



# ESQUIMALT TOWN CENTRE

## Parking Study

Prepared for: **Aragon Properties Ltd.**

Prepared by: **Boulevard Transportation, a division of Watt Consulting Group**

Our File: **1958**

Date: **April 29, 2016**

## TABLE OF CONTENTS

|            |  |           |
|------------|--|-----------|
| <b>1.0</b> | <b>INTRODUCTION .....</b>                                  | <b>1</b>  |
| 1.1        | Location .....   | 1         |
| 1.2        | Transportation Options.....                                | 2         |
| <b>2.0</b> | <b>PROPOSED LAND USES.....</b>                             | <b>3</b>  |
| 2.1        | Context .....  | 3         |
| 2.2        | Land Use .....   | 3         |
| 2.3        | Proposed Parking Supply.....                               | 4         |
| <b>3.0</b> | <b>PARKING REQUIREMENT .....</b>                           | <b>5</b>  |
| <b>4.0</b> | <b>EXPECTED PARKING DEMAND .....</b>                       | <b>6</b>  |
| 4.1        | Residential .....  | 6         |
| 4.2        | Library.....   | 8         |
| 4.3        | Justice Institute .....                                    | 9         |
| 4.4        | Office .....   | 11        |
| 4.5        | Commercial / Retail.....                                   | 12        |
| 4.6        | Summary of Expected Parking Demand .....                   | 14        |
| <b>5.0</b> | <b>SHARED PARKING &amp; PARKING MANAGEMENT .....</b>       | <b>15</b> |
| 5.1        | Parking Management.....                                    | 16        |
| <b>6.0</b> | <b>TRANSPORTATION DEMAND MANAGEMENT .....</b>              | <b>17</b> |
| 6.1        | Carshare.....  | 18        |
| 6.2        | Bicycle Parking .....                                      | 19        |
| 6.3        | Bicycle End-Point Facilities .....                         | 20        |
| 6.4        | Transit Programs .....                                     | 21        |
| 6.5        | TDM Summary.....   | 21        |
| <b>7.0</b> | <b>ON-STREET PARKING .....</b>                             | <b>23</b> |
| <b>8.0</b> | <b>PARKING DIMENSIONS &amp; AISLE WIDTH ANALYSIS .....</b> | <b>25</b> |
| <b>9.0</b> | <b>SUMMARY .....</b>                                       | <b>25</b> |
| 9.1        | Recommendations .....                                      | 26        |

**APPENDIX A. Parking Plan**

**APPENDIX B. Shared Parking Analysis**

**APPENDIX C. On-street Parking Summary**

## 1.0 INTRODUCTION

Boulevard Transportation, a division of Watt Consulting Group was retained by Aragon Properties Ltd. to undertake a parking study for the proposed redevelopment of the Esquimalt Town Centre site 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, parking management approaches (particularly the use of shared parking) and transportation demand management (TDM) options.

### 1.1 LOCATION

The subject site is located in the Esquimalt Town Centre (1235 Esquimalt Road) in the Township of Esquimalt (see **Figure 1**).

FIGURE 1. SUBJECT SITE



## 1.2 TRANSPORTATION OPTIONS

The subject site is located in a central area with access to a number of transportation options. A summary of the subject site's transportation options is provided below.

### 1.2.1 Public Transit

The subject site has immediate access to three bus routes: no.15 – UVic / Esquimalt, no.25 – Maplewood / Admirals Walk / Colwood Exchange, and the no. 26 – Dockyard / UVic, providing connections to/from View Royal, the Esquimalt dockyard, downtown Victoria, and the University of Victoria. The no.15 – Uvic / Esquimalt operates every day between approximately 6:00am and 1:00am, with 15-minute frequency in peak hours.

BC Transit's *Transit Future Plan* has identified Esquimalt Road as a "Frequent Transit Corridor" 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 and transit priority measures and enhanced bus stop infrastructure.<sup>1</sup> With the Frequent Transit Network projected to carry a large share of the future transit system's total ridership, the subject site will benefit from frequent, reliable, and convenient service.

### 1.2.2 Walking

Various commercial/retail, personal services, and professional offices are accessible in the Esquimalt Town Centre area which is located on Esquimalt Road between Constance Avenue and Joffre Street. Many of these uses are approximately 300m from the subject (less than a 5-minute walk). Sidewalks are provided on both sides of Esquimalt Road and a crosswalk is provided on the west side of Park Place.

