



2566 Fifth Street Parking Variance Report

Final Report V02

Prepared for
Purdey Group

Date
April 8, 2019

Project No.
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April 08, 2019
04-18-0059

Luke Mari
Director of Development
Purdey Group
Victoria, BC

Dear Luke:

**Re: 2566 Fifth Street Residential Development
Parking Variance Report – Draft Report**

Bunt & Associates Engineering Ltd. (Bunt) has reviewed the proposed parking supply for the proposed Purdey Group residential and art school building at 2566, 2570, and 2580 Fifth Street in Victoria, BC.

To allow the development of affordable rental units, just one level of vehicle parking is viable at the proposed site, resulting in 25 on-site parking spaces for 64 rental residential units and the school. The proposed development requires a parking variance as the proposed on-site parking supply is below City of Victoria's bylaw requirements.

Our Draft Parking Variance Report is provided herewith. Our report presents the development, its required parking variance, and discusses Transportation Demand Management strategies that can support the proposed parking supply.

Bunt acknowledges Purdey Group's offer of significant transportation demand management initiatives. These initiatives are anticipated to support the proposed parking supply, facilitate more affordable rental housing in Victoria, and encourage the use of more sustainable forms of transportation.

Best regards,
Bunt & Associates



Jason Potter, M.Sc. PTP
Senior Transportation Planner, Associate

CORPORATE AUTHORIZATION

Prepared By: Jason Potter, PTP
Senior Transportation Planner

Bunt & Associates Engineering Ltd.
Suite 530 – 645 Fort Street
Victoria, BC V8W 1G2
Canada

Reviewed By: Simon Button, P.Eng.

Telephone: +1 250 592 6122

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1. INTRODUCTION	1
1.1 Report Scope and Objectives	1
1.2 Development Details	3
1.3 Bylaw Vehicle Parking Requirements and Proposed Parking Supply	5
2. LOCAL CONTEXT	7
2.1 Land Use.....	7
2.2 Street Network	7
2.3 Walking and Cycling	7
2.4 Transit	8
2.5 Car-Share.....	8
2.6 On-Street Parking.....	8
3. PARKING DEMAND ANALYSIS	11
3.1 Resident Parking	11
3.1.1 Unit Size & Affordability	11
3.1.2 Tenure	13
3.1.3 Geographical Area.....	14
3.2 Visitor Parking	15
3.3 Art School Parking	15
3.4 Vehicle Parking Demand Summary	16
4. TRANSPORTATION DEMAND MANAGEMENT	17
4.1 Information Sharing.....	17
4.2 Cycling Amenities	18
4.2.1 Bicycle Parking	18
4.2.2 Bicycle Repair Station.....	18
4.3 Car Share.....	19
5. CONCLUSIONS AND RECOMMENDATIONS	20
5.1 Conclusions.....	20
5.2 Recommendations	20

EXHIBITS

Exhibit 1.1: Study Area2
 Exhibit 1.2: Site Plan4
 Exhibit 2.1: On-Street Parking Regulations..... 10

TABLES

Table 1.1: Residential Unit Breakdown3
 Table 1.2: Parking Requirement and Proposed Supply – Six Affordable Units5
 Table 1.3: Parking Requirement and Proposed Supply – 38 Affordable Units, Village Area6
 Table 2.1: Nearby Transit Routes8
 Table 3.1: Residential Unit Sizes 11
 Table 3.2: Vehicle Ownership Rates for Comparable Affordable Buildings in Greater Victoria 12
 Table 3.3: Vehicle Ownership Rates for Comparable CRHC Buildings in Greater Victoria 13
 Table 3.4: Summary of Market Rental Apartments Included in 2012 Parking Study..... 14
 Table 4.1: Recommended TDM Strategy Summary 17

EXECUTIVE SUMMARY

Purdey Group is proposing to develop the properties at 2566, 2570, and 2580 Fifth Street in Victoria. The development is located just east of Quadra Street, and approximately one block south of Hillside Avenue. The three properties are currently occupied with three residential homes. The proposed development will result in 64 rental residential units and an approximate 620 m² new home for the Vancouver Island School of Art which is currently located directly south of the development site.

The development includes 25 vehicle parking spaces which is 42 spaces short of City of Victoria's bylaw requirement. The bylaw requirement is calculated with most of the affordable units being classified as regular apartment units using the City's regular apartment rates. Many units (59% or 38 units) would be classified as affordable except due to bank financing they cannot be offered as affordable units in perpetuity.

If a more functional approach is used where the affordable units are allowed to be categorized as affordable units and the site is considered to be in the Quadra Village area (currently on border) then the bylaw minimum parking requirement would be 44 parking spaces, which represents a parking variance of 19 spaces.

The proposed parking supply of 25 parking spaces is anticipated to meet resident and visitor peak period parking demand when considering the size of the units which is intended to promote affordability, the rental tenure of the building, the location's walkability, transit access, and the substantial Transportation Demand Management (TDM) initiatives proposed by Purdey Group. Most importantly, future residents will understand that most units at this development will not have access to a parking space. If they require a parking space then these residential units will simply not be for them. We believe there are plenty of prospective tenants who do not require a parking space, making this development not only viable but also important for promoting affordable housing in Victoria.

