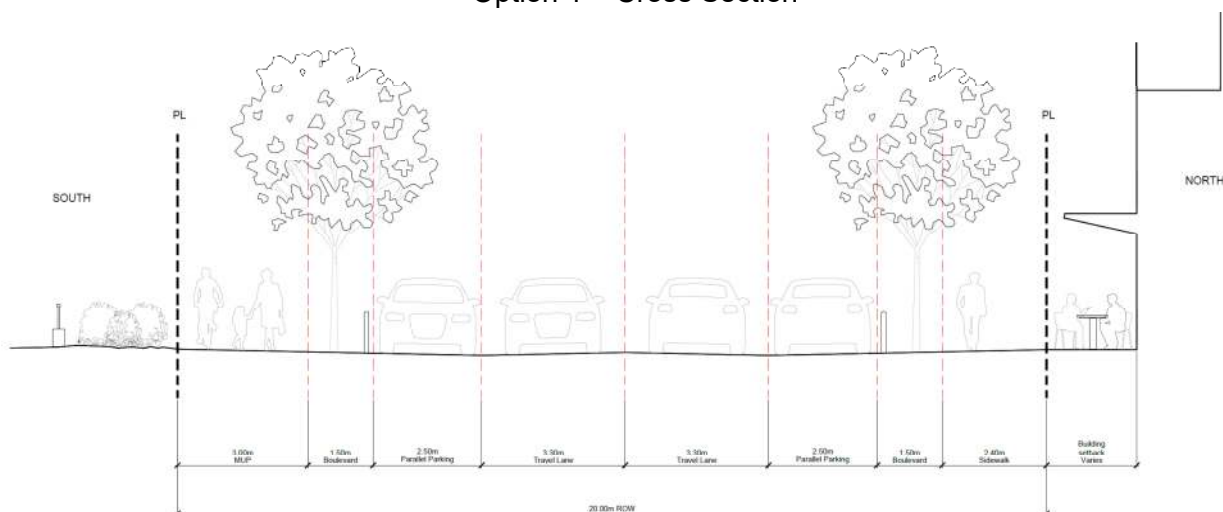
## Design Option 1

- Two way traffic
- Parallel parking on both sides
- Parking spaces provided: 36

Option 1 – Rendering



Option 1 – Cross Section





# McAllister Streetscape Design Options

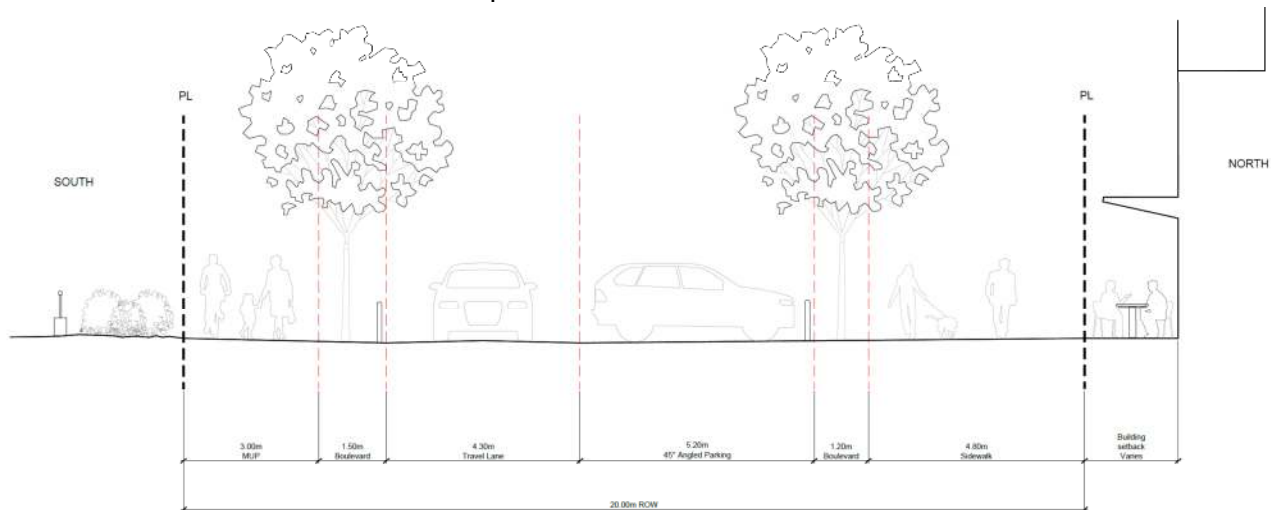
## Design Option 2

- One way traffic (east bound)
- Angled parking on the north side; no parking on the south side
- Parking spaces provided: 42
- Potential for a double row of street trees within the North boulevard

Option 2 - Rendering



Option 2 – Cross Section





# McAllister Streetscape Design Options

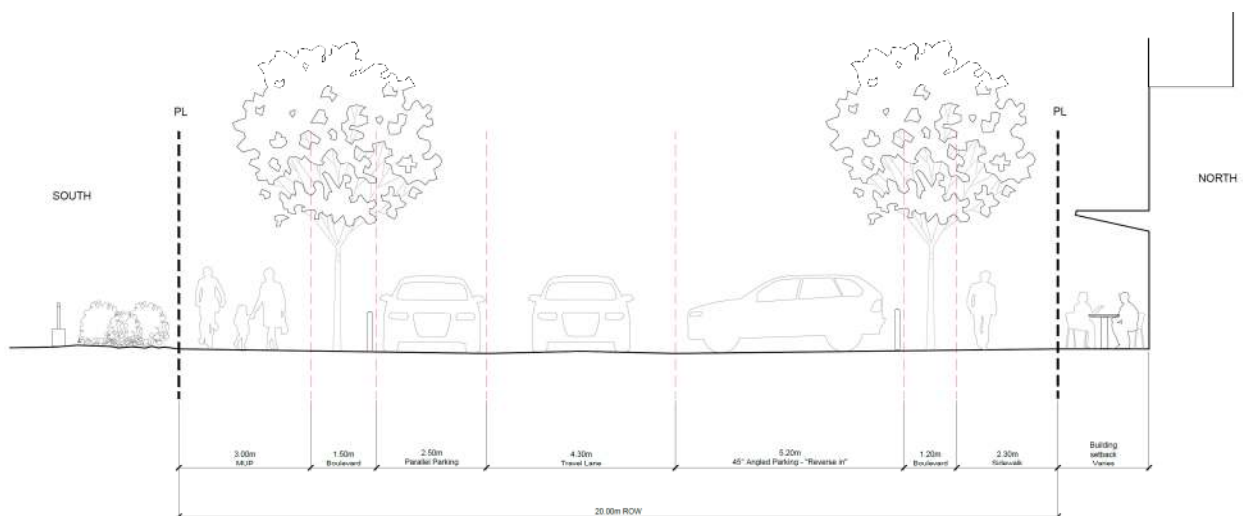
## Design Option 3

- One way traffic (east bound)
- Angled parking on the north side, parallel parking south side
- Parking spaces provided: 56

Option 3 - Rendering



Option 3 – Cross Section





# McAllister Streetscape Design Options

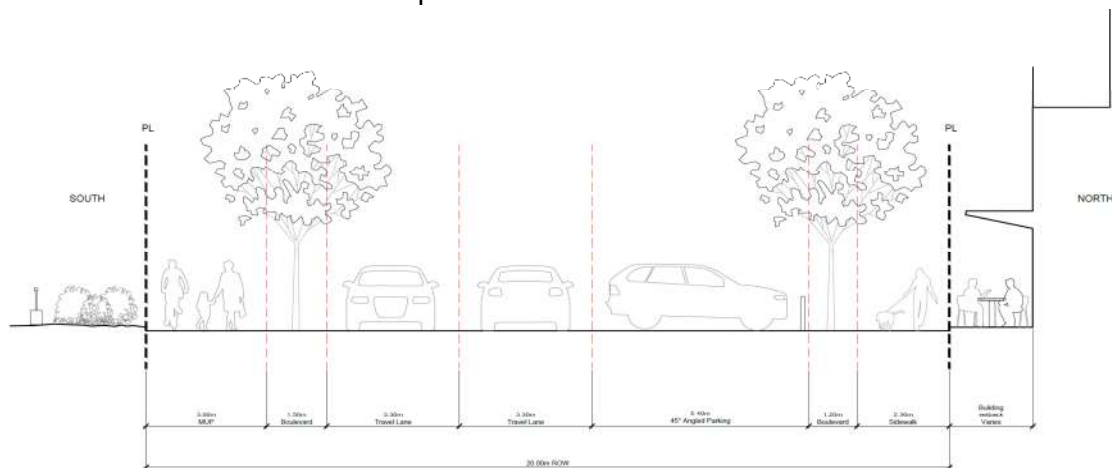
## Design Option 4

- Two way traffic
- One sided angled parking on the north side between Shaughnessy Street and Donald Street
- Parking spaces provided – 33
- Parallel parking on the north and south side from Donald Street to Mary Hill Road
- Street trees, bollards and furnishings in boulevard spaces

Option 4 - Rendering



Option 4 – Cross Section





## McAllister Streetscape Design Options

Below is a table of design specifics for comparison purposes:

	Design Option 1	Design Option 2	Design Option 3	Design Option 4
Traffic Flow	Two-way	One-way (EB)	One-way (EB)	Two-way
Total Pedestrian and Blvd Width	3.9m (N) & 1.5m (S)	6.0m(N) & 1.5m (S)	3.5m(N) & 1.5m (S)	3.6m (N) & 1.5m (S)
Building Setbacks	1.8m to 2.4m	1.8m to 2.4m	1.8m to 2.4m	1.8m to 2.4m
Multi Use Path on South Side	3.0m	3.0m	3.0m	3.0m
Parking	Parallel both sides	Front angle (north side; no parking south side.	Parallel parking on south side; Back in angled parking on north side	West of Donald:  Front angle parking on north side; No parking on south side  East of Donald:  Parallel parking north side; Parallel parking south side
Parking Stalls	36 (20 fewer)	42 (14 fewer)	56 (2 fewer)	27 (29 fewer)
Benefits	-consistent with current streetscape designs	-large flexible width on north side (6.0m)	-negligible loss in parking	-produces linear park near Donald St. as parking is transitioned
Challenges	-limited café space on north side	-impacts TransLink Bus route 175	-back in angled parking -impacts TransLink Bus route 175	-inconsistent cross section between Shaughnessy St and Mary Hill Rd

Through the traffic analysis (attachment 2) it was determined that restricting traffic to one-way has minimal impact to the surrounding road network and in consultation with the City's land and development facilitator, understand that one-way traffic will have minimal impacts on any adjacent commercial development. Therefore, staff is recommending Option 2 as the preferred design option as it provides greater flexibility for the northern pedestrian area and allows for programming of this space with enhanced landscaping and street furniture.

In the Downtown Action Plan, Elgin Avenue was also envisioned as a one-way street to address traffic concerns with left hand turns. However, this has been addressed by restricting left turns onto Shaughnessy Street, and the decision on McAllister does not influence or require any changes on Elgin Avenue.



## McAllister Streetscape Design Options

One-way traffic on McAllister allows a narrower travel lane that enhances multi-modal transportation in the downtown. There is also a relationship to City Hall, Veterans' Park and Leigh Square that will maximize downtown animation. Events and activities can flow into the public realm on McAllister and future restaurant, patios and nearby retail. Additionally, this option still provides 42 on-street parking spaces.

However, should Council wish to maintain the two-way traffic flow, staff supports option 1 as an alternative design approach. Option 1 retains the existing traffic flow while providing an enhanced pedestrian area of 3.9 m. This is larger than a typical sidewalk width (1.5m) and provides a level of flexibility for animating the space. Design option 1 maintains 36 parking spaces by providing parallel parking on both sides of the street.

Option 3 and 4 were generally not supported by staff. Option 3 while maintaining the current level of parking, also requires back in angled parking that is a significant departure for the City. While this option provides one way traffic it does not provide the enhanced sidewalk area.

Option 4 provides the fewest on-street parking spaces and was discounted for this reason.

### Shaughnessy Street Pedestrian Safety Improvements

As part of the traffic analysis, pedestrian safety improvements along Shaughnessy St. at Elgin Ave. and Whyte Ave. were considered.

#### **Elgin Avenue:**

To further improve intersection performance at the Shaughnessy Street and Elgin Avenue intersection, the installation of a traffic signal was considered. Signal warrant analysis was conducted and the results showed that a full traffic signal is warranted in 2019 and 2029. The peak hour traffic operation analysis indicated that during the PM peak, the average delay experienced by westbound right-turn vehicles was significantly decreased, while the northbound queue might spill over further upstream to McAllister Avenue. Overall, the installation of a traffic signal would be beneficial during the PM peak to accommodate right hand turns from Elgin.

After further consideration, staff are not recommending signalization as the infrastructure would have minimal value given the majority of movements are prohibited at this location. Pedestrian visibility at Elgin is good, with well-defined curb extensions. Alternatively, staff recommend a rectangular rapid flashing beacon be installed and the interim median treatment be replaced by removable planting beds (or similar) to further enhance the character of Shaughnessy Street.



## McAllister Streetscape Design Options

### Whyte Avenue:

After reviewing this crossing it was determined that the sightlines at this heavily used crossing require improvement to meet industry standards. Accordingly, the traffic consultant has recommended the following list of potential improvements ranked in order of most cost effective to least.

Table 5 – Shaughnessy St. / Whyte Ave Pedestrian Crossing Improvements

Option	Improvement	Benefit	Cost
1	Remove parking stalls adjacent to crossings	Improved sightlines	\$500
2	Construct curb extensions (NW & SW corners)	Decrease pedestrian crossing time while improving sightlines	\$10,000
3	Install a Rectangular Rapid Flashing Beacon at the Crosswalk	Improved driver response; same impact to vehicle traffic as current condition	\$75,000
4	Install a Pedestrian controlled signalized crossing	Decrease pedestrian conflict; opportunity to align timing with corridor to improve intersection performance	\$200,000

A rectangular rapid flashing beacon would not impact traffic flow over current conditions, however would increase driver response and provide a safer crossing opportunity for pedestrians. Whereas, a pedestrian controlled signal would be a decreased service level for pedestrians as their crossing ability would be restricted to align with corridor signal timing. A pedestrian controlled signal does provide the highest level of protection and provides opportunities to align the signal timing with other intersections along the corridor for improved traffic flow.

Accordingly, a decision must be made on which mode of traffic to prioritize at this location. Considering a guiding principle of the Downtown Action plan was to ensure that the Downtown is walkable, staff recommend the construction of curb extensions at the north west corner and the south west corner and installation of a rectangular rapid flashing beacon. This will avoid delays to pedestrians and improve walkability.

### **FINANCIAL IMPLICATIONS**

The estimated costs for the project are provided below. It should be noted that these are class C estimates which are prepared with limited site information and are based on some assumed site conditions (typically +/- 25 to 40% of the actual project costs). Class C estimates are used for




## McAllister Streetscape Design Options

project planning and following approval to proceed with detailed design and further investigations and more accurate estimates are prepared.

Funding for McAllister Avenue streetscape improvements is included in the Capital Works budget for design in 2020 and construction in 2021.

	Cost range	Comments
Surface works	\$2.5M to \$2.9M	The estimate ranges provides for a variety of design options including: pavement, tile, landscaping design, etc.
Underground Utilities	\$0.625M	Includes BC Hydro
Contingency (30%)	\$0.85M to \$0.95M	The contingency ranges based on the estimated costs of the final design options
<b>Total</b>	<b>\$3.975M to \$4.475M</b>	

### **OPTIONS** (✓ = Staff Recommendation)

	#	Description
	1	Approve proceeding to detail design of option 2.
	2	Approve an alternative design option.
	3	Refer the design concepts back to staff for further analysis.

### **ATTACHMENTS**

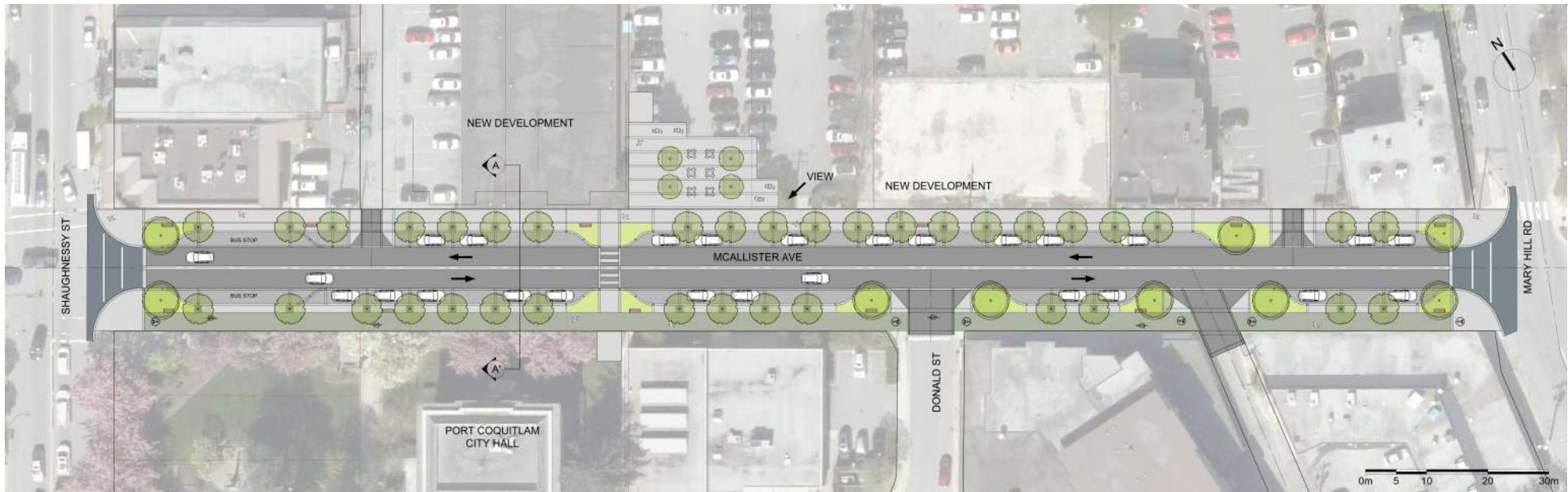
Att#1: Design Options

Att#2: Traffic Analysis

**Lead author(s):** Forrest Smith

**Contributing author(s):** Lisa Grant



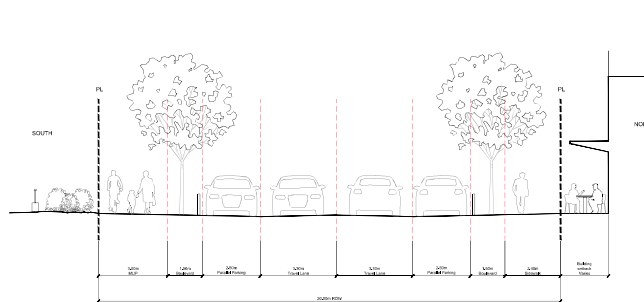


# OPTION 1 2-WAY, 2-SIDED PARALLEL PARKING

- STREETSCAPE SUMMARY**
- TWO WAY VEHICLE TRAFFIC
  - PARALLEL PARKING BOTH SIDES
  - PARKING SPACES: 36
  - MULTI-USE PATH ON SOUTH SIDE, SIDEWALK ON NORTH SIDE
  - MID-BLOCK PEDESTRIAN CROSSING AND NEW PUBLIC PLAZA ON NORTH SIDE OF STREET
  - STREET TREES, BOLLARDS AND FURNISHINGS IN BOULEVARD SPACES