The Esquimalt Village (where the existing Town Centre is located) has been identified in the Official Community Plan (OCP) as an important area that will continue to serve as the main commercial, civic, and recreational service centre. Designs are encouraged that focus on pedestrian orientation and many include features such as sidewalk cafés, attractive landscaping, public art, and other amenities.<sup>2</sup> Furthermore, as per the OCP, the Township has plans to create a clearly defined, well-landscaped, and well-lit pedestrian network throughout the Esquimalt Village. These future pedestrian improvements are anticipated to result in enhanced walkability for the subject site and surrounding area.

---

<sup>1</sup> More information on the Victoria Transit Future Plan is available online at:  
<http://bctransit.com/victoria/transit-future/victoria-transit-future-plan>

<sup>2</sup> The Township of Esquimalt's OCP is available online at:  
[https://www.esquimalt.ca/sites/default/files/docs/business-development/bylaw\\_2646\\_-\\_ocp\\_consolidation\\_-\\_no\\_maps\\_2014a.pdf](https://www.esquimalt.ca/sites/default/files/docs/business-development/bylaw_2646_-_ocp_consolidation_-_no_maps_2014a.pdf)

### 1.2.3 Cycling

Bike lanes are provided along much of Esquimalt Road providing for direct connectivity to downtown Victoria. The site is approximately 1.1 km from the Esquimalt + Nanaimo (E+N) Rail Trail, which provides a direct off-road cycling route to downtown Victoria (east) and to View Royal and the Westshore (west).

## 2.0 PROPOSED LAND USES

### 2.1 CONTEXT

The proposal is for a comprehensive development that will act as a mixed use urban centre for Esquimalt. The development will include a mix of retail, residential, and commercial uses in addition to accommodating the new Public Library and teaching and administration space for the Justice Institute of British Columbia (JIBC), a public post-secondary institution. The overall objectives of this site<sup>3</sup> are as follows:

- Create a lively and sustainable Esquimalt Town Centre, which incorporates a mix of uses and community recreation needs;
- Revitalize Esquimalt's town core and enhance community economic development, while providing residents with a wider range of amenities and services; and,
- Capitalize on and enhance the value of public and private assets in the core.

### 2.2 LAND USE

The proposed development includes four buildings (some contain a single land use and others containing multiple uses). The proposal includes 101 units of multi-family residential, 10,000 square feet (sq. ft.) gross floor area (GFA) for the new public library, 18,000 sq. ft. GFA for the Justice Institute, 17,800 sq. ft. GFA for office uses, and 4,460 sq. ft. GFA for commercial/retail uses. These data are summarized in **Table 1**.

**TABLE 1. SUMMARY OF PROPOSED LAND USES**

| Land Use                                  | Quantity<br>(Units or Floor Area) <sup>***</sup> |
|---|--|
| Multi-Family Residential (Market Rental)* | 32   |

<sup>3</sup> For more information about this project, see the Township of Esquimalt website at: <https://www.esquimalt.ca/municipal-hall/esquimalt-village-project>

| Land Use                                | Quantity<br>(Units or Floor Area) <sup>***</sup> |
|---|--|
| Multi-Family Residential (Condominium)* | 69   |
| Library**                               | 10,000 sq. ft. (929 m <sup>2</sup> ) GFA         |
| Justice Institute                       | 18,000 sq. ft. (1,672 m <sup>2</sup> ) GFA       |
| Office                                  | 17,800 sq. ft. (1,654 m <sup>2</sup> ) GFA       |
| Commercial/Retail Use (CRU)             | 4,460 sq. ft. (414 m <sup>2</sup> ) GFA          |

\*An email correspondence on Thursday April 28<sup>th</sup> with the proponent confirmed that the total residential units changed to 101 units.

\*\*At the time of completing this study, the analysis on the library use was based on a floor area of 10,000 sq. ft. However, there is the potential for additional library area.

\*\*\*The quantity (unit or floor area) of the proposed land uses are current as of April 29, 2016 and are considered final for the purposes of this study.

## 2.3 PROPOSED PARKING SUPPLY

The proposal includes a total of 200 parking spaces, comprised of 161 underground parking spaces and 39 surface parking spaces (see **Table 2**). See **Appendix A** for parking plan.

**TABLE 2. SUMMARY OF PROPOSED PARKING SUPPLY**

| Building  | Land Use                                       | Underground Parking | Surface Parking |
|---|--|---------------------|-----------------|
| Building A & B                                    | Multi-Family Residential (Condominium)         | 55                  |                 |
| Building C & D                                    | Library / Justice Institute / Office           |                     | 39              |
|   | CRU / Multi-Family Residential (Market Rental) | 121                 |                 |
| <b>Total Underground and Surface</b>              |  | <b>215*</b>         |                 |
| <b>Total (Excluding Town Hall Parking Spaces)</b> |  | <b>200</b>          |                 |

\* Approximately 15 parking spaces will be assigned to the Town Hall, resulting in a total of 215 parking spaces. However, for the purposes of this study, which deals with the land uses in Table 2, the proposed parking supply of 200 is used.