Proposed TDM initiatives include Purdey Group purchasing one car-share vehicle (to be located on-site) and providing Modo car-share memberships to all residents who choose not to lease a parking space. The memberships will remain in title of the building and be transferable to future residents.

The development will meet the long-term bicycle parking requirements (70 long-term spaces) and exceed requirements for short-term spaces. Purdey Group will also provide an on-site bicycle repair station to further promote cycling.

To help establish more sustainable forms of transportation while resident travel behaviour is most pliable, Purdey Group will provide new residents with information that summarizes the location's wide range of transport options.

1. INTRODUCTION

1.1 Report Scope and Objectives

Purdey Group is proposing to develop the properties at 2566, 2570, and 2580 Fifth Street in Victoria BC. The location of the site is illustrated in **Exhibit 1.1**.

The three lots currently each contain a single residential detached home.

The proposed development will be providing a total of 64 dwellings and a 620 m² art school.

The goal of this report is to develop and present a parking supply plan that ensures the proposed development's parking demand can be accommodated on-site. Specifically this study will:

- Review the transportation context of the development location;
- Review the development's proposed vehicle parking supply in comparison with the bylaw requirements;
- Forecast the development's parking demands based on various factors such as location, tenure, and unit types; and,
- Present Transportation Demand Management initiatives that can help support the proposed parking supply.



Exhibit 1.1
Site Context

2566 5th Street Parking Variance
04-18-0059 March 2018



1.2 Development Details

The development will have a total of 64 residential units. The units range from studios to 3 bedroom units. The proposed development's unit breakdown is presented in **Table 1.1**. Each unit size is broken down into size ranges used to apply the City of Victoria's bylaw minimum vehicle parking rates. As shown, 49 of the 64 units (77%) are 657 square feet or less and of those, 45 are 495 square feet or less (70% of the 64 units).

Table 1.1: Residential Unit Breakdown

	SF	M ²	# OF UNITS	<45 M ²	45-70 M ²	>70 M ²
Studio	382	35.5	20	20		
1 bedroom	474-495	44-46	25	16	9	
1 bedroom + Den	657	61	4		4	
2 bedrooms	764-823	71-77	9			9
3 bedrooms	904	84	6			6
TOTALS			64	36	13	15

The residential units, with their modest size, are anticipated to have low person per unit occupancy. All units will be rental units. A minimum of 59% of the units (38 units) will be "Affordable" housing units as defined by BC Housing¹, where rent will be priced at least 12% below market, however due to bank financing restrictions these units are not secured in perpetuity. At this time the development proposes 10% of the units will be secured as affordable in perpetuity (6) while a further 10% (7) will be secured as affordable for a minimum of five years.

The site plan is shown in **Exhibit 1.2**.

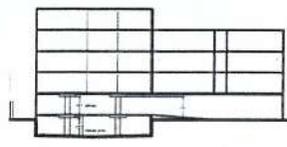
¹ Affordable rental housing is for people who have a low-to-moderate income but may not be eligible for subsidized housing. Affordable rental housing is housing that rents equal to, or lower than, average rates in the private market.



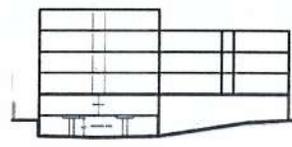
PARKING LEVEL

MAIN STOREY

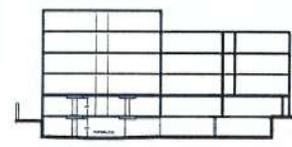
SECOND THRU FIFTH STOREY



SECTION 1



SECTION 2



SECTION 3

FLOOR	GRID	INTERIOR AREA (SQM)	INTERIOR SIZE (MxM)	NUMBER	NO OF BLS	AREA PER UNIT/FLOOR	UNIT TYPE	
MAIN STOREY	102.5	623.0	1	1	623.0		SCHOOL	
		77.0	2	2	38.5		2 BDRM	
		78.8	1	1	78.8		1 BDRM	
		73.0	2	2	36.5		2 BDRM	
2ND/3RD/4TH STOREYS	90.0	25.5	12	12	2.125		STUDIO	
		44.0	12	12	3.667		1 BDRM	
		44.0	9	9	4.889		1 BDRM + DEN	
		44.0	6	6	7.333		2 BDRM	
		71.0	3	3	23.667		2 BDRM + DEN	
5TH STOREY	64.0	24.5	9	9	2.722		STUDIO	
		44.0	4	4	11.000		1 BDRM	
		44.0	3	3	14.667		1 BDRM + DEN	
		44.0	1	1	44.000		2 BDRM	
		72.0	1	1	72.000		2 BDRM	
TOTAL RESIDENTIAL UNITS							24	
TOTAL BUILT FLOOR AREA (EXTENSION FACE OF EXTERIOR WALLS)							504.0	5311.4
BUILDING FLOOR AREA (INTERIOR FACE OF EXTERIOR WALLS)							311.0	3222.1
TOTAL FLOOR AREA (INCLUDING COMMON AREAS)							504.0	5311.4
TOTAL UNOCCUPIABLE AREA (INCLUDING COMMON AREAS)							193.0	2019.3
GROSS FLOOR AREA (RESIDENTIAL + COMMON)							311.0	3222.1
TOTAL OCCUPIABLE AREA (RESIDENTIAL)							311.0	3222.1
GROSS PARKING GARAGE AREA (PARKING FOR 24 CARS)							90.0	950.7
LOT SIZE							1000	
FOR 15.2% MAXIMUM							152	

