WATT Consulting Group

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CORP. OF TOWNSHIP OF ESQUIMALT
DEVELOPMENT SERVICES

833 + 835 Dunsmuir Road

Parking Study

Prepared for:	**GT Mann Contracting**
Prepared by:	**Watt Consulting Group**
Our File:	**2258**
Date:	**December 6, 2017**

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Subject Site 1
1.2 Site Characteristics 2
2.0 PROPOSED DEVELOPMENT 3
2.1 Proposed Parking Supply 4
3.0 PARKING REQUIREMENT 4
4.0 EXPECTED PARKING DEMAND 4
4.1 Resident Parking, Vehicle Ownership 4
4.2 Resident Parking, Observations 6
4.3 Precedent Sites 6
4.4 Visitor Parking 6
4.5 Summary of Expected Parking Demand 7
5.0 ON-STREET PARKING 7
6.0 TRANSPORTATION DEMAND MANAGEMENT 9
6.1 Bike Parking 9
6.2 Carshare 9
7.0 SUMMARY 10
7.1 Recommendations 10

1.0 INTRODUCTION

Watt Consulting Group was retained by GT Mann Contracting to conduct a parking study for the proposed development at 833-835 Dunsmuir Road in the Township of Esquimalt. The purpose of this study is to assess the adequacy of the proposed parking supply by considering parking demand at representative sites and to identify transportation demand management (TDM) options.

1.1 SUBJECT SITE

The proposed redevelopment site is 833-835 Dunsmuir Road in the Township of Esquimalt. See **Figure 1**. The site is zoned RD-3 | Two Family/Single Family Residential and RM-4 | Multiple Family Residential.

FIGURE 1. **SUBJECT SITE**

1.2 SITE CHARACTERISTICS

The following provides information regarding services and transportation options in close proximity to the subject site. See **Figure 2**.

SERVICES

The site is located 400m from the intersection of Esquimalt Road and Head Street that has various retail stores including anchor Shoppers Drug Mart, small scale restaurants, and medical services. The area is identified in the Official Community Plan (OCP)[1] as a "commercial node" where commercial services and concentrations of medium- and high-density residential will be focused. Esquimalt Village and Downtown Victoria are located over 1-km from the site and have the majority of services site residents may need.

TRANSIT

The closest bus stop to the site is located less than 100m away on Dunsmuir Road and serves Route 25 | Maplewood/Admirals Walk. This route is classified as a local route that has a service frequency between 20 and 120 minutes. Route 15 | Esquimalt/Uvic stops 150m from the site on Esquimalt Road and is a regional route with a service frequency of 15 to 60 minutes with limited stops. This route provides direct service between the DND Esquimalt base and the University of Victoria, via downtown Victoria.

BC Transit's Transit Future Plan identifies Esquimalt Road as a "Frequent Transit Corridor"[2] that will provide frequent service (15 minutes or better between 7am and 10pm, 7 days per week) with improved transit travel times achieved by fewer stops, transit priority measures and enhanced bus stop infrastructure. The subject site will benefit from frequent, reliable and convenient transit service.

WALKING

There are sidewalks on both sides of Dunsmuir Road, providing connection to Esquimalt Road. Esquimalt Road provides for a relatively pleasant pedestrian environment, the result of a streetscape revitalization initiative in approximately 2010. Sidewalks are provided on both sides of Esquimalt Road with crosswalks at major intersections and various mid-block crosswalks. The site has a Walkscore[3] of 72, which suggests most errands can be accomplished on foot.