- POSITIVES**
- MINIMAL TRAFFIC IMPACT (MAINTAINS TWO WAY TRAVEL)
  - ACCOMMODATES ALL USERS
  - ENHANCED STREETSCAPE
  - OPPORTUNITIES FOR RAINGARDENS IN LARGE PLANTING BEDS

- NEGATIVES**
- PARKING LOSS (20 FEWER SPACES THAN EXISTING NUMBER)





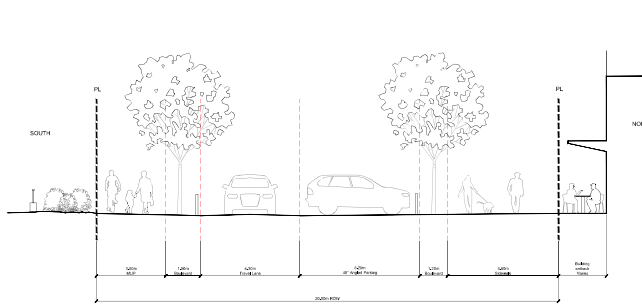


## OPTION 2 1-WAY, 1-SIDED ANGLED PARKING

- STREETSCAPE SUMMARY**
- ONE WAY VEHICLE TRAFFIC (EAST BOUND)
  - ANGLED PARKING ON NORTH SIDE
  - PARKING SPACES 42
  - MULTI-USE PATH ON SOUTH SIDE, SIDEWALK ON NORTH SIDE
  - MID-BLOCK PEDESTRIAN CROSSING AND NEW PUBLIC PLAZA ON NORTH SIDE OF STREET
  - STREET TREES, BOLLARDS AND FURNISHINGS IN BOULEVARD SPACES

- POSITIVES**
- ACCOMMODATES ALL USERS
  - ENHANCED STREETSCAPE
  - NORTH SIDEWALK AND CAFE SPACES WELL BUFFERED FROM ROADWAY
  - OPPORTUNITIES FOR HANGGARDENS IN LARGE PLANTING BEDS

- NEGATIVES**
- TRAFFIC IMPACT (NO WEST BOUND TRAVEL)
  - PARKING LOSS (16 FEWER SPACES THAN EXISTING NUMBER)
  - NO WEST BOUND BUS TRAFFIC OR STOP (EAST BOUND POSSIBLE WITH LOADING ON ROADWAY OR STOP ALCOVE AT VETERANS PARK)
  - OVERLY WIDE NORTH SIDEWALK (OUT OF SCALE TO ANTICIPATED PEDESTRIAN VOLUMES AND USES)



**McAllister Avenue Streetscape**  
Port Coquitlam  
City of Port Coquitlam

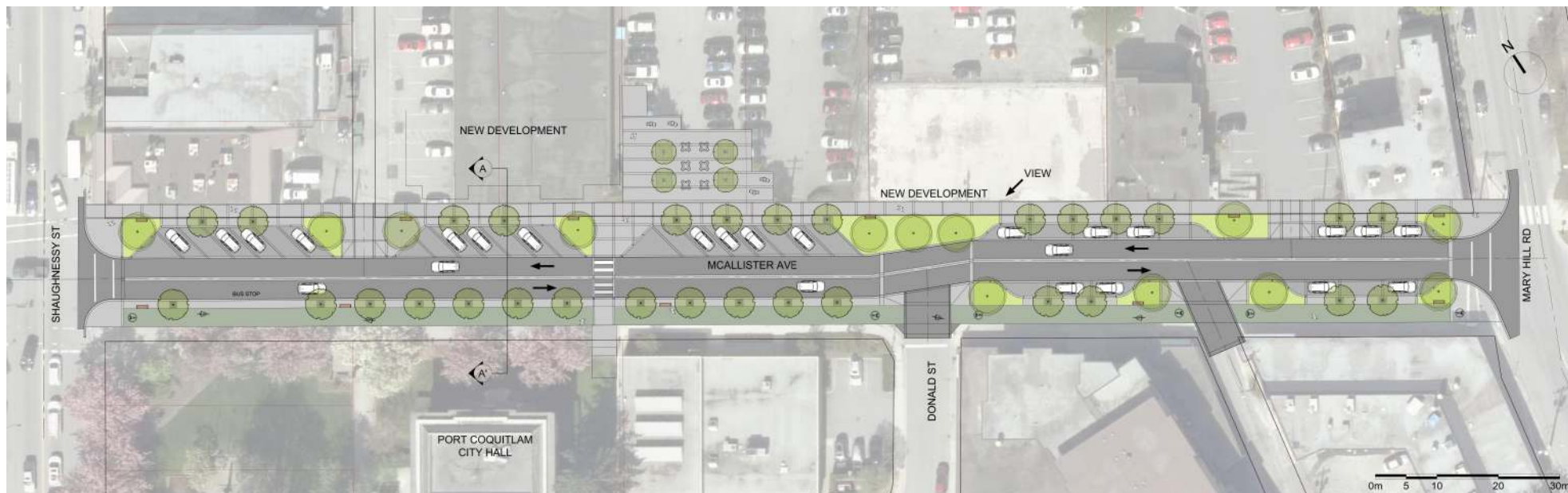
**CONCEPT - OPTION 2 (4A)**  
1-WAY, 1-SIDED ANGLED PARKING  
Sept 2019

**LA02**  
32419  
1:300







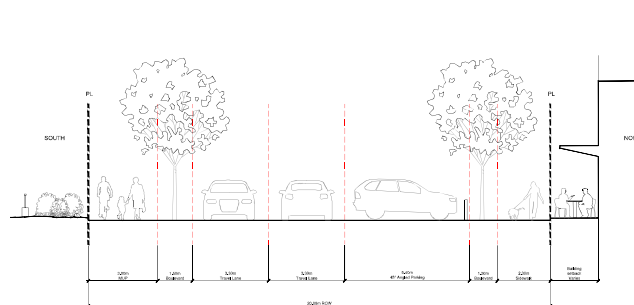


#### OPTION 4 2-WAY, 1-SIDED ANGLED & 2-SIDED PARALLEL PARKING

- STREETSCAPE SUMMARY**
- TWO WAY VEHICLE TRAFFIC
  - ONE SIDED ANGLED PARKING NORTH SIDE BETWEEN SHAUGHNESSY ST AND DONALD ST. PARALLEL PARKING ON NORTH AND SOUTH SIDE FROM DONALD ST TO MARY HILL RD
  - PARKING SPACES: 33
  - MULTI-USE PATH ON SOUTH SIDE, SIDEWALK ON NORTH SIDE
  - MID-BLOCK PEDESTRIAN CROSSING AND NEW PUBLIC PLAZA ON NORTH SIDE OF STREET
  - STREET TREES, BOLLARDS AND FURNISHINGS IN BOULEVARD SPACES

- POSITIVES**
- MINIMAL TRAFFIC IMPACT (MAINTAINS TWO WAY TRAVEL)
  - ACCOMMODATES ALL USERS
  - ENHANCED STREETSCAPE
  - NORTH SIDEWALK AND CAFE SPACES WELL BUFFERED FROM THE ROADWAY
  - OPPORTUNITIES FOR RAINGARDENS IN LARGE PLANTING BEDS

- NEGATIVES**
- PARKING LOSS (23 FEWER SPACES THAN EXISTING NUMBER)







To: **City of Port Coquitlam** Date: **December 5, 2019**  
Attention: **Melony Burton** Project No.: **32419**  
Cc: **Chris Boit and Andrew Robertson (ISL)**  
Reference: **McAllister Avenue Streetscape – Traffic Analysis Memorandum (Revised)**  
From: **Borg Chan and Omid Ebadi**

## 1.0 Introduction

The City of Port Coquitlam (the City) has retained ISL Engineering and Land Services (ISL) to develop high-level concept plans to upgrade McAllister Avenue, between Shaughnessy Street and Mary Hill Road, as part of the Donald Street multi-use path extension to Elgin Avenue.