Exhibit 1.2
Site Plan

2566 Fifth Street Parking Variance
04-18-0059 April 2019



1.3 Bylaw Vehicle Parking Requirements and Proposed Parking Supply

City of Victoria's updated Schedule C: Off-Street Parking bylaw differentiates between affordable units – defined as being secured in perpetuity through a legal agreement, and regular apartment units.

At this time six of the 64 units will be “affordable” units for perpetuity and an additional seven units will be secured as “affordable” for a minimum of five years. Since these seven units are not “affordable” in perpetuity they technically do not count as “affordable” units as defined by City of Victoria's bylaw.

The development is on the edge of a Village Centre area but is not within the area; hence the “Other Area” location factor is applied to parking bylaw requirement calculations. The parking requirements for the development located in a designated “Other Area” with just six of the units provided affordable status are presented in **Table 1.2**.

Table 1.2: Parking Requirement and Proposed Supply – Six Affordable Units

DEVELOPMENT COMPONENT	UNITS	BYLAW MINIMUMS		PROPOSED SUPPLY
		RATE	AMOUNT	AMOUNT
Art School	620 m ²	1/ 80 m ²	7.75	0
Residential				
Affordable	6	0.2	1.2	0
< 45 m ²	30	0.75	22.5	0
45 m ² to 70 m ²	13	0.90	11.7	7
>70 m ²	15	1.3	19.5	15
Resident Sub-total	64		54.9 (55)	22
Visitor	64	0.1/ unit	6.4	3 (1 is car-share)
TOTALS	64		69	25

As shown in Table 1.2, using the regular apartment (non-affordable) bylaw categorization in an “Other Area” location results in a bylaw requirement of 69 parking spaces. This represents a 44 space variance from the proposed on-site parking supply of 25 spaces.

Table 1.3 summarizes City of Victoria's bylaw requirement if all 59% of the affordable units were permitted "Affordable" status. It also presents the site as being within a Village Centre (as it functionally is). Table 1.3 is therefore presented solely for comparison purposes, as the site is not technically considered to be within a Village Area and most of the affordable units are not in perpetuity. It does however in Bunt's view represent a more functional and accurate portrayal of the development.

Table 1.3: Parking Requirement and Proposed Supply – 38 Affordable Units, Village Area

DEVELOPMENT COMPONENT	UNITS	BYLAW MINIMUMS		PROPOSED SUPPLY
		RATE	AMOUNT	AMOUNT
Art School	620 m ²	1/ 80 m ²	7.75	0
Residential				
Affordable	38	0.2	7.6	0
< 45 m ²	-	0.6	0	0
45 m ² to 70 m ²	9	0.7	6.3	7
>70 m ²	15	1.1	16.5	15
Resident Sub-total	64		30.4	22
Visitor	64	0.1/ unit	6.4	3 (1 is car-share)
TOTALS	64		45	25

Calculations conservatively assume smallest units are the affordable units.

As shown in Table 1.3 using the "Affordable" categorization for the 38 units which will be provided as affordable units as per guidelines apart from being secured in perpetuity, and allowing the site to be considered in a Village area would result in a bylaw requirement of 45 spaces which would represent a 20 space variance from the proposed on-site parking supply.

At this time according to City of Victoria's bylaw just six of the 64 units will be designated as "Affordable" units in perpetuity and a further seven units guaranteed for a 5 year term instead of in perpetuity. Therefore for the purposes of this study the bylaw requirement is calculated at 69 spaces as shown in Table 1.2, and the required variance is therefore 44 spaces.

2. LOCAL CONTEXT

The location of a development site dictates the extent of transportation options available to future residents. As described in the following sub-sections, the proposed development is accessible by foot, bicycle, transit, and car-share.

2.1 Land Use

The site is on Quadra Village's southeast border. Therefore it is technically not in a Village Centre as per Bylaw definition but does benefit from Quadra Village services and amenities which are all within typical walking distance thresholds. Near the site on Fifth Street is a mix of single family and multi-family residential buildings. Also near the site, Quadra Street offers a wide range of retail, commercial businesses, and services.

The site is also less than 500 metres from the north edge of Victoria's downtown core area.