## 3.0 PARKING REQUIREMENT

The Township's Parking Bylaw<sup>4</sup> defines the parking requirement for each of the proposed land uses. The total required parking supply for the site is 428 spaces, which is 228 spaces more than proposed (see **Table 3**).

The Library and Justice Institute requirements are based on the "Museum" requirement as neither are defined land use classifications. This classification has a significantly higher requirement than is typical of Library or post-secondary requirements in other communities. As per Section 11 "Visitor Parking" of the Parking Bylaw, in mixed residential/commercial development, visitor parking spaces may be assigned to commercial uses up to 15% of the space required for the commercial use component. In this case, the visitor parking supply would be shared with commercial uses and the overall requirement reduced by 35 spaces (428 total spaces required).

**TABLE 3. PARKING REQUIREMENT**

| Land Use                               | Quantity                                      | Requirement                        |                                   | Applied to Subject Site |
|--|---|------------------------------------|-----------------------------------|-------------------------|
| Residential                            | 101 units                                     | Medium and High density apartment  | 1.3 / unit                        | 131                     |
| Residential Visitor                    |   | 1 of every 4 required spaces       |                                   |                         |
| Library                                | 10,000 sq. ft. GFA<br>(929m <sup>2</sup> )    | Museum*                            | 1 space per 10 m <sup>2</sup> GFA | 93                      |
| Justice Institute                      | 18,000 sq. ft. GFA<br>(1,672 m <sup>2</sup> ) | Museum*                            | 1 space per 10 m <sup>2</sup> GFA | 167                     |
| Office                                 | 17,800 sq. ft. GFA<br>(1,654 m <sup>2</sup> ) | Business and Professional Offices  | 1 space per 30 m <sup>2</sup> GFA | 55                      |
| Commercial/Retail                      | 4,460 sq. ft. GFA<br>(414 m <sup>2</sup> )    | Retail Sales of goods and services | 1 space per 25 m <sup>2</sup> GFA | 17                      |
| <b>Total</b>                           |   |                                    |                                   | <b>463</b>              |
| <b>Subtract 35 for visitor sharing</b> |   |                                    |                                   | <b>428</b>              |

<sup>4</sup> The Township of Esquimalt's Parking Bylaw is available online:  
[https://www.esquimalt.ca/sites/default/files/zoning\\_parkingbylaw2008.pdf](https://www.esquimalt.ca/sites/default/files/zoning_parkingbylaw2008.pdf)

Section 13.5 of the Parking Bylaw allows for a parking supply reduction of two spaces in commercial and industrial land uses where two or more secure bicycle parking spaces, shower and change rooms and six visitor bicycle parking spaces are provided, and if the building is located within 200 metres of a regional bus route. The subject site is located on a regional bus route (see Section 1.2) and bike parking and shower and change rooms are proposed for this site.

## 4.0 EXPECTED PARKING DEMAND

Expected parking demand is considered in the following sections based on vehicle ownership from comparable sites, observations, research, and results from previous studies.

### 4.1 RESIDENTIAL

#### 4.1.1 Multi-Family Residential, Strata Owned

Buildings A and B are proposed to be strata ownership multi-family condominium comprising 69 units. Known vehicle ownership rates for strata ownership sites in proximity to the subject site are presented in **Table 4**. Unit configuration (i.e., proportion one- and two-bedroom units) is assumed to be representative of the subject site. Average vehicle ownership is 0.96 vehicles per unit. Accordingly, 0.95 vehicles per unit is suggested as an appropriate parking supply, resulting in demand of 66 vehicles.

**TABLE 4. VEHICLE OWNERSHIP AT REPRESENTATIVE SITES, STRATA OWNED CONDO**

| Site                | No. Units | Owned Vehicles | Vehicle Demand (vehicles/unit) |
|---------------------|-----------|----------------|--------------------------------|
| 885 Ellery Street   | 21        | 24             | 1.14                           |
| 830 Esquimalt Road  | 22        | 17             | 0.77                           |
| 848 Esquimalt Road  | 51        | 40             | 0.78                           |
| 924 Esquimalt Road  | 58        | 53             | 0.91                           |
| 929 Esquimalt Road  | 31        | 31             | 1.00                           |
| 1000 Esquimalt Road | 30        | 32             | 1.07                           |
| 1315 Esquimalt Road | 78        | 79             | 1.01                           |
| 614 Fernhill Place  | 22        | 19             | 0.86                           |
| 331 Robert Street   | 10        | 11             | 1.10                           |
|                     |           | <b>Average</b> | <b>0.96</b>                    |