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[1] Corporation of the Township of Esquimalt Official Community Plan, 2006, Bylaw No. 2646. Available online at: https://www.esquimalt.ca/sites/default/files/docs/municipal-hall/bylaws/bylaw_no._2646_2006_official_community_plan_consolidated_march_2017_complete_document.pdf

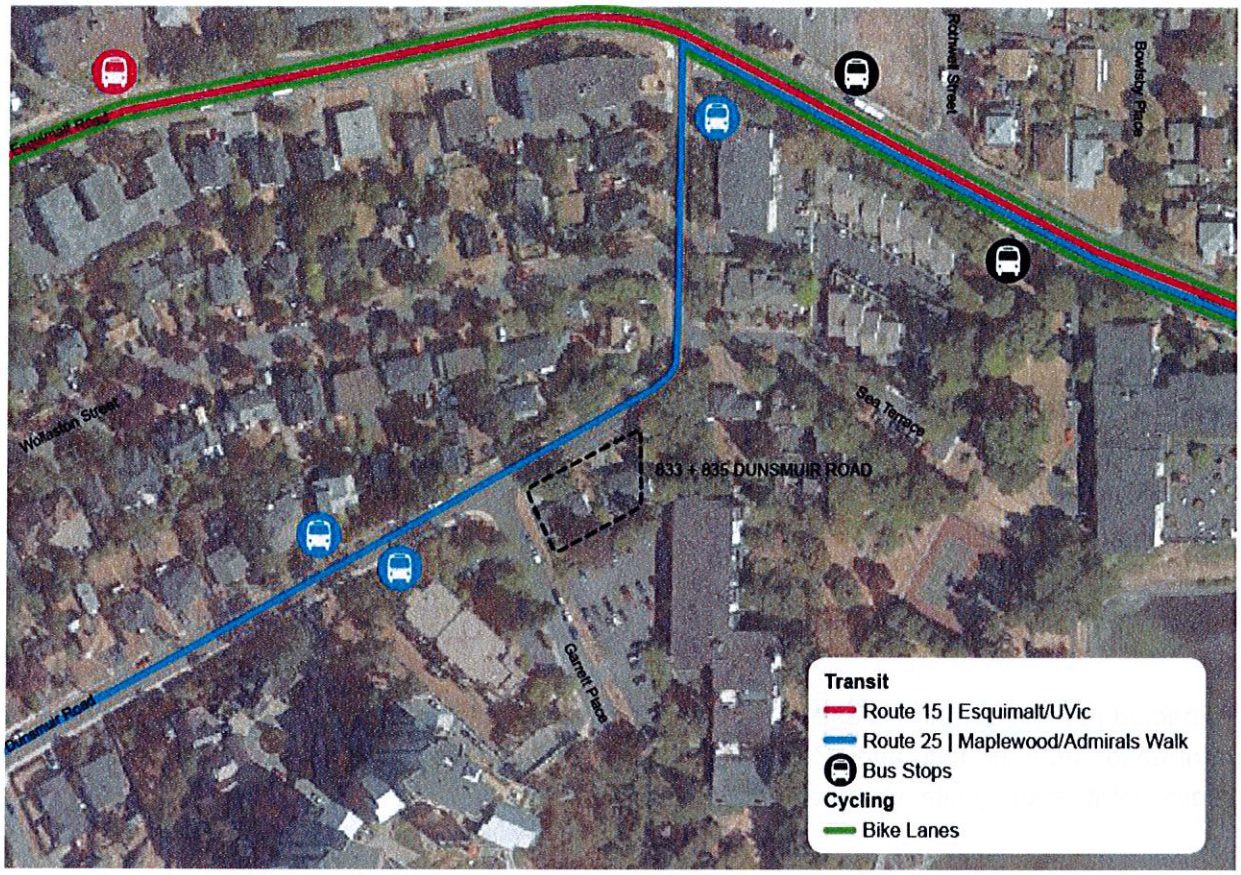
[2] More information on the Victoria Transit Future Plan is available online at: http://bctransit.com/victoria/transit-future/victoria-transit-future-plan

[3] Walkscore. For more information see: https://www.walkscore.com/score/833-dunsmuir-rd-victoria-bc-canada

CYCLING

Bike lanes are provided on Esquimalt Road with direct connection to downtown Victoria and the Galloping Goose Regional Trail. The site is approximately 400m from the Esquimalt + Nanaimo (E+N) Rail Trail, which provides a direct off-road cycling route to View Royal and the Western Communities.