2.2 Street Network

Quadra Street extending north/south is classified by the City of Victoria as an arterial road. Fifth Street is classified as a local road. Kings Road to the north of the site is also classified as a local road from a volume standpoint, however it operates similar to a secondary collector.

The Fifth Street and Kings Road intersection to the north of the development site operates under stop control for Fifth Street. Fifth Street traffic is restricted to right-in and right-out only turn movements.

The development site on Fifth Street is within a School Zone which is regulated with a 30 km/hour speed limit.

2.3 Walking and Cycling

Fifth Street has a sidewalk along the development frontage's west edge, while the east edge is unfinished with unregulated parking. The homes along the opposite east edge of Fifth Street face east hence Fifth Street functions as a rear access to these lots.

The majority of the nearby streets have sidewalks on both sides. There are crosswalks at all of the major intersections in the vicinity of the site.

The nearest designated bike route is located on Graham Street which is one block east of Fifth Street. Graham Street is classified as a Signed Bike Route which indicates it is a comfortable route for people cycling however it does not have any dedicated cycling infrastructure. The Graham Street cycling route is part of the Vancouver Street cycling route which extends north/south connecting south to the Pandora AAA cycling route in Victoria's core downtown area, and north to the Finlayson Street bike lanes and onward into Saanich:

2.4 Transit

The site is well served by transit. The proposed development site is surrounded by five major transit corridors, all within a 5 to 10 minute walk. **Table 2.1** presents nearby transit routes and approximate distances from the development site to bus stops. Buses along these routes are designed to accommodate wheelchairs, strollers, and mobility aids.

Table 2.1: Nearby Transit Routes

STREET/ AVENUE	BUS ROUTE	TRAVEL DIRECTION	DISTANCE FROM SITE	NEAREST BUS STOP IS SHELTERED (Y/N)
Quadra Street	6	N/S	170 m	Y
Bay Street	10	E/W	220 m	N
Hillside Avenue	4	E/W	270 m	Y
Cook Street	24, 25	N/S	450 m	Y-SB, N-NB
Douglas Street	70, 72	N/S	1,000 m	Y

2.5 Car-Share

The site has two Modo vehicles within a 10 minute walk which is commonly regarded as walkable. One Modo vehicle is located 400m to the south near Quadra Street and Queens Street, and another is approximately 500m away from the development site near Quadra Street and Topaz Avenue.

Zipcar currently (February 2018) has four vehicles in Victoria; none of which are located within a commonly regarded walkable distance from the proposed development site.

2.6 On-Street Parking

The development will face and be accessed from Fifth Street. The Fifth Street frontage is currently regulated as "Resident Only" parking. The development site frontage on Fifth Street is approximately 40m in length. After allowance for a site access driveway the frontage is anticipated to accommodate approximately six vehicle spaces. It is anticipated that these six spaces will be regulated as 2-hour visitor parking spaces.

To the immediate south of the site the on-street parking is publically available for 2 hours, Monday to Saturday, 9 AM to 6 PM. This area is approximately 55 metres in length or approximately nine vehicle spaces.

Despite being in front of the development site and a high likelihood of these on-street parking spaces being used by development visitors, they do not count towards the buildings parking supply. However

their presence is noted, as functionally these spaces are anticipated to be used by the buildings short-term visitors.

Existing (March 2018) on-Street parking regulations are illustrated on **Exhibit 2.1**.

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Exhibit 2.1 On-Street Parking Regulations

2566 5th Street Parking Variance
04-18-0059 March 2018



3. PARKING DEMAND ANALYSIS

3.1 Resident Parking

Many municipalities such as Victoria are recognizing variations in resident parking demands based on various factors. Variables to consider when forecasting resident auto ownership and corresponding parking demands include:

- **Unit size:** Parking requirements should be proportional to the dwelling size (square footage/ number of bedrooms). Unit size can also correlate with factors such as the number of working adults in the household, income level, and unit affordability.
- **Tenure type (rental or strata):** Parking requirements should be different for private ownership, market rental, and non-market rental units to reflect the different vehicle ownership rates of these tenure types.
- **Geographic area:** Parking requirements should be lowest in areas that are in close proximity to frequent and high quality transit and active mode infrastructure.
- **Transportation Demand Management (TDM):** TDM initiatives can have substantial impact in reducing vehicle dependency.

Each of these factors is discussed below in the context of the proposed 2655 Fifth Street residential development. Proposed TDM initiatives to support the proposed parking supply are presented in Section 4.

3.1.1 Unit Size & Affordability

The proposed unit sizes are particularly small in size. As shown in **Table 3.1**, 36 of the units are less than 45 m², another 13 are greater than 45 m² but less than 70 m². Therefore 49 of the 64 units (77%) are less than 70 m².

Table 3.1: Residential Unit Sizes

UNIT SIZE	NUMBER OF UNITS
Less than 45m ²	36
45m ² or more, but less than 70m ²	13
More than 70m ²	15
	64

Many cities recognize the correlation between unit size and parking demand. The City of Victoria, with its recently updated Zoning Bylaw No. 80-159 Schedule C: Off-Street Parking Regulations has parking space requirements tailored to the location of the development and unit sizes. Parking requirements for units less than 45 m² are approximately 30% lower than rates applied to larger units in a common area. Parking

requirements for units less than 70 m² are approximately 20% lower than rates applied to larger units in a common area.