#### 4.1.2 Multi-Family Residential, Market Rental

Building D will contain 32 market rental multi-family residential units. Multi-family strata ownership units are known to exhibit higher parking demand rates as compared to rental apartment units. Comprehensive studies from Metro Vancouver<sup>5</sup> and the City of Toronto<sup>6</sup> conclude that parking demand is 33% to 41% lower among market rental than strata ownership condominium units. When the average vehicle ownership rate among the strata ownership condominium sites (0.95 vehicles per unit) is reduced by 35% to reflect the reduced rate among rental apartments, the expected demand rate is 0.60 vehicles per unit.

**Table 5** presents the vehicle ownership rates at representative rental apartment sites for rental buildings. Many of these sites are in the City of Victoria but closely resemble the subject site based on proximity to the downtown area. These sites were obtained from an ICBC vehicle ownership data request for past parking studies.

**TABLE 5. VEHICLE OWNERSHIP AT REPRESENTATIVE SITES (RENTAL UNITS)**

| Site                                | No. Units | Owned Vehicles* | Vehicle Demand (vehicles/unit) |
|-------------------------------------|-----------|-----------------|--------------------------------|
| 1635 Cook Street                    | 72        | 30              | 0.42                           |
| 628 Head Street (Dagmar Apartments) | 25        | 11              | 0.44                           |
| 1130 Pandora Avenue                 | 45        | 24              | 0.53                           |
| 1020 Pembroke Street                | 109       | 75              | 0.69                           |
| 2310 Quadra Street                  | 19        | 14              | 0.74                           |
| 1110 Queens Avenue                  | 17        | 9               | 0.53                           |
| 1017 Queens Avenue                  | 27        | 11              | 0.41                           |
| 2549 Dowler Place                   | 32        | 25              | 0.78                           |
| 2523 Wark Street                    | 16        | 8               | 0.50                           |
| <b>Average</b>                      |           |                 | <b>0.56</b>                    |

\*Vehicle ownership information obtained from Insurance Corporation of British Columbia (ICBC). Information is current as of November 30, 2013.

The results from **Table 5** illustrate that parking demand for rental units is approximately 40% lower than strata ownership condominium units, which is consistent with the research from Toronto and Vancouver. Moreover, a recent parking study of 433 Boleskine Road in the City of

<sup>5</sup> Metro Vancouver. (2012). Metro Vancouver Apartment Parking Study. Page 44, Table 21; available online at: [http://www.metrovancouver.org/services/regional-planning/PlanningPublications/Apartment\\_Parking\\_Study\\_TechnicalReport.pdf](http://www.metrovancouver.org/services/regional-planning/PlanningPublications/Apartment_Parking_Study_TechnicalReport.pdf)

<sup>6</sup> City of Toronto. (2007). Parking Standards Review – Phase Two Apartment Building / Multi-Unit Blocks Developments Component, New Zoning By-Law Project. Page 16, Figure 3.1; available online at: [www1.toronto.ca/city\\_of\\_toronto/city\\_planning/zoning\\_environment/files/pdf/cansult\\_final\\_apart\\_stds.pdf](http://www1.toronto.ca/city_of_toronto/city_planning/zoning_environment/files/pdf/cansult_final_apart_stds.pdf)

Victoria, considered to be a somewhat representative site, found that the expected parking demand rate for the rental apartments was 0.62 vehicles per unit.<sup>7</sup>

A similar parking study was completed in 2010 for the rental apartment development on the southeast corner of Tillicum Road / Burnside Road (3185 Tillicum Road). Eight market rental apartment sites were surveyed and found average parking demand to be 0.68 vehicles per unit. The site was ultimately approved and constructed with a parking supply rate of 0.59 vehicles per unit (61 resident spaces, 104 units).<sup>8</sup> Vehicle ownership was recently obtained for the 3185 Tillicum Road site and determined vehicle ownership rates to be 0.58 vehicles per unit.<sup>9</sup>

Given the results in Table 5 and the supporting evidence from the research and past parking studies, a rate of 0.60 per unit is suggested for site planning purposes, which results in a parking demand of 19 vehicles.

#### 4.1.3 Visitors

Vehicle ownership data considers resident parking demand, but does not account for visitor parking. Visitor parking demand rates have been shown to be in the range of 0.05 to 0.07 vehicles per unit for multi-family residential.<sup>10</sup> A demand rate of 0.1 vehicles per unit is considered an appropriate representation of visitor parking demand among multi-family residential uses.<sup>11</sup> Applied to the site, the visitor parking demand is approximately 10 vehicles (approximately three for each of Building A, Building B, and Building D). This is significantly less than the visitor parking requirement per the Township's Parking Bylaw (35 spaces).