FIGURE 2. **TRANSPORTATION OPTIONS SURROUNDING THE SITE**



2.0 PROPOSED DEVELOPMENT

The proposal is for 34 Multi-family Residential units. The site will be a condominium subject to strata ownership and will consist of a combination of one and two bedroom units. See **Table 1**.

TABLE 1. **PROPOSED UNIT COMPOSITION**[4]

Number of Bedrooms	Quantity
One-Bedroom	21
Two-Bedroom	13
Total	**34**

2.1 PROPOSED PARKING SUPPLY

The proposed parking supply is 37 spaces - a parking supply rate of 1.09 spaces per unit.

The proposal also includes the provision of 51 long-term bike parking spaces (1.5 bike parking spaces per unit) and a six-space bike rack at the building entrance.

3.0 PARKING REQUIREMENT

The Township of Esquimalt Parking Bylaw No. 2011[5] identifies a minimum parking supply rate of 1.3 spaces per unit for Medium and High Density Apartment uses (assumes RM-4 zoning). Applied to the subject site, this results in a requirement for 44 parking spaces. The Bylaw also requires that 11 of the required spaces are reserved for visitors, and one space is designed and designated as Disabled Persons' parking.

4.0 EXPECTED PARKING DEMAND

Expected parking demand is estimated in the following sections based on vehicle ownership information from the Insurance Corporation of British Columbia ("ICBC"), observations of representative study site, research and surveys.

4.1 RESIDENT PARKING, VEHICLE OWNERSHIP

Vehicle ownership information was obtained from ICBC for representative sites. See **Table 2**. Sites selected exhibit similar characteristics to the subject site - all sites are condominium (i.e., strata ownership) and in a similar location / context. The average vehicle ownership rate is 0.98 vehicles per unit and ranges from 0.78 to 1.2 vehicles per unit.

Research suggests that parking demand varies based on the size of unit - the higher the number of bedrooms, the higher the parking demand. For each study site the total parking demand has been redistributed based on number of bedrooms.

[4] Unit composition information per email correspondence from Praxis Architects, received September 18 2017

[5] The Township's Zoning Bylaw is available online at: www.esquimalt.ca/sites/default/files/docs/municipal-hall/bylaws/parking_bylaw_2011_july.pdf

Overall vehicle ownership at each study site has been factored to account for unit configuration (i.e., number of bedrooms) as follows:

1. Overall vehicle ownership data for each site;
2. The breakdown of unit type (i.e., number of bedrooms) at each site; and
3. The assumed "ratio differences" between each unit type based on the King County Metro[6] study which recommends one-bedroom units have a 20% higher parking demand than bachelor units, two-bedroom units have a 60% higher parking demand than one-bedroom units, and three-bedroom units have a 15% higher parking demand than two-bedroom units.

Results suggest that average parking demand when factored for unit configuration is as follows:

- One-Bedroom Units (21) = 0.68 vehicles per unit, 14 vehicles
- Two-Bedroom Units (13) = 1.06 vehicles per unit, 14 vehicles

The subject site has more one-bedroom units and less two-bedroom units than is typical of the study sites, which explains why the expected parking demand is reduced when factored for unit configuration (i.e., number of bedrooms).

TABLE 2. **VEHICLE OWNERSHIP AT REPRESENTATIVE SITES**

Location	Number of Units	Vehicle Ownership based on ICBC Data		Assumed Vehicle Ownership Distribution (vehicles per unit)	
		Total	Rate (vehicles per unit)	1-Bedroom	2-Bedroom
885 Ellery St	20	24	1.2	0.81	1.30
830 Esquimalt Rd	21	17	0.81	0.56	0.90
848 Esquimalt Rd	51	40	0.78	0.60	0.96
924 Esquimalt Rd*	58	53	0.91	0.62	0.99
929 Esquimalt Rd	31	31	1.00	--	1.00
1000 Esquimalt Rd	30	32	1.07	0.7	1.12
1315 Esquimalt Rd*	78	79	1.01	0.68	1.09
614 Fernhill Pl	21	19	0.90	--	0.90
331 Robert St	10	11	1.10	0.79	1.26
Average			**0.98**	**0.68**	**1.06**

* Unit breakdown information was unavailable for these sites, and so an average of unit breakdown at other representative sites was applied to these sites.