Smaller residential unit sizes also correspond with affordability and resident income, as smaller unit sizes generally allow for reduced unit prices.

Bunt obtained parking supply and parking demand data of comparable Greater Victoria Housing Society (Table 3.2) affordable housing buildings operated by Capital Region Housing Corporation (Table 3.3). The buildings listed were selected as they share similar characteristics such as expected resident demographics, unit size, proximity to services, and that they are all non-downtown locations. As shown in Tables 3.2 and 3.3, the average parking demand is approximately 0.37 spaces per unit and no building had a parking demand greater than 0.59 spaces per unit.

Table 3.2: Vehicle Ownership Rates for Comparable Affordable Buildings in Greater Victoria

COMPLEX NAME	LOCATION	SUBSIDIZED	NUMBER OF UNITS	PARKING SPACES	PARKING SPACES OCCUPIED BY TENANT	PARKING DEMAND RATE
Colwood Lodge	85 Belmont Road Victoria	YES	50	37	24	0.48
Constance Court	1325 Esquimalt Road Esquimalt	YES	52	26	18	0.35
Grafton Lodge	506 Crofton Street Esquimalt	YES	29	20	17	0.59
Townley Lodge	1780 Townley Street Saanich	NO	39	16	13	0.33
Esquimalt Lions Lodge	874 Fleming Street Esquimalt	NO	77	23	21	0.27
WEIGHTED AVERAGE						0.37

Source: Greater Victoria Housing Society

The dataset (presented in Table 3.3) obtained from Capital Region Housing Corporation in 2017 of six "Affordable" housing buildings (either rental or strata) in the Greater Victoria area (with similar characteristics such as unit size, proximity to services, but mostly in less central locations) also shows that the average resident parking demand for affordable housing units was approximately 0.37 spaces per unit, and no building had a parking demand greater than 0.50 spaces per unit. These rates were realized with minimal to no support from TDM initiatives.

Table 3.3: Vehicle Ownership Rates for Comparable CRHC Buildings in Greater Victoria

COMPLEX NAME	LOCATION	SUBSIDIZED	NUMBER OF UNITS	PARKING SPACES OCCUPIED BY TENANT	PARKING DEMAND RATE
Amberlea	3330 Glasgow Avenue	YES	44	22	0.50
The Birches	1466 Hillside Avenue	YES	49	8	0.16
Leblond Place	390 Waterfront Crescent	YES	53	23	0.43
Rosewood	1827 McKenzie Avenue	YES	44	15	0.34
Springtide	270 Russell Street	YES	48	19	0.40
The Heathers	3169 Tillicum Road	YES	26	11	0.42
Viewmont Gardens	4450 Viewmount Avenue	YES	36	14	0.39
WEIGHTED AVERAGE					0.37

Source: Capital Region Housing Corporation

The Canada Mortgage and Housing Corporation (CMHC) (Research Highlight, Socio-Economic Series Issue 50- Revision 2) concluded that household income is the second best predictor of auto ownership. As income increases, auto ownership and use increase. A study reported in the Australia Transportation Forum (2007) also found a strong correlation between vehicle ownership and household income. A study published by Pushkar et al (TRB 2000) based on a survey of 115,000 households in Toronto indicated that higher income households had more vehicles. A study conducted by Bunt & Associates in the Vancouver area in the early 1990's and in Calgary area in 2003 also supported a positive, almost linear relationship between income and auto ownership.

3.1.2 Tenure

Rental apartments generally have lower vehicle ownership rates than owned apartments. Bunt has previously conducted analysis of out-of downtown market rental apartment buildings in Victoria in 2012. The data (presented in **Table 3.4**) was derived from three key sources of information:

- Vehicle ownership information acquired from ICBC;
- Data collected in the field during resident and visitor peak parking periods; and,
- Information gathered from building manager interviews.

The collected data indicated that the approximate vehicle ownership rate (i.e. residential parking demand) of the 13 rental apartment buildings was 0.66 vehicles per unit. These parking ownership rates are approximately 40% lower than bylaw minimum supply rates for "Other Area" locations. This data correlates with the field observation counts and building manager surveys. The data revealed a range of vehicle

ownership rates as low as 0.52 and as high as 0.81 vehicles per unit. It also illustrates the impact of unit size as the highest vehicle occupant buildings have a higher proportion of two bedroom units.

All units at 2655 Fifth Street will be rental units.