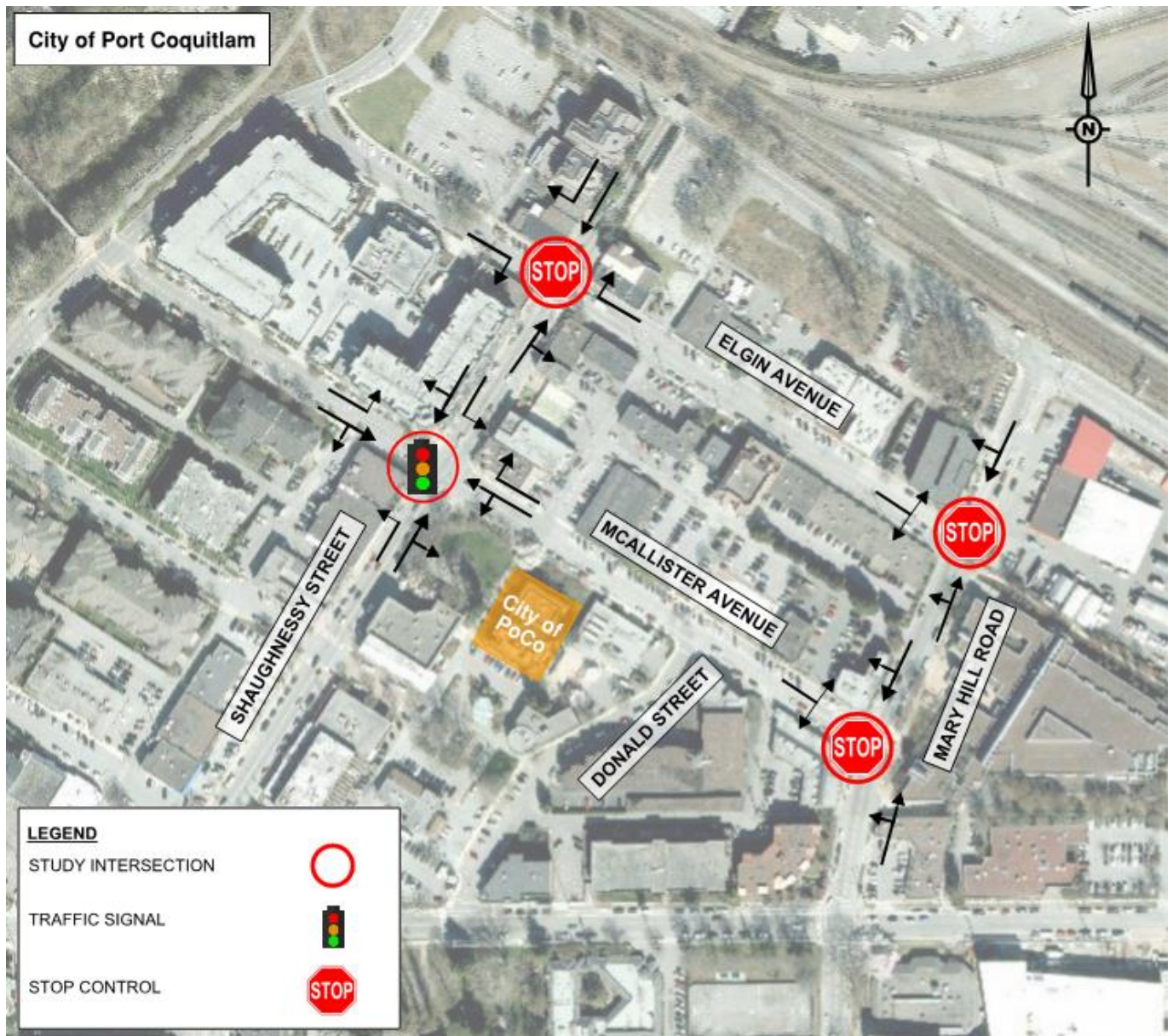
According to *PoCoMAP (the City's GIS Map)*, McAllister Avenue is classified as a local road in the downtown area, which connects Shaughnessy Street in the west and Mary Hill Road Road in the east. The length of the study corridor is approximately 225 metres consisting of two travel lanes (one lane in each direction) and angled parking on the north side and parallel parking on the south side. The study area is surrounded mainly by commercial lots such as restaurants, retail stores, and professional services, which will be developed or redeveloped within a 20-year horizon.

There are four key intersections located in the study area (**Figure 1**), for which the road classification and designation of the intersecting street and existing traffic control type are provided:

- Shaughnessy Street (arterial) and McAllister Avenue – 4-legged signalized
- Shaughnessy Street and Elgin Avenue (local) – 4-legged stop-controlled with right-in-right-out (RIRO) movements on Elgin Avenue approaches. It was found that central plastic delineators were recently installed along Shaughnessy Street to restrict all left-turn movements at the intersection.
- Mary Hill Road (collector) and McAllister Avenue – 3-legged stop-controlled
- Mary Hill Road and Elgin Avenue – 3-legged stop-controlled

The objectives of this Traffic Analysis Memorandum are to assess the existing (2019) and future (2039) traffic conditions for the proposed McAllister Avenue cross-section design options and to provide a summary of traffic operation issues identified through the analysis. This traffic study could be used as input for the engineering work of roadway cross-section design of McAllister Avenue Streetscape.





**Figure 1** Study Area and Existing Lane Configurations



## 2.0 Traffic Volumes

### 2.1 Existing Traffic Volumes (2019)

Multi-year (2014-2018) traffic counts of the study intersections, including the number of crossing pedestrians and cyclists, were collected from the City. All surveyed traffic volumes were projected to 2019 using 1.5% annual background traffic growth rate from previous studies such as *Kingsway Avenue Conceptual Design* (ISL). Based on the surveyed volumes at the study intersections, the weekday AM peak hour was found to be from 0800 to 0900 hours and the weekday PM peak was found to be from 1700 to 1800 hours (5:00 to 6:00 PM).

It is understood that left-turn movements from Shaughnessy Street to Elgin Avenue were previously restricted only during the PM peak and hence the available traffic counts do not reflect the current 24-hour left-turn restriction. As a result, the following assumptions were made to redistribute the affected movements during the AM peak:

- The Shaughnessy Street southbound left-turn vehicles will turn left at the McAllister Avenue intersection – some trips will be destined to the existing parking lots on McAllister Avenue or Elgin Avenue; while, some trips will turn right onto Mary Hill Road.
- The Shaughnessy Street northbound left-turn vehicles will turn left at the McAllister Avenue intersection to access Maple Street.

The modified 2019 turning movement volumes during the weekday AM and PM peak hours are shown in **Table 1**.

**Table 1** 2019 Modified Traffic Volumes at Study Intersections

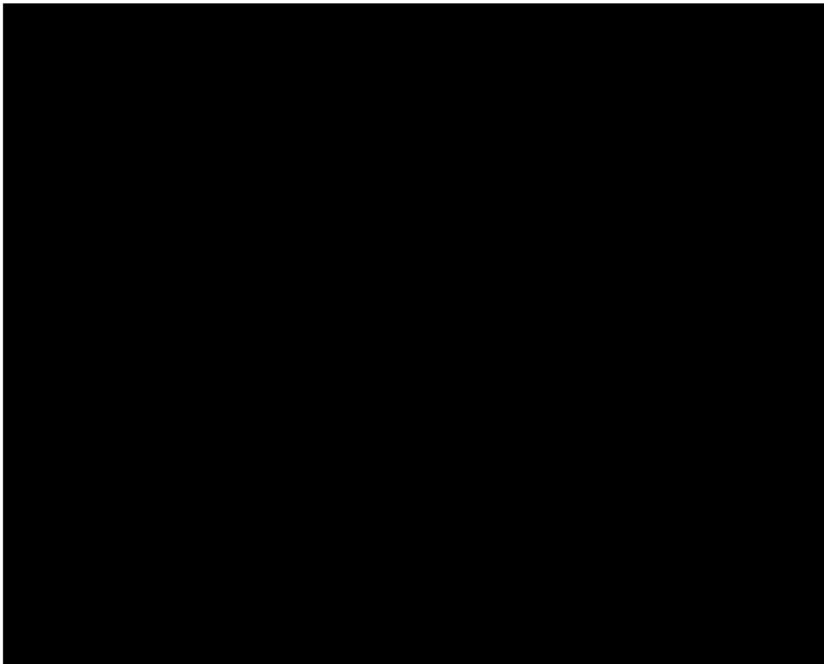
Study Intersection	Eastbound			Westbound			Northbound			Southbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak													
McAllister Avenue at Shaughnessy Street	45	15	15	15	15	60	20	490	35	145	520	15	1,390
Elgin Avenue at Shaughnessy Street	RE	RE	5	RE	RE	120	RE	585	10	RE	670	80	1,470
McAllister Avenue at Mary Hill Road	10	-	95	-			115	375	-	-	200	15	810
Elgin Avenue at Mary Hill Road	10	-	70	-			85	240	-	-	170	40	615
PM Peak													
McAllister Avenue at Shaughnessy Street	135	30	35	30	30	150	15	705	15	60	680	25	1,910
Elgin Avenue at Shaughnessy Street	RE	RE	40	RE	RE	235	RE	975	10	RE	725	130	2,115
McAllister Avenue at Mary Hill Road	20	-	95	-			195	290	-	-	365	40	1,005
Elgin Avenue at Mary Hill Road	25	-	55	-			80	210	-	-	380	100	850

RE: restricted movements at Shaughnessy Street and Elgin Avenue intersection



## 2.2 Future Development Traffic

As informed by the City, there will be 11 major developments/redevelopments within a 20-year horizon in the vicinity of the study area. **Figure 2**, provided by the City, shows the location of the future developments in the downtown area as well as the approximate completion time frame. At the time of the study, the land use data were available for eight developments (marked in red), which will be completed in two to ten years. **Table 2** shows the location (address), land use data, and the anticipated time frame for each development.