[6] King County Metro. (2013). Right Size Parking Model Code. Table 2, page 21.
Available online at: http://metro.kingcounty.gov/programs-projects/right-size-parking/pdf/140110-rsp-model-code.pdf

4.2 RESIDENT PARKING, OBSERVATIONS

Observations of parked vehicles were conducted at select sites assessed above in 2015 as part of a previous study[7] and were updated for this study to determine if the ICBC vehicle ownership information from 2015 (see above) is reflective of current demand at the representative sites. Results of observations from 2015 and 2017 - shown in **Table 3** – demonstrate that parking conditions are virtually identical to 2015, suggesting that the vehicle ownership information from 2015 (presented in Section 4.1) is an accurate measure of current parking demand.

TABLE 3. **SUMMARY OF OBSERVATIONS AT REPRESENTATIVE SITES**

Location	Number of Units	Parking Supply	Thurs, Dec 02 2015 @ 10:30pm		Tues, Sept 19 2017 @ 9:30pm	
			Vehicles	Rate	Vehicles	Rate
885 Ellery St	20	26	16	0.80	16	0.80
830 Esquimalt Rd	21	30	17	0.81	16	0.76
614 Fernhill Pl	21	24	20	0.95	20	0.95
Average				**0.85**		**0.84**

4.3 PRECEDENT SITES

A recent development (924 Esquimalt Road) was assessed, as it is deemed representative to the subject site and reflects parking demand characteristics of newer developments. The site has a vehicle ownership rate of 0.91 vehicles per unit over 24% one- and 76% two-bedroom units. Considered by number of bedrooms, this assumes ownership rates of 0.63 vehicles per one-bedroom unit and 1.0 vehicles per two-bedroom unit. Applied to the subject site, the anticipated resident parking demand is 26 vehicles.

4.4 VISITOR PARKING

Observations were conducted as part of a study by Metro Vancouver[8] that concluded typical visitor parking demand is less than 0.1 vehicles per unit. This is similar to observations that were conducted for parking studies in the City of Langford and the City of Victoria, and suggests that visitor parking demand is not strongly influenced by location.

As such, it is estimated that visitor parking demand will be no more than 0.1 vehicles per unit.

[7] 826 Esquimalt Road Parking Study. Available online at: https://esquimalt.ca.legistar.com/LegislationDetail.aspx?ID=3663&GUID=B883D3FE-6D24-4C02-9550-0339E2D847A4

[8] Metro Vancouver Apartment Parking Study, Technical Report, 2012. Available online at: http://www.metrovancouver.org/services/regional-planning/PlanningPublications/Apartment_Parking_Study_TechnicalReport.pdf

4.5 SUMMARY OF EXPECTED PARKING DEMAND

Expected parking demand is approximately 31 vehicles, 6 less than is proposed. See **Table 4**.

TABLE 4. **SUMMARY OF EXPECTED PARKING DEMAND**

		Units	Expected Parking Demand	
			Rate	Total
Resident	One Bedroom	21	0.68 / unit	14
	Two Bedroom	13	1.06 / unit	14
Visitor		34	0.1 / unit	3
		Total Expected Parking Demand		**31**

5.0 ON-STREET PARKING

On-street parking conditions were observed surrounding the site on Dunsmuir Road (from West Bay Terrace to Wollaston Street) and Garrett Place (from Dunsmuir Road to the cul-de-sac). Parking restrictions on these road segments are either unrestricted or there is no parking available. See **Table 4** and **Figure 3**.