Table 3.4: Summary of Market Rental Apartments Included in 2012 Parking Study

NAME AND ADDRESS	TOTAL UNITS (OCCUPIED/AVAILABLE)	# OF STUDIO UNITS	# OF 1 BDR UNITS	# OF 2 BDR UNITS	# OF ON-SITE RESIDENT PARKING STALLS	# OF ON-SITE VISITOR PARKING STALLS	PARKING STALL COST (MONTHLY)	VEHICLE OWNERSHIP RATE
805 Academy Close	9 / 10	0	10	0	0	0	N/A	0.7
360 Douglas Street, Goodacre Towers N. & S.	194 / 197	55	81	61	152	32	\$15 - \$20	0.68
240 Douglas Street, Beacon Tower Apartments	58/60	0	44	16	42	0	\$30	0.73
151 St. Andrews, Beacon Park Apartments	75/75	3	10	62	90	5	\$35	0.81
575 Marifield Ave, Kirkcauldly Apartments	43 / 43	7	28	8	28	3	\$20	0.53
562/566 Simcoe Street	104 / 108	6	78	24	75	12	\$20	0.54
576 Simcoe Street, Park Plaza	37 / 37	3	27	7	35	1	\$0	0.55
160 Government Street, Weybridge Manor	33/33	N/A	N/A	N/A	23	3	N/A	0.63
890 Academy Close	54 / 55	12	30	13	33	0	\$10-\$15	0.63
505 Quadra Street, Beacon Arms	34 / 34	2	21	11	26	1	\$15-\$30	0.68
955 Humbolt Street	43 / 43	0	37	6	40	3	\$45	0.72
976 Humbolt Street	23 / 23	6	13	4	15	0	\$45	0.52
TOTALS AND AVERAGES	98.5% OCCUPANCY						\$20	0.66

3.1.3 Geographical Area

Potential apartment owners who do not own a vehicle or would like to live without a private vehicle require other transportation options such as transit, car-share, or the ability to safely access common destinations by foot or bicycle. Proximity to high frequency transit, commercial areas, and recreational opportunities is a critical support for reduced parking rates.

As presented in Section 2, from a transportation perspective the site is in an excellent location as it is near a cycling route and is within a walkable range of various commercial services, amenities and transit routes.

Grocery stores, pharmacies, restaurants, coffee shops, parks, schools, shopping and entertainment are all shown to be within a 500 metre distance (an approximate 5 to 10 minute walk). According to the Walk Score² website the 2566 Fifth Street location has a Walkscore of 92 (out of 100) placing it in the "Walker's Paradise" category.

According to bylaw the development is located in an "Other Area" geographic area however the site does border a Village/ Centre area and is considered highly walkable.

3.2 Visitor Parking

Previous research conducted by Bunt has repeatedly suggested that a visitor parking rate of 0.10 spaces per unit for residential buildings is suitable as it is anticipated to provide a buffer over peak demands. This is supported by Metro Vancouver's comprehensive "2012 Metro Vancouver Residential Apartment Parking Study"³ which suggests 0.10 spaces per residential unit can accommodate peak visitor parking demand. The study found peak visitor parking demand rates in the range of 0.05 to 0.07 vehicles per unit for multi-family residential. This is consistent with Bunt's in-house database of peak visitor parking demand rates.

A visitor parking demand rate of 0.05 spaces per unit would translate to peak period demand of approximately three parking spaces for the proposed 64 units.

Short-term visitors are anticipated to use the 5 to 6 two-hour on-street parking spaces fronting the site. It is acknowledged that longer term visitors may wish to park on-site. It is therefore recommended that three of the 25 on-site parkade spaces be marked as visitor spaces.

3.3 Art School Parking

The current and neighbouring Vancouver Island Art School has an informal parking lot with approximately 10 parking spaces. Bylaw rates for the new proposed school require a minimum of 8 (7.75) parking spaces.

The proposed new location would not provide vehicle parking spaces for the Art School. Art School staff and students would be informed that there are no available parking spaces available on-site. Those still wishing to access the school by vehicle would then need to park on-street in front of the building. Vancouver Island Art Classes typically operate from 9 AM to 5 PM, coinciding with low residential visitor

² Walk Score is a method of evaluating a location's walkability by using an algorithm that awards points based on the distance to amenities such as grocery stores, schools, shops, recreation opportunities, banks and restaurants. www.walkscore.com

³ 2012 Metro Vancouver Apartment Parking Study available at: https://www.esquimalt.ca/sites/default/files/docs/municipal-hall/EVP/schedule_m_parking_study.pdf

parking demand periods (visitor parking for residential development typically peaks in the evening and on weekends), allowing the curb side parking spaces to be shared well between residential visitors and the Art School. This arrangement is considered viable from a functional perspective, however on-street spaces are not considered to be part of a development's parking supply which technically must all be on-site.

3.4 Vehicle Parking Demand Summary

Smaller apartments have been shown to result in lower than average parking demand rates, regardless of tenure. Rental buildings also typically result in lower parking demands than strata ownership.

The location of the development offers a plenitude of transportation options. It is in a highly walkable area, surrounded by amenities. It has nearby transit, cycling routes, and car-share opportunities.

These factors of unit size, tenure, and location are all shown to result in lower vehicle ownership rates, when these factors are combined the impact is anticipated to be compounded.