**Figure 2** Future Developments Location within Downtown Area (Provided by the City)

**Table 2** Future Developments Location and Land Use Data

No.		Additional Commercial/Office (Gross Floor Area)	Potential Dwelling Units	Time frame (occupancy)
1		20,000	60	< 5 years
2		20,000	0	< 5 years
3		20,000	75	< 5 years
4		-20,000	60	5-7 years
5		0	60	< 5 years
6		20,000	60	5-10 years
7		40,000	120	5-10 years
8		30,000	120	5-10 years

Negative values indicate a reduction in gross floor area compared to the existing lot.



Based on the development locations, it was assumed that five future developments will have direct traffic impacts on the operation of the study intersections, namely: #1, #2, #6, #7, and #8. Using the *Institute of Transportation Engineers Trip Generation Manual – 10<sup>th</sup> Edition (ITE Manual)*, the additional traffic generated by the future developments during the weekday AM and PM peak hours are provided in **Table 3**.

**Table 3** Peak Hour Trip Generation from Future Major Developments

No.	ITE Classification (Land Use Code)	Unit	Extent	Peak Hour	Trip Rate	Two-Way Trip	Directional Split		Total Trip	
							In	Out	In	Out
1	Multifamily Housing (Mid-Rise) (221)	Dwelling Unit	60	AM	0.36	22	26%	74%	6	16
				PM	0.44	26	61%	39%	16	10
	Shopping Centre (820)	1,000 ft² GFA	10,000	AM	0.94	9	62%	38%	5	4
				PM	3.81	39	48%	52%	19	20
		1,000 ft² GFA	10,000	AM	1.48	15	95%	5%	14	1
				PM	1.30	13	65%	35%	8	5
TOTAL				AM		46			25	21
				PM		78			43	35
2	General Office Building (710)	1,000 ft² GFA	20,000	AM	1.16	23	86%	14%	20	3
				PM	1.15	23	16%	84%	4	19
		1,000 ft² GFA	-10,000	AM	1.48	-15	95%	5%	-14	-1
				PM	1.30	-13	65%	35%	-8	-5
TOTAL				AM		8			6	2
				PM		10			-4	14
6	Multifamily Housing (Mid-Rise) (221)	Dwelling Unit	60	AM	0.36	22	26%	74%	6	16
				PM	0.44	26	61%	39%	16	10
	Shopping Centre (820)	1,000 ft² GFA	10,000	AM	0.94	9	62%	38%	5	4
				PM	3.81	39	48%	52%	19	20
	General Office Building (710)	1,000 ft² GFA	10,000	AM	1.16	12	86%	14%	10	2
				PM	1.15	12	16%	84%	2	10
TOTAL				AM		43			21	22
				PM		77			37	40
7	Multifamily Housing (Mid-Rise) (221)	Dwelling Unit	120	AM	0.36	43	26%	74%	11	32
				PM	0.44	53	61%	39%	32	21
	Shopping Centre (820)	1,000 ft² GFA	20,000	AM	0.94	19	62%	38%	12	7
				PM	3.81	76	48%	52%	36	40
	General Office Building (710)	1,000 ft² GFA	20,000	AM	1.16	23	86%	14%	20	3
				PM	1.15	23	16%	84%	4	19
TOTAL				AM		85			43	42
				PM		152			72	80
8	Multifamily Housing (Mid-Rise) (221)	Dwelling Unit	120	AM	0.36	43	26%	74%	11	32
				PM	0.44	53	61%	39%	32	21
	Shopping Centre (820)	1,000 ft² GFA	15,000	AM	0.94	14	62%	38%	9	5
				PM	3.81	57	48%	52%	27	30
	General Office Building (710)	1,000 ft² GFA	15,000	AM	1.16	17	86%	14%	15	2
				PM	1.15	17	16%	84%	3	14
TOTAL				AM		74			35	39
				PM		127			62	65
TOTAL				AM		255			129	126
				PM		445			210	234

In total, the associated five future developments will generate an additional **255** and **445** two-way vehicle trips during AM and PM peak hours, respectively.



Based on land use data, it is assumed that destinations/origins of the generated trips from the future developments will be similar. Using the existing traffic patterns, the following destination/origin distribution assumptions are made for inbound/outbound traffic during both weekday AM and PM peak periods:

- 40% of generated trips from/to north (Lougheed Highway) through Shaughnessy Street;
- 40% from/to south through Mary Hill Road;
- 10% from/to north through Kingsway Avenue; and,
- 10% from/to south through Shaughnessy Street.

It is noted that the assignment of the generated trips would differ considering the proposed options for McAllister Avenue cross-section design.

## 2.3 20-Year Horizon Traffic Volumes (2039)

To determine the future traffic conditions, 20-year (2039) horizon traffic pattern was estimated. In order to consider background traffic growth that is not generated by future developments, a linear annual growth rate of 1.5% was applied to 2019 traffic volumes (i.e. 30% growth in 20 years). Existing traffic volumes with background traffic growth and development generated trips were summed to determine the combined traffic volumes for both weekday peak hours of the horizon year 2039, as shown in **Table 4**.

**Table 4** 20-year Horizon (2039) Estimated Traffic Volumes

Study Intersection	Eastbound			Westbound			Northbound			Southbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak													
McAllister Avenue at Shaughnessy Street	75	25	20	25	40	85	30	640	50	245	675	20	1,930
Elgin Avenue at Shaughnessy Street	RE	RE	30	RE	RE	185	RE	785	15	RE	910	115	2,040
McAllister Avenue at Mary Hill Road	35	-	160	-			180	500	-	-	280	20	1,175
Elgin Avenue at Mary Hill Road	15	-	110	-			145	310	-	-	220	55	855
PM Peak													
McAllister Avenue at Shaughnessy Street	200	45	45	45	75	210	25	925	25	165	890	30	2,680
Elgin Avenue at Shaughnessy Street	RE	RE	85	RE	RE	350	RE	1,315	20	RE	1,000	190	2,960
McAllister Avenue at Mary Hill Road	50	-	185	-			305	410	-	-	515	50	1,515
Elgin Avenue at Mary Hill Road	40	-	115	-			165	275	-	-	495	140	1,230

RE: restricted movements at Shaughnessy Street and Elgin Avenue intersection



## 3.0 Existing Condition Traffic Performance (2019)

### 3.1 Intersection Level of Service

Traffic operation performance at the key study intersections during the 2019 and 2039 weekday AM and PM peak hours were analyzed using *Synchro Version 9*, which is based on the standard methods of the *Highway Capacity Manual (HCM)*. In *HCM*, measures of effectiveness were developed including control delay (second per vehicle) and Level of Service (LOS), which is defined based on the average control delay

For capacity analysis in urban areas, LOS D or better is generally considered as acceptable LOS for both signalized and unsignalized intersections. Capacity improvement measures could be considered for intersections and/or individual movements that are operating at LOS E or F. For the signalized intersection of Shaughnessy Street and McAllister Avenue, the existing signal timing plans were provided by the City and the signal timing was optimized for future traffic operation analysis.

Based on the analysis, it is expected that all study intersections are currently operating at an acceptable LOS (LOS D or better) during both weekday peak hours. No critical movements were found for the weekday AM peak. While, during the PM peak, the westbound right-turn at Shaughnessy Street and Elgin Avenue was determined to experience long delay (LOS F), which is due to limited opportunity for the vehicles to find a safe crossing gap to turn onto Shaughnessy Street with high through traffic volumes. The overall intersection and individual movement performance of study intersections for both 2019 weekday AM and PM peak hours are shown in **Table 5**.

**Table 5** 2019 Peak Hour Traffic Operation Results (Existing Condition) at Study Intersections

Study Intersection (Control Type)	Peak Hour	Average Delay [second per vehicle]	LOS	Critical Movement (LOS)
McAllister Avenue at Shaughnessy Street (signalized)	AM	11.1	B	-
	PM	19.4	B	-
Elgin Avenue at Shaughnessy Street (stop-controlled)	AM	1.4	A	-
	PM	25.8	D	Westbound Right-turn (F)
McAllister Avenue at Mary Hill Road (stop-controlled)	AM	3.2	A	-
	PM	4.3	A	-
Elgin Avenue at Mary Hill Road (stop-controlled)	AM	2.7	A	-
	PM	2.4	A	-

Red: Level of Service E or F

To improve the traffic operation at Shaughnessy Street and Elgin Avenue intersection, the installation of a traffic signal was considered to provide more crossing gaps to the side street traffic (particularly westbound right-turn) and reduce conflicts with the through traffic and crossing pedestrians. The signal warrant and traffic operation analysis results are discussed in **Section 5**.

### 3.2 Queue Length Analysis

Queue length analysis was conducted using *SimTraffic* (traffic micro-simulation of *Synchro*) for the existing condition (2019) to determine whether the existing storage lengths are adequate. During both peak hours, the southbound left-turn 95<sup>th</sup> percentile vehicle queue at Shaughnessy Street and McAllister Avenue intersection was longer than the available storage length. No other queuing issues were found during the AM peak hour, while in the PM peak, the northbound and southbound through vehicle queues at Shaughnessy Street and McAllister Avenue intersection could spill over to the upstream intersections.