## 4.2 LIBRARY

The new Public Library will be approximately 10,000 sq. ft. (929 m<sup>2</sup>) GFA. To determine the parking demand for the library site, conversations were held with the Greater Victoria Public Library (GVPL) Chief Executive Officer and Core District Coordinator.<sup>12</sup> These staff were able to

<sup>7</sup> Boulevard Transportation. (2016). 433 Boleskine Road Parking Study.

<sup>8</sup> A similar parking study was completed in 2010 for the rental apartment development on the southeast corner of Tillicum Road / Burnside Road (3185 Tillicum Road).

<sup>9</sup> Vehicle ownership rate based on the number of vehicles registered to this address. Information is provided by Insurance Corporation of British Columbia (ICBC) and current as of November 30, 2015.

<sup>10</sup> Based on observations of visitor parking conducted in 2015 for two studies of multi-family residential sites (one adjacent downtown Victoria, the other in Langford) and findings from the 2012 Metro Vancouver Apartment Parking Study available at: <http://canadianparking.ca/the-metro-vancouver-apartment-parking-study/>

<sup>11</sup> City of Toronto. (2007). Parking Standards Review – Phase Two Apartment Building/Multi-Unit Block Developments Component, New Zoning By-law Project. Available online at: [https://www1.toronto.ca/city\\_of\\_toronto/city\\_planning/zoning\\_environment/files/pdf/cansult\\_final\\_apart\\_stds.pdf](https://www1.toronto.ca/city_of_toronto/city_planning/zoning_environment/files/pdf/cansult_final_apart_stds.pdf)

<sup>12</sup> Phone conversation was held on March 31, 2016 with the GVPL CEO, and on April 4, 2016 with the Core District Coordinator. Additional data were provided via email.

provide valuable statistics that informed the parking demand rate for the new library site. The data are summarized as follows:

- The current library is 8,600 sq. ft. (799 m<sup>2</sup>) GFA
- On average, 560 patrons visit the library per day
- The branch is busiest from 10am to 12pm, and 2:30 to 6pm on weekdays and weekends
- It was estimated that about 65-75% of library patrons drive to the library

In addition to the statistics above, the library staff conducted a patron count on Tuesday April 5 to better understand the demographics of the patrons during peak times and approximately how many “eligible drivers” were at the library at any one time in order to determine peak parking demand. Three age groups were counted: youth (16 years and younger) adults / eligible drivers (17 to 80 years old) and non-eligible drivers (80 years and older). Observations were conducted at four distinct periods over the course of the day: 10am, 12pm, 3pm, and 5pm. The 3pm count reported 52 eligible drivers. Factored for an assumed 75% of patrons driving<sup>13</sup>, an estimated 39 vehicles are parked on-site during the peak period.

Email correspondence with the library staff confirmed that the new library is anticipated to be busier with an approximate 25% increase in patrons and associated parking demand<sup>14</sup> as new staff may be hired, new programs offered, and new programming spaces provided. Therefore, applying this factor results in a parking demand of 49 vehicles during peak times, of which 7 are reported to be staff.<sup>15</sup>

### 4.3 JUSTICE INSTITUTE

The Justice Institute of BC (JIBC), located in Building C, will contain a mix of teaching and administration spaces consisting of a total of 18,000 sq. ft. (1,672 m<sup>2</sup>) GFA.

To better understand how the Justice Institute functions, a phone conversation was held with a staff member at the Institute’s existing Victoria campus.<sup>16</sup> The downtown campus building, approximately 21,175 sq.ft. (1,967 m<sup>2</sup>) GFA, functions like a post-secondary institution offering several fee for services courses, much like the University of Victoria or Camosun College. However, the JIBC downtown Victoria campus has a much smaller student and staff population than the aforementioned post-secondary institutions.

---

<sup>13</sup> As confirmed through conversation with GVLP Core District Coordinator on April 6, 2016.

<sup>14</sup> Email correspondence with the GVPL Core District Coordinator on April 11, 2016.

<sup>15</sup> Email correspondence with GVPL Core District Coordinator on April 11, 2016.

<sup>16</sup> Phone conversation was held on March 31, 2016 with the Facilities Administrator at the JIBC’s downtown Victoria campus.