Observations were completed during a weekday afternoon and evening to reflect the anticipated "peak" periods. Observations were conducted during the following time periods:

- Tuesday September 19, 2017 at 9:30pm
- Friday September 22, 2017 at 2:45pm

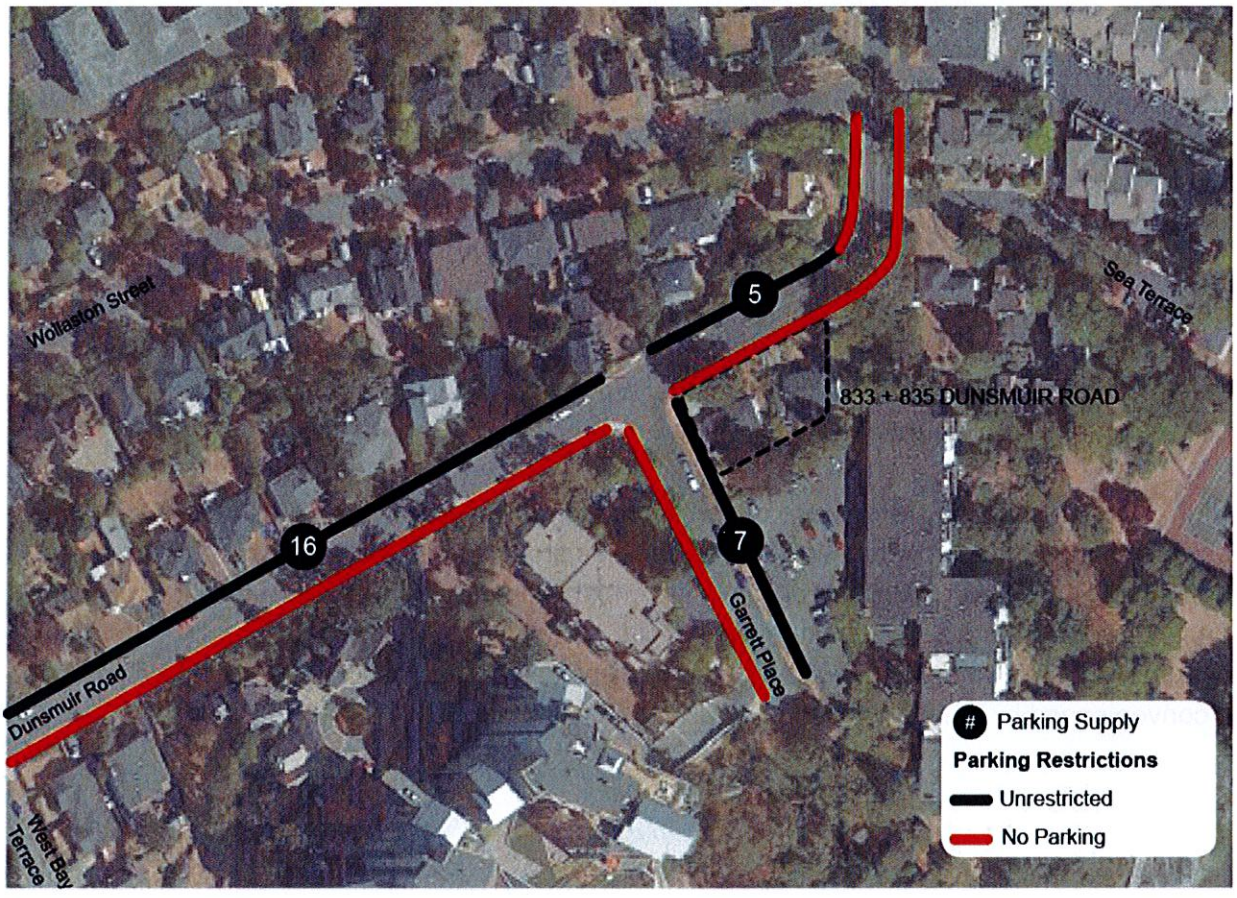
Peak occupancy was observed during the weekday afternoon observation (Friday at 2:45pm) when available parking was 75% occupied, with seven parking spaces still available. This demonstrates reasonable utilization of nearby on-street parking supply but sufficient availability of parking in case of spillover.