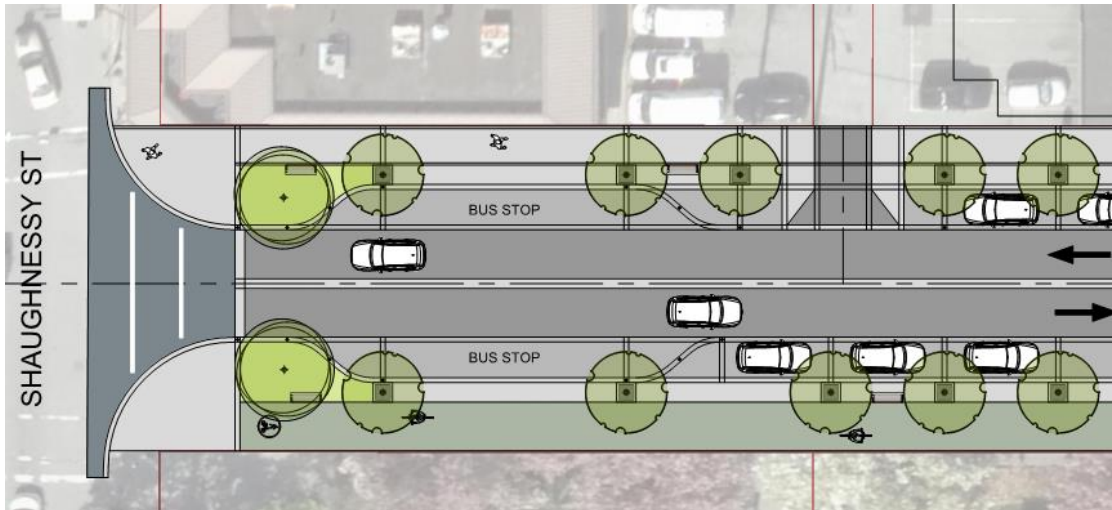


## 4.0 Proposed McAllister Avenue Cross-section Options

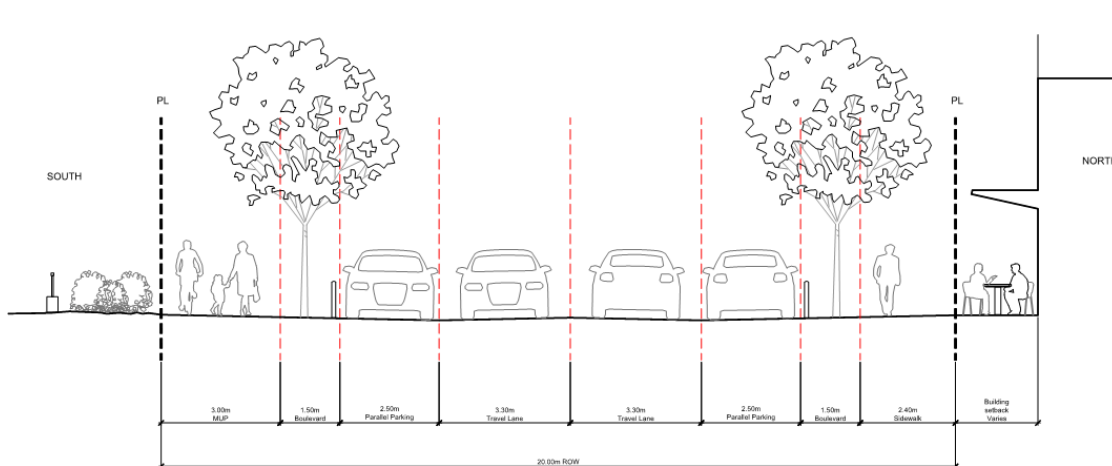
It is understood that four options be reviewed for future McAllister Avenue cross-section, between Shaughnessy Street and Mary Hill Road, including:

### 1) Option 1 – Two-way, Two-sided Parallel Parking

To keep the existing travel lanes, provide a multi-use path on the south side, a sidewalk on the north side, and parallel parking on both sides, as shown in **Figure 3 & 4**.



**Figure 3** Typical layout of MUP on South Side and Parallel Parking on Both Sides

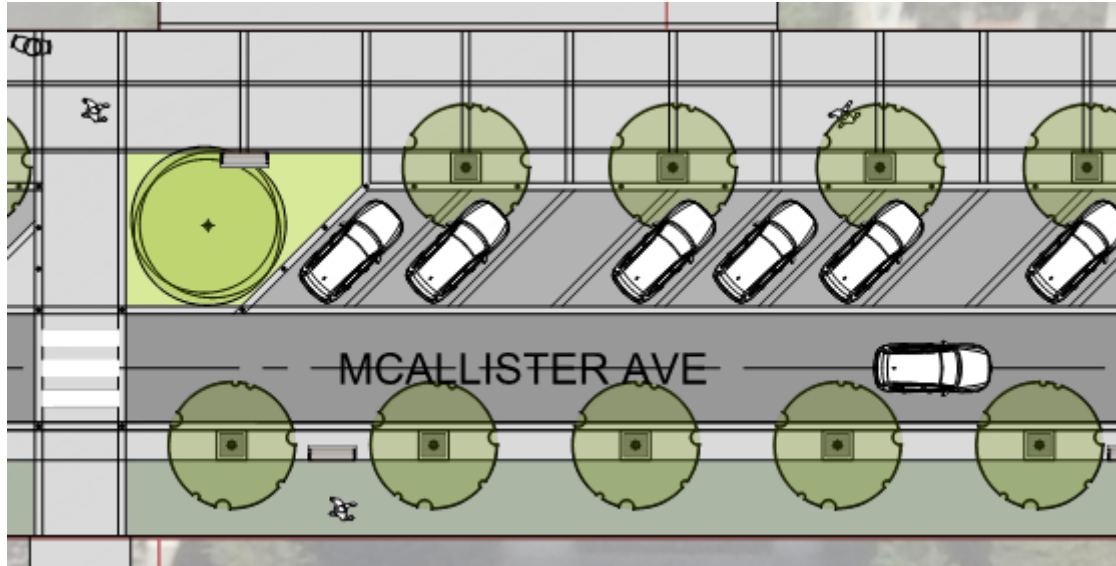


**Figure 4** Cross-Section with MUP on South Side and Parallel Parking on Both Sides

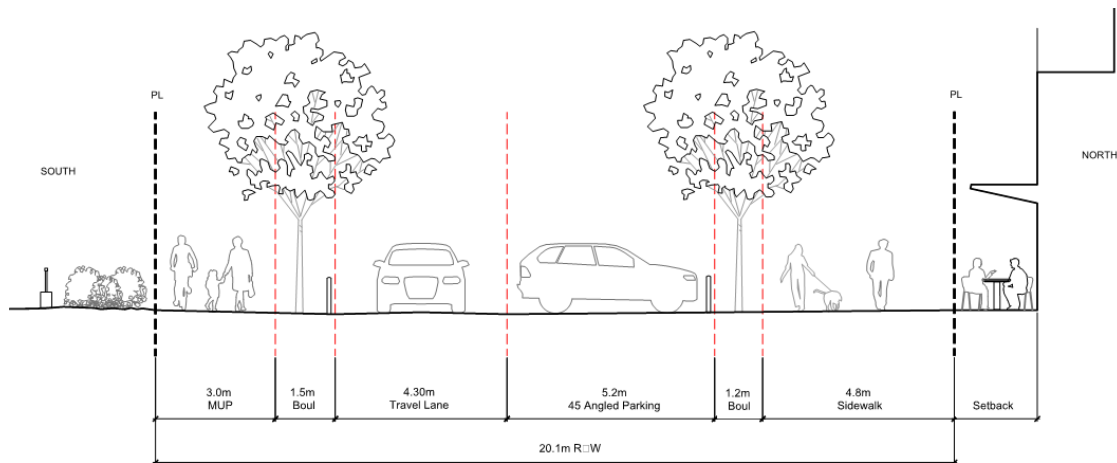


## 2) Option 2 – One-way (eastbound), One-sided Angled Parking

To reduce the number of travel lanes from two lanes to one lane and only in eastbound direction (from Shaughnessy Street to Mary Hill Road), provide a multi-use path on the south side, a sidewalk on the north side, and angled parking on the north side, as shown in **Figure 5 & 6**.