During the JIBC's busiest times – typically March and October – they have a peak of 100 students per day; however, it was reported that this only occurs for three to five weeks of the year. Up to 15 staff (including instructors) may be on-site at one time during peak times. However, for the other approximately 45 weeks of the year (i.e., non-peak times), the JIBC downtown Victoria campus typically has 50 students per day with about seven staff, which is a more reliable estimate of expected parking demand for the subject site.<sup>17</sup>

It was reported that approximately 10% or less of students and staff drive to the site due to a lack of dedicated parking at the current location<sup>18</sup> - most rely on cycling, public transit or walking. It is assumed that parking demand will slightly increase at the new location due to increased parking availability and reduced access to nearby travel options as compared to the current downtown site.

Modal split figures were used to estimate parking demand for the JIBC on the subject site, as follows:

- 48% of students are assumed to drive<sup>19</sup>; and
- 78% of staff are assumed to drive.<sup>20</sup>

Using the above-mentioned modal split figures, it is expected that the JIBC will experience average parking demand of 29 vehicles - students will contribute 24 vehicles (50 students, 48% driver) and staff will contribute about 5 vehicles (7 staff, 78% driver).

As discussed above, the JIBC has about 100 students and 15 staff per day during peak times (about 3 to 5 weeks per year). Using the modal split numbers above, this results in approximately 60 vehicles, or 31 vehicles greater than the average. Therefore, it is expected that for 3 to 5 weeks per year, approximately 31 vehicles attributed to the JIBC will require additional parking and may need to be accommodated by on-street parking spaces surrounding and in proximity to subject site.

---

<sup>17</sup> Phone conversation was held on April 29, 2016 administrative staff at the JIBC's downtown Victoria campus.

<sup>18</sup> Numbers provided by the Facilities Administrator are approximate and should be used with caution.

<sup>19</sup> Assumption that 48% of students drive is consistent with Camosun College's Interurban campus, which as a community college with a variety of technical and vocational programs, has more similarities to the JIBC than the University of Victoria. The 2012 Camosun College Modal Split report is available online at: <http://camosun.ca/documents/about/transportation/modal-split-camosun-2012.pdf>

<sup>20</sup> Assumption that 78% of staff will drive is consistent with the modal split numbers in the 2011 CRD Origin-Destination Household Travel Survey Daily Travel Characteristics Report. During the AM peak period, 78% of trips to the Township of Esquimalt are reported to be by auto driver. The report is available online at: <https://www.crd.bc.ca/docs/default-source/regional-planning-pdf/transportation/crd-od-survey-dailytravelcharacteristicsreportfinal.pdf?sfvrsn=2>

## 4.4 OFFICE

A total of 17,800 sq. ft. (1,654 m<sup>2</sup>) GFA of office is proposed in Building C. Parking observations were conducted at nine office sites within, or in proximity to, downtown Victoria.<sup>21</sup> See **Table 6**. Each site was found to be similar to the subject site based on proximity to downtown, a regional trail or to one of BC Transit's frequent or rapid transit corridors. Observations were conducted during the weekday over two time periods representing peak periods for office land uses.<sup>22</sup>

Results found only moderate variation in parking demand between different times of day; for the 10am time period, average demand was approximately one vehicle per 62 m<sup>2</sup> of office floor space whereas in the 2pm time period, the demand was approximately one vehicle per 75 m<sup>2</sup> of office floor space. One vehicle per 60 m<sup>2</sup> of office floor space is appropriate as a generalized parking demand rate for site planning purposes, which results in 28 vehicles. Office parking demand is assumed to be 93% employees (26 vehicles) and 7% visitors (2 vehicles).<sup>23</sup>

**TABLE 6. SUMMARY OF PARKING DEMAND AT REPRESENTATIVE OFFICE SITES**

| Site  | Parking Supply | Floor Area, Estimated (m <sup>2</sup> ) | Observed Vehicles | Demand Rate (1 vehicle per m <sup>2</sup> ) |
|---|----------------|---|-------------------|---|
| 420 William Street<br>BMS Integrated Services Inc.            | 17             | 920                                     | 16                | 1 / 58                                      |
| 2736 Quadra Street (Quadra Village) CUPE 50                   | 13             | 448                                     | 5                 | 1 / 90                                      |
| Harbour Road<br>Dockside Green Business Center                | 30             | 792                                     | 12                | 1 / 66                                      |
| 1708 Vancouver Street<br>Hollis Wealth                        | 6              | 224                                     | 5                 | 1 / 45                                      |
| 1012 North Park Street<br>Howe and Gramlich Wealth Management | 4              | 330                                     | 4                 | 1 / 83                                      |
| 125 Skinner Street<br>Island Community Mental Health          | 19             | 1,094                                   | 16                | 1 / 68                                      |
| 2420 Douglas Street<br>The Co-operators                       | 10             | 280                                     | 5                 | 1 / 56                                      |
| 1002 Wharf Street<br>Turnham Woodland / Waddell Rapona        | 11             | 480                                     | 7                 | 1 / 69                                      |
| 3035 Nanaimo Street   | 43             | 756                                     | 27                | 1 / 28                                      |