In addition to the above factors, this proposed development is largely defined by its effort to create affordable housing. Recognized or not by Victoria's bylaw (due to the timeframe of the affordability guarantee) most of the units are designed in order to achieve affordability.

Bunt recommends that 22 of the 25 on-site parking spaces be reserved for resident use and three spaces be provided for visitors, one of which may be occupied by the car-share vehicle. It may be best to place the car-share vehicle on the adjacent on-street parking where it is more visible and accessible to neighbouring residents. This would then leave three on-site spaces for regular visitor use. This equates to approximately 0.05 visitor spaces per unit which is supported by Bunt.

The 22 spaces available to support the development's 64 units represents a parking ratio of 0.34 spaces per unit. While this may be achievable without additional management, we recommend the development market the 36 units that are less than 45 m² as not having access to a parking space. Rental of these units would therefore be contingent on the renter not owning a vehicle. The remaining 28 units over 45 m² will therefore be supported by 22 parking spaces (a parking ratio of 0.79 spaces per unit).

We also recommend the Vancouver Island Art School consider a transit pass program for its students. This may be similar to other Universities and Colleges where the price of a transit pass is embedded into the tuition costs.

With consideration of the factors discussed above and with the support of the proposed robust transportation demand management initiatives, it is Bunt's opinion that the proposed 25 on-site parking spaces can be anticipated to meet the parking demands of the proposed 64 unit rental residential plus 620 m² Art School development at 2566, 2570, and 2580 Fifth Street.

4. TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) seeks to decrease private vehicle use by promoting other more sustainable modes of transportation.

Initiatives presented in **Table 4.1** are potential components of a TDM plan intended to further encourage future residents to use more non-single occupant vehicle travel modes, i.e. transit, ride-sharing, walking, and cycling. Recommended actions are described in further detail below.

Table 4.1: Recommended TDM Strategy Summary

STRATEGY	MEASURE	RESPONSIBILITY FOR IMPLEMENTATION
Information Sharing/Marketing & Promotion	Prepare marketing materials to attract residents who want a car-free lifestyle	Site Developer
	Provide a Welcome Brochure, with an information package on local area transportation options, provided to all new residents and posted in a common area	Site Developer/ Site Operator
Cycling Amenities	Provide a bicycle repair station	Site Developer
End of Trip Cycling Facilities	Provide long-term secure and convenient bicycle storage for residents	Site Developer
	Provide short-term bicycle rack parking at building entrance (well lit and protected, within view of lobby)	Site Developer
Pedestrian Amenities	Provide an sidewalk along site frontage with boulevard improvements to buffer pedestrians from moving traffic	Site Developer
	Provide amenities such as benches on the site and/or along the site frontage	Site Developer/ Municipality
Car Share	Provide Car Share vehicle for residents and neighbours	Site Developer initiates with provision of vehicle and stall, Car Share Program Provider operates and maintains program
	Provide Car Share stall in publicly accessible area for site visitors and community use	
	Provide initial Car Share membership fee for each unit that does not lease a parking space	Site Developer
Parking Management	Unbundle parking from unit leasing	Site Developer
	Require residents to pay for on-site parking	Site Developer
	Restrict parking supply: provide lower than Bylaw supply rates	Site Developer

4.1 Information Sharing

TDM is about changing travel behaviour. New residents are considered a pliable demographic for transportation mode change as they have yet to establish travel patterns from their new address. Clear and simple messages along with practical information about local transit services and walking and cycling routes to and from the site can help encourage residents to use more sustainable transportation modes. Information should be distributed to tenants upon their move-in or made available through a website or webpage. The information provided in print or on-line should include:

- Map showing local transit routes (can be obtained from BC Transit - Victoria website);
- Map showing local area cycling routes (can be obtained from City website – Map of Victoria Bike Routes);
- Map showing amenities within a typical walking catchment of 800 metres (can be obtained from Walk Score website: www.walkscore.com)

4.2 Cycling Amenities

4.2.1 Bicycle Parking

City of Victoria's updated zoning bylaw requires 1.25 long-term bicycle space per residential unit greater than 45 m² and 1 space per unit less than 45 m², resulting in a requirement for 71 long-term bicycle spaces for the 64 residential units. Long-term bicycle parking spaces are defined as a secure, weather-protected bicycle parking facility used to accommodate long-term bicycle parking. The greater of 6 short-term bicycle spaces per building or 0.1 spaces per unit equates to a bylaw requirement for 6 short-term bicycle spaces.

City of Victoria bylaw parking rates for the Art School fall under the City's University/ College designation which requires 1 short-term space per 100 m² and one long-term space per 1,600 m². This equates to a requirement for 6 short-term spaces and 1 (rounded up from 0.4) long-term space to satisfy the residential component of the proposed development.

The total bylaw requirement for the site is therefore 72 long-term bicycle spaces and 12 short-term bicycle spaces.

The development will meet the long-term and short-term bicycle parking requirements. Long-term spaces will be provided in two rooms accessed from the parking structure.