**Figure 5** Typical layout of travel lane (Eastbound), MUP on South Side and Angled Parking on North Side

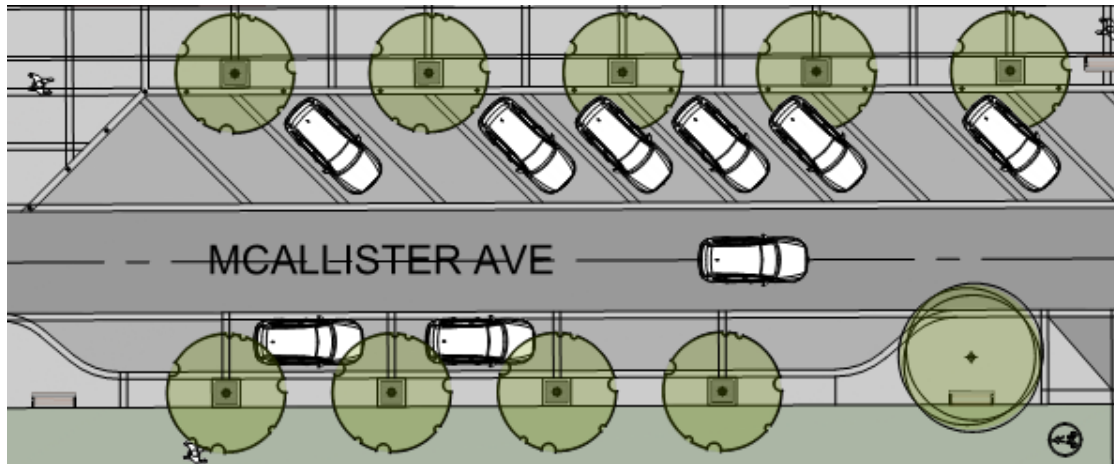


**Figure 6** Typical Section of 1 travel lane (Eastbound), MUP and Angled Parking

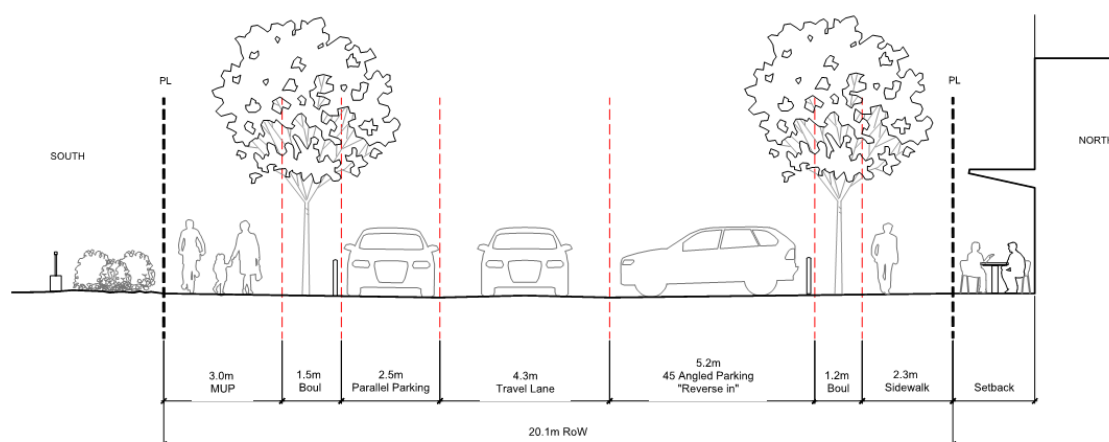


### 3) Option 3 – One-way (eastbound), One-sided Angled, One-sided Parallel Parking

To reduce the number of travel lanes from two lanes to one lane and only in eastbound direction (from Shaughnessy Street to Mary Hill Road), provide a multi-use path on the south side, a sidewalk on the north side, a parallel parking on the south side, and angled parking on the north side, as shown in **Figure 7 & 8**.



**Figure 7** Typical layout of travel lane (Eastbound), MUP and parallel on South Side and Angled Parking on North Side

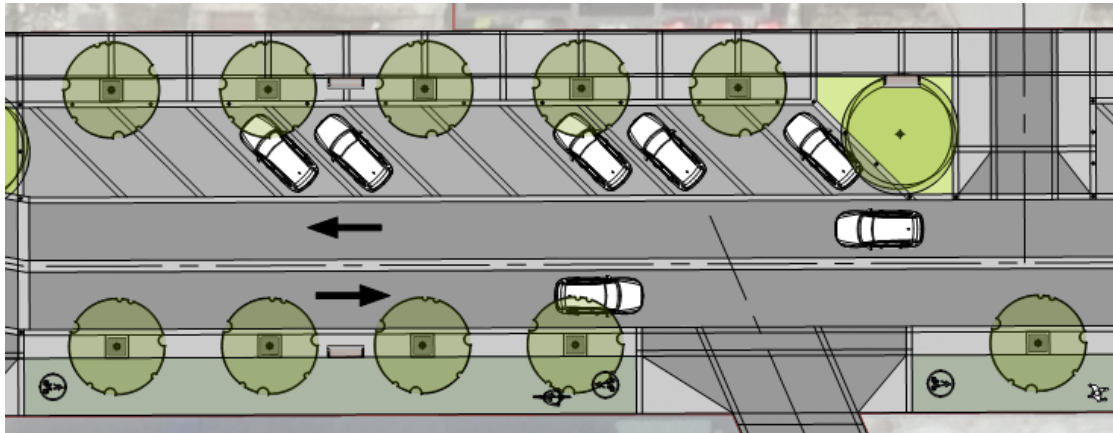


**Figure 8** Typical section with One-way Travel Lane (Eastbound), MUP, Parallel Parking and Angled Parking on North Side

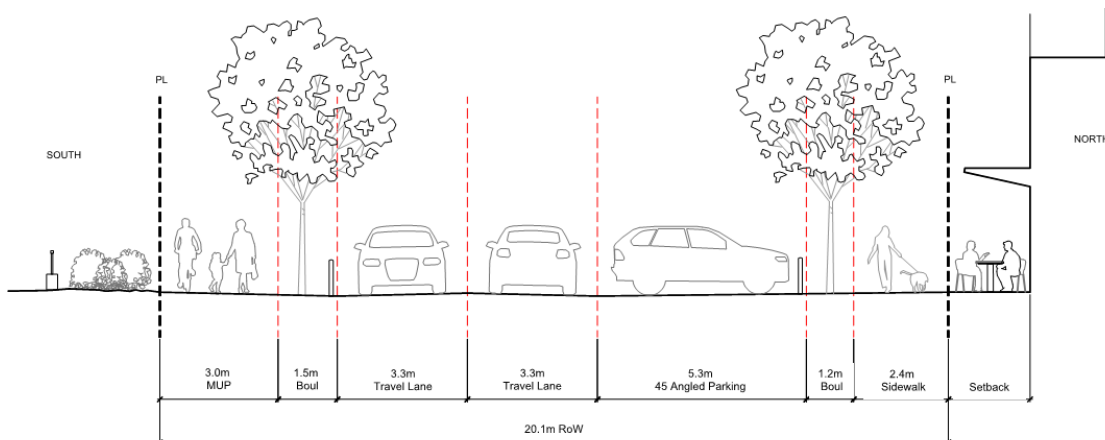


## 4) Option 4 – Two-way, One-sided Angled Parking

To keep the existing travel lanes, provide a multi-use path on the south side, a sidewalk on the north side, and angled parking on the north side, as shown in **Figure 9 & 10**.



**Figure 9** Typical layout of Two-way Travel Lane, MUP on South Side and Angled Parking on North Side



**Figure 10** Typical Section with Two-way Travel Lane, MUP on South Side and Angled Parking on North Side

Since parking arrangement and pedestrian crossings have no significant impacts to intersection capacity analysis, only two cross-section options were assessed and compared with each other: two-way – existing lane configurations (**Options 1** and **4**) and one-way eastbound from Shaughnessy Street to Mary Hill Road (**Options 2** and **3**). Traffic operation analysis was carried out to assess the feasibility of the proposed options for 2039 projected traffic demands.



## 4.1 Options 1 and 4 – Two-way McAllister Avenue

As shown in **Figures 3 and 9**, the number of travel lanes and lane configurations will be similar to the existing condition. During the AM peak, all intersections will operate at an acceptable level of service (LOS A or B), and no critical movements were identified. During the PM peak, Shaughnessy Street and McAllister Avenue intersection will still operate at an acceptable overall level of service (LOS D); however, the eastbound left-turn will operate poorly (LOS F). Similar to the existing condition (2019), the westbound right turn movement at Shaughnessy Street and Elgin Avenue intersection will experience excessive delays due to high through traffic volumes on Shaughnessy Street. Likewise, at Mary Hill Road and McAllister Avenue intersection, the eastbound left/right turn vehicles will have difficulties to find a sufficient crossing gap to turn onto Mary Hill Road (LOS F).

The 2039 traffic operation results are summarized and compared with the 2019 results in **Table 6**.

**Table 6** 2039 Peak Hour Traffic Operation Results (Two-way McAllister Avenue) at Study Intersections

Study Intersection	Peak Hour	Scenario					
		2019 - Existing Lane Configuration			2039 - Option 1/4 (Existing Lane Configuration)		
		Average Delay [second per vehicle]	LOS	Critical Movement (LOS)	Average Delay [second per vehicle]	LOS	Critical Movement (LOS)
McAllister Avenue at Shaughnessy Street	AM	11.1	B	-	15.6	B	-
	PM	19.4	B	-	40.6	D	Eastbound Left-turn (F)
Elgin Avenue at Shaughnessy Street	AM	1.4	A	-	3.1	A	-
	PM	25.8	D	Westbound Right-turn (F)	1182.0	F	Westbound Right-turn (F)
McAllister Avenue at Mary Hill Road	AM	3.2	A	-	5.8	A	-
	PM	4.3	A	-	37.1	E	Eastbound Left/Right Turn (F)
Elgin Avenue at Mary Hill Road	AM	2.7	A	-	3.7	A	-
	PM	2.4	A	-	5.6	A	-

Red: Level of Service E or F

During the PM peak, queuing analysis identified long vehicle queues for side street approaches at the stop-controlled intersections due to excessive delays to turn onto the major roads (Shaughnessy Street and Mary Hill Road). It is expected that there will be queue spillovers for the eastbound approach at Mary Hill Road and McAllister Avenue and westbound approach at Shaughnessy Street and Elgin Avenue. In addition, long queues will be formed in the northbound direction on Mary Hill Road due to vehicles turning left onto Elgin Avenue.