<sup>21</sup> The consultants who prepared this study are also completing a parking review for the City of Victoria

<sup>22</sup> Observations were conducted on Wednesday, March 9 at 10:00am and Wednesday March 9 at 2:00pm

<sup>23</sup> This assumes that approximately 7% of the total vehicles are for visitors. Ratio determined using the following publication: Urban Land Institute. (2005). Shared Parking, 2nd Edition, Table 3-2, pg. 33.

| Site                       | Parking Supply | Floor Area, Estimated (m <sup>2</sup> ) | Observed Vehicles | Demand Rate (1 vehicle per m <sup>2</sup> ) |
|----------------------------|----------------|---|-------------------|---|
| Victoria Real Estate Board |                |   |                   |   |
| <b>Average</b>             |                |   |                   | <b>1 / 62</b>                               |

#### 4.5 COMMERCIAL / RETAIL

Building D contains 4,460 sq. ft. (414 m<sup>2</sup>) GFA of commercial / retail space. An assumed 1,200 sq. ft. (111 m<sup>2</sup>) GFA of the commercial/retail space is proposed to be a café or coffee shop, with the balance (303 m<sup>2</sup> GFA) as a restaurant or general retail.<sup>24</sup> Parking demand rates are known to vary significantly between restaurant / café and retail uses, and each have been considered in detail in the following section.

##### Restaurant

An on-going study being completed for the City of Victoria<sup>25</sup> has included observations at eight restaurant sites at the periphery of the downtown area over three separate time periods - Wednesday March 9 at 6pm, Friday March 11 at 6pm, and Saturday April 2 at 6pm. See **Table 7**. Results suggest that parking demand is one vehicle per 24 m<sup>2</sup>, or 12 vehicles if applied to the retail/restaurant floor area.

**TABLE 7. SUMMARY OF OBSERVATIONS AT REPRESENTATIVE RESTAURANT SITES**

| Site   | Parking Supply | Floor Area, Estimated (m <sup>2</sup> )* | Observed Vehicles | Demand Rate (1 vehicle per m <sup>2</sup> ) |
|--|----------------|--|-------------------|---|
| 1028 Hillside Avenue (Quadra Village) 5th Street Bar and Grill   | 31             | 542                                      | 31                | 1 / 17                                      |
| 2900 Douglas Street ABC Country Restaurant                       | 17             | 357                                      | 10                | 1 / 21                                      |
| 1739 Fort Street (Jubilee Village) Christie's Carriage House Pub | 30             | 900                                      | 22                | 1 / 30                                      |
| 405 Craigflower Road Crown Palace Chinese Restaurant             | 8              | 182                                      | 3                 | 1 / 23                                      |
| 607 Oswego Street Harbour House Restaurant                       | 7              | 220                                      | 3                 | 1 / 31                                      |
| 308 Catherine Street Spinnaker's Gastro Brewpub                  | 39             | 1,008                                    | 36                | 1 / 26                                      |
| 1871 Fort Street White Spot                                      | 24             | 264                                      | 21                | 1 / 11                                      |

<sup>24</sup> Email correspondence with proponent on March 17, 2016 and April 4, 2016.

<sup>25</sup> The consultants who prepared this study are also completing a parking review for the City of Victoria.

| Site  | Parking Supply | Floor Area, Estimated (m <sup>2</sup> )* | Observed Vehicles | Demand Rate (1 vehicle per m <sup>2</sup> ) |
|---|----------------|--|-------------------|---|
| 2706 Government Street (Humber Green Village) Chiba Sushi | 24             | 741                                      | 12                | 1 / 31                                      |
|   |                |  | <b>Average</b>    | <b>1 / 24</b>                               |

\* Restaurant floor area estimated using Google Maps

To confirm if one vehicle per 24 m<sup>2</sup> is an appropriate rate, a calculation was completed to convert floor area to number of patron seats. In order to do this, a total floor area per person needed to be determined. An online source recommends 1.11 m<sup>2</sup> per person<sup>26</sup> for the portion of the restaurant that represent the dining and seating area, about 60%. The other 40% typically makes up the kitchen, cooking area, storage etc. The rate of 1.11 m<sup>2</sup> was deemed to be too low and was therefore adjusted to 2 m<sup>2</sup> to better reflect a realistic seat density and configuration achievable given the requirements for hallways, aisles, entrances, etc.