High parking occupancy rates were observed on Garrett Place and many of the same vehicles observed during both observations. These vehicles are assumed to be attributed to the Multi-Family Residential building immediately adjacent. It is anticipated that any resident or visitor parking spillover associated with the subject site would seek parking on Dunsmuir Road due to proximity to the front entry, and are unlikely to displace vehicles parking on Garrett Place nor be inconvenienced by the high occupancy rate.

TABLE 4. SUMMARY OF ON-STREET PARKING CONDITIONS

Street		Side	Restrictions	Parking Supply (spaces)	Vehicles Observed	
					Tues. 09/19/17 @ 9:30pm	Fri. 09/22/17@ 2:45pm
Dunsmuir Road	West Bay Terr – Garrett Pl	N	Unrestricted	16	11	10
		S	No Parking	-	-	-
	Garret Pl – Wollaston St	N	Unrestricted	5	2	4
		S	No Parking	-	-	-
Garret Place	Dunsmuir Rd – cul-de-sac	W	No Parking	-	-	-
		E	Unrestricted	7	7	7
				28	**20** 71%	**21** 75%

FIGURE 3. ON-STREET PARKING SUPPLY AND RESTRICTIONS



6.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) is the application of strategies and policies to influence individual travel choice, most commonly to reduce single-occupant vehicle travel. TDM measures can be pursued to encourage sustainable travel, enhance travel options and decrease parking demand. The following summarizes TDM options for the applicant's consideration.

6.1 BIKE PARKING

Bike parking is not currently required in the Township's Parking Bylaw. However, the Township of Esquimalt Official Community Plan includes policy that states:

> *In new multi-unit residential developments, secure bicycle storage for residents should be provided in the ratio of 1.5 storage spaces per dwelling unit. In addition to the residents' parking, each multi-unit building should have six (6) bicycle lock-up spaces for the use of visitors.*

The applicant is providing bike parking as per the policy in the OCP, which is higher than typical bike parking requirements in other communities.

6.2 CARSHARE

Modo Carshare is the carshare organization most wide spread in the Capital Region. Monthly Modo members pay $5 per month, a $10 registration fee, $8 per hour (including gas, insurance, and maintenance) and receive the first 200 kilometers of their trip for free. Member-owner memberships are $500 (refundable share purchase).

There is currently one Modo vehicle located in the Skyline Residences at 924 Carlton Terrace (Esquimalt Road/Head Street) and a second vehicle will be included in the Multi-Family Residential development under construction at 826 Esquimalt Road within the next year[9]. This vehicle will be approximately 250m from the subject site and may be accessed within a 3-4 minute walk. To facilitate carshare use among site residents, the applicant may consider purchasing carshare memberships for each unit that would allow residents to access the carshare vehicle without paying the up-front membership cost (the resident would only pay for usage). The cost to the applicant would be approximately $17,000 (34 units X $500 non-refundable membership).

[9] Staff report can be found online at: https://esquimalt.ca.legistar.com/LegislationDetail.aspx?ID=3663&GUID=B883D3FE-6D24-4C02-9550-0339E2D847A4. Staff Report-DEV-16-002.

7.0 SUMMARY

The proposed development is for 34 units and 37 off-street parking spaces - a parking supply rate of 1.09 spaces per unit. The Township's Parking Bylaw identifies a required minimum parking supply of 44 parking spaces; seven more than is proposed.

Parking demand was estimated for the site based vehicle ownership data and observations of representative study sites. Results suggest an expected parking demand of 28 resident vehicles and 3 visitor vehicles – a total site parking demand of 31 vehicles. Site parking demand is expected to be accommodated within the proposed off-street parking supply and without impacting the surrounding neighbourhood.

Long- and short-term bicycle parking will be provided, consistent with the policy in the Township's OCP (1.5 long-term bike parking spaces per unit and a six-space rack at the building entrance).

7.1 RECOMMENDATIONS

1. It is recommended that the Township grant the requested variance to the minimum parking supply to allow for provision of 37 parking spaces (1.09 space per unit); and