A short-term bicycle rack will be provided within 15 meters of the building's main entry in a well lit and highly visible area.

Bunt recommends that electric outlets be installed in the bicycle storage room for electric-assisted bicycles.

4.2.2 Bicycle Repair Station

To support resident cycling, we recommend the developer provide a bicycle repair station within the site (example image of a bicycle repair station provided below in **Figure 4.1**).



Figure 4.1: Example of Bike Repair Station

4.3 Car Share

Car-sharing organizations have developed significantly in the last 5-10 years. They allow people to have access to a car in their area without having to buy or maintain their own vehicle. A “pay as you go” approach is adopted as members pay by the hour and/or kilometre when they use a vehicle. There are currently two car share organizations in Victoria: Modo and Zipcar. Modo currently (March 2018) has a fleet of approximately 50 vehicles throughout Victoria, including two vehicles within 650 metres of the development site. Zipcar currently has three vehicles in the Victoria area; none of these are within a 10 minute walk of the development site.

Purdey Group is offering to purchase one car-share vehicle for Modo. One vehicle space would be provided within the publically accessible visitor parking area of the parkade for the car-share vehicle.

In addition, Purdey Group is offering to purchase Modo memberships for each resident unit that does not lease a parking space. The cost to Purdey Group will be \$500 per unit for the membership down payment fee. The memberships will remain property of the development and are transferable to new future tenants. Residents provided with memberships will pay for vehicle use by time or by kilometers traveled.

The parking demand impact of having a car-share vehicle and memberships provided to residents is unclear. Some other municipalities such as Vancouver have equated varying degrees of car-share participation with a parking requirement reduction of five vehicle spaces. The true impact is likely dependent on various site specific factors such as location and resident demographics. It is our opinion that having access to a shared vehicle will remove a common barrier for residents who may consider not owning a private vehicle, especially in the present context where the car-share vehicle provides another viable transport option to an area that has other strong multi-modal transportation options.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

- The proposed residential development at 2566, 2570, and 2580 Fifth Street proposes a total of 64 rental residential units and a 620 m² art school (Vancouver Island Art School).
- Affordability is a primary goal for Purdey Group; hence the units are generally small in size with 49 or 77% of the units being less than 70 m² in size and 56% of the units being under 45 m².
- The site is well serviced with transit and is within walking range to a wide variety of commercial and service amenities.
- The current zoning bylaw requires a minimum of 69 parking spaces for this project. This is calculated with just six of the 38 affordable units being considered "Affordable" by the City's bylaw definition. The remaining 32 "affordable" units are proposed to be secured as affordable for an undefined time period or for a minimum of a five year period (seven units) rather than in perpetuity.
- The development offers 25 on-site vehicle parking spaces which represents a 44 space variance from Bylaw requirements. Three of these spaces would be for visitors leaving 22 spaces for the 64 units which is an overall parking ratio of 0.34 spaces per unit.
- Our analysis of other comparable buildings suggests that the proposed 25 parking spaces can be anticipated to accommodate the building's resident and visitor peak parking demands. Similar affordable or small sized apartments are shown to have average parking demand rates of 0.37 spaces per unit regardless of tenure. The rental tenure of the proposed units is also anticipated to lead to lower than average vehicle ownership rates. These factors of affordability, size, and tenure are further supported by the site's strong proximity to other transportation options and also Purdey Group's proposed robust TDM initiatives.
- The development will meet the long-term bicycle parking requirements (72 long-term spaces) and requirements for short-term spaces.
- We are confident that a market exists for small, affordable rental units without a vehicle parking space. We recommend the developer secure this demographic by making clear to prospective tenants that all rental units under 45 m² do not and will not in the future have access to a parking space.

5.2 Recommendations

- Bunt recommends that three of 25 on-site parkade parking spaces be reserved for visitor use, one of which would accommodate the proposed car-share vehicle. This leaves 22 spaces available to residents. It is recommended that the 36 units that are less than 45 m² be rented without parking

spaces. Tenants would be made aware of the units not having parking spaces upon rental inquiry. This leaves the 22 spaces to be used by the 28 units that are over 45 m² (0.79 spaces per unit).

- The proposed parking variance will be supported by the developer agreeing to purchase one car-share vehicle and also the provision of Modo car-share memberships for all units that do not lease a parking space. The memberships would remain with the units and will be transferable to future tenants.
- We recommend Purdey Group provide a Welcome/ Transportation Information Brochure for future residents.
- We recommend 5th Street on-street parking regulations be reviewed when the neighbouring site to the south is developed. This will help to ensure these neighbouring on-street parking spaces are not being used by visitors of the subject development.
- We recommend Purdey Group provide a bicycle repair station, either in a designated bike storage room or in a common area accessible to all residents.
- We recommend electrical outlets be provided in the long-term bicycle parking rooms.
- It is recommended that the Vancouver Island Art School implement TDM measures for the school to reduce school related parking demand. Transit subsidies (often imbedded in tuition costs) are common for Universities/Colleges and should be explored by the Art School.