## 4.2 Options 2 and 3 – One-way McAllister Avenue (Eastbound)

As shown in **Figures 5 and 7**, the number of travel lanes will be reduced from two to one, and no westbound traffic will be allowed from Mary Hill Road to Shaughnessy Street. In other words, the northbound left-turn and southbound right-turn movements at McAllister Avenue and Mary Hill Road intersection are restricted. As a result, vehicle traffic for the restricted movements will use other roads in the study area and the intersections of McAllister Avenue with Shaughnessy Street and Mary Hill Road will become less congested. While, the Mary Hill Road and Elgin Avenue intersection will have higher total entering traffic volumes. The 2039 redistributed traffic volumes are shown in **Table 7**.



**Table 7** 20-year Horizon (2039) Estimated Traffic Volumes (One-way McAllister Avenue) at Study Intersections

Study Intersection	Eastbound			Westbound			Northbound			Southbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
AM Peak													
McAllister Avenue at Shaughnessy Street	75	35	20	RE			65	645	90	245	675	20	1,870
Elgin Avenue at Shaughnessy Street	RE	RE	30	RE	RE	270	RE	700	15	RE	910	115	2,040
McAllister Avenue at Mary Hill Road	35	-	185	-			RE	585	-	-	280	RE	1,085
Elgin Avenue at Mary Hill Road	15	-	110	-			230	310	-	-	200	55	920
PM Peak													
McAllister Avenue at Shaughnessy Street	200	70	45	RE			100	925	70	165	890	30	2,495
Elgin Avenue at Shaughnessy Street	RE	RE	85	RE	RE	560	RE	1,105	20	RE	1,000	190	2,960
McAllister Avenue at Mary Hill Road	50	-	230	-			RE	620	-	-	515	RE	1,415
Elgin Avenue at Mary Hill Road	40	-	115	-			375	275	-	-	445	140	1,390

RE: restricted movements

Based on traffic analysis (**Table 8**), the following changes were identified in terms of intersection overall and individual movement level of service:

- PM peak – At Mary Hill Road and McAllister Avenue, the intersection overall LOS will be improved from LOS F to A. However, at Mary Hill Road and Elgin Avenue, the eastbound left/right turn movements will become critical (LOS F), due to higher traffic volumes on Mary Hill Road.

In terms of the queuing analysis, similar issues were identified for one-way McAllister Avenue options, which means that the proposed cross-section designs have minimal relations on the spillover issues and long experienced delays at the stop-controlled intersections.

**Table 8** 2039 Peak Hour Traffic Operation Results (One-way McAllister Avenue) at Study Intersections

Study Intersection	Peak Hour	Scenario					
		2019 - Existing Lane Configuration			2039 - Option 2/3 (One-way McAllister Avenue EB)		
		Average Delay [second per vehicle]	LOS	Critical Movement (LOS)	Average Delay [second per vehicle]	LOS	Critical Movement (LOS)
McAllister Avenue at Shaughnessy Street	AM	11.1	B	-	15.9	B	-
	PM	19.4	B	-	38.7	D	Eastbound Left-turn (E)
Elgin Avenue at Shaughnessy Street	AM	1.4	A	-	4.9	A	-
	PM	25.8	D	Westbound Right-turn (F)	1893.2	F	Westbound Right-turn (F)
McAllister Avenue at Mary Hill Road	AM	3.2	A	-	3.3	A	-
	PM	4.3	A	-	8.5	A	Eastbound Left/Right Turn (E)
Elgin Avenue at Mary Hill Road	AM	2.7	A	-	4.6	A	-
	PM	2.4	A	-	16.6	C	Eastbound Left/Right Turn (F)

Red: Level of Service E or F



## 5.0 Potential Improvement Measures

The latest *Traffic Signal and Pedestrian Signal Head Warrant Handbook* from TAC (TAC Warrant) was used to determine whether a traffic signal is warranted for the Shaughnessy Street and Elgin Avenue intersection. The TAC Warrant uses cumulative factors methodology that considers turning conflicts (vehicle-vehicle and vehicle-pedestrian) plus various intersection characteristics and local demographic factors. The warrant analysis requires two hours each for morning, midday, and afternoon peak periods to calculate an average hourly volume. The warrant score of 100 is the threshold for traffic signal installation.

Based on the 2019 modified traffic volumes, the analysis results showed that the intersection is marginally warranted for a full traffic signal as the score is 100. Using the 2029 traffic volumes, with the development traffic, the signal warrant score was found to be 167, indicating that the traffic signal is required.

Traffic operation analysis was undertaken considering the installation of traffic signal. It was assumed that the signal is coordinated with the upstream signal at McAllister Avenue during the PM peak. While, during the AM peak, due to acceptable traffic operation performance, coordination is not required.

The results are summarized and compared with the existing condition in **Table 9**.

**Table 9** 2019 Peak Hour Traffic Operation Results Comparison at Shaughnessy Street and Elgin Avenue Intersection

Peak Hour	Control Type	Level of Service [Average Delay, seconds per vehicle]				
		Eastbound	Westbound	Northbound	Southbound	Intersection Overall
AM	stop-controlled	B [14.2]	C [15.7]	A [0]	A [0]	A [1.4]
	signalized	A [0.1]	A [5.6]	A [7.3]	A [5.9]	A [6.4]
PM	stop-controlled	C [17.5]	F [230.8]	A [0]	A [0]	D [25.8]
	signalized	A [0.5]	F [81.0]	C [31.4]	A [9.9]	C [27.6]

The intersection operates at an acceptable level of service during the AM peak for both cases (stop-controlled and signalized). In the PM peak, the level of service for the westbound right-turn movement will remain the same (LOS F); however, the average vehicle delay will be decreased by 65% (from 230.8 to 81.0 seconds). The northbound vehicle queue could spill over to the McAllister Avenue intersection. Overall, the installation of traffic signal could be more beneficial during the PM peak.

On Mary Hill Road, long vehicle queues were identified for all options. It was determined that the provision of left-turn bays on northbound direction will allow the through traffic pass the left-turning vehicles to McAllister Avenue (Options 1 and 4) and Elgin Avenue (all options). Hence, the vehicle average delay will be reduced for McAllister Avenue northbound vehicles.



## 6.0 Summary and Conclusions

Traffic operation analysis of four intersections in the vicinity of McAllister Avenue, between Shaughnessy Street and Mary Hill Road for the existing condition (2019) and proposed laning configurations for the projected 2039 (20-year horizon) traffic demands were reviewed.

The intersection capacity analysis results indicated that, for the 2019 traffic conditions, the study intersections are experiencing an acceptable condition (LOS D or better) during weekday AM and PM peak hours. Queue length analysis was also conducted and indicated that there are generally no existing storage capacity deficiencies. At Shaughnessy Street and McAllister Avenue intersection, spillover issues may occur for the southbound left-turn movements during both peak hours and for the northbound / southbound through movements during the PM peak hour.

The traffic operation of the proposed cross-section design options, **Options 1 and 4** (Two-way McAllister Avenue) and **Options 2 and 3** (One-way Eastbound McAllister Avenue from Shaughnessy Street to Mary Hill Road) were analyzed for 20-year horizon traffic demands. Based on the results, for both options, the major issues were determined to be long delays and hence long vehicle queues for vehicles turning from the side streets, McAllister Avenue and Elgin Avenue, onto the major roads, Shaughnessy Street and Mary Hill Road, due to high through traffic volumes on major roads. In other words, the identified operational issues are not due to the implementation of proposed options for McAllister Avenue cross-section. However, overall, the traffic operation performance of the study intersections will be better with two-way McAllister Avenue options (**Options 1 and 4**).

To further improve the traffic operation performance at the Shaughnessy Street and Elgin Avenue intersection, the installation of a traffic signal was considered. Signal warrant analysis was conducted and the results showed that a full traffic signal is warranted in 2019 and 2029. The peak hour traffic operation analysis indicated that during the PM peak, the average delay experienced by westbound right-turn vehicles was significantly decreased, while the northbound queue might spill over further upstream to McAllister Avenue. Overall, the installation of traffic signal could be more beneficial during the PM peak.

It was also determined that to alleviate the queuing issues on Mary Hill Road, the provision of left-turn bays on northbound direction could be considered at McAllister Avenue (Options 1 and 4) and Elgin Avenue (all options).

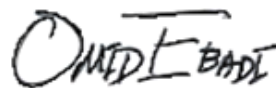
The main focus of the report ISL was to review the traffic capacities. However, it should be noted that there are other factors that should be considered when changing the traffic patterns. Most businesses want unrestricted access to their commercial space, in McAllister's circumstances this would translate to a 2-way roadway with access to parking. Commercial areas request these conditions, as it helps to generate additional customers to their business. ISL would recommend that the City consult with the developer prior to making an ultimate decision on the typical road cross section.

If there are any questions or further information is required, please do not hesitate to contact the undersigned.

Yours truly,



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