Restaurant parking requirements are commonly based on the number of vehicles per seat – most commonly between one vehicle per three seats to one vehicle per five seats. For the purposes of this study, one vehicle per four seats was used. To determine the number of vehicles and number of seats for the subject site, the following equations were used:

- (1)  $303 \text{ m}^2 \text{ (restaurant floor area)} \times 0.6 \text{ (occupied area)} / 2 \text{ m}^2 \text{ (floor area per person)} = 91 \text{ persons}$
- (2)  $91 \text{ persons divided by } 4 \text{ seats} = 23 \text{ vehicles, or } 1 \text{ vehicle per } 4 \text{ seats}$

Based on the seat calculation above, it is expected that the restaurant will experience peak period demand of 23 vehicles, of which three vehicles are for employees.<sup>27</sup>

### General Retail

As discussed, there is the potential for a portion of the commercial / retail space to be used as general retail. A parking study that was completed for Dockside Green collected observations at seven mixed commercial sites during a weekday (Wednesday August 6, 2014 at 1:00pm) and weekend mid-day (Saturday, August 9, 2014 at 12:00pm). The study found that peak demand occurred during the weekday mid-day observation period where average demand was approximately one per 45 m<sup>2</sup> of commercial floor space,<sup>28</sup> or 7 vehicles if applied to the

<sup>26</sup> Central Restaurant Products. (2016). Dining Room Space Planning. Available online at: <http://www.centralrestaurant.com/learn/buying-guides/space-planning.html>

<sup>27</sup> This assumes that approximately 15% of the total vehicles are for employees. Ratio determined using the following publication: Urban Land Institute. (2005). Shared Parking, 2nd Edition, Table 3-2, pg. 33.

<sup>28</sup> Dockside Green. (2015). Dockside Green Transportation Review Parking Study.

retail/restaurant floor area. A general retail use is expected to have lower parking demand than a restaurant use and therefore, if the CRU ends up being general retail, less parking will be required.

### Café / Coffee Shop

It is assumed that the café / coffee shop land use will experience peak parking demand rates comparable to the restaurant uses described above (i.e., one vehicle per four seats), although the time-of-day characteristics will differ. Peak parking demand for the café / coffee shop is expected to be 8 vehicles (7 customers, 1 employee).

#### 4.5.1 Mixed Use

The subject site contains six distinct land uses among four buildings. All building entrances are within close proximity of one another and considered “walkable”. This creates a condition where individuals may park a vehicle on-site to access more than one land use. This is considered a “captive market” condition.

With this in mind, the customer portion of the Commercial / Retail parking demand has been reduced by 25% as it is assumed that one-quarter of customers will be either site employees, patrons/students or residents whose vehicles will already be attributed to these uses. Accordingly, the Commercial / Retail customer parking demand is reduced by seven vehicles, bringing the total to 21 vehicles.

## 4.6 SUMMARY OF EXPECTED PARKING DEMAND

The total site parking demand is expected to be 225 vehicles (see **Table 8**). This is 25 vehicles greater than the proposed parking supply and 203 spaces less than the parking requirement.

**TABLE 8. SUMMARY OF EXPECTED PARKING DEMAND**

| Land Use                          | Quantity/Size                     | Expected Parking Demand Rate    | Applied to Subject Site |
|-----------------------------------|-----------------------------------|---------------------------------|-------------------------|
| Multi-Family Residential (Owned)  | 69 units                          | 0.95 vehicles per unit          | 66                      |
| Multi-Family Residential (Rental) | 32 units                          | 0.60 vehicle per unit           | 19                      |
| Residential Visitor               | 101 units                         | 0.10 vehicles per unit          | 10                      |
| Library                           | 929 m <sup>2</sup>                | Patrons = 42<br>Employee = 7    | 49                      |
| Justice Institute                 | 1,672 m <sup>2</sup>              | Students = 24<br>Employee = 5   | 29                      |
| Office                            | 1,654 m <sup>2</sup>              | 1 vehicle per 60 m <sup>2</sup> | 28                      |
| Commercial/Retail*                | **Restaurant = 182 m <sup>2</sup> | 1 per 4 seats                   | 18                      |



|                                      |                                       |               |            |
|--------------------------------------|---------------------------------------|---------------|------------|
|                                      | Café/Coffee Shop = 111 m <sup>2</sup> | 1 per 4 seats | 6          |
| <b>Total Expected Parking Demand</b> |                                       |               | <b>225</b> |

\*Note, the CRU expected parking demand has been reduced by seven vehicles as it assumed that one-quarter of customers will be either site employees, patrons/students or residents.

\*\* Calculation based on 60% of the total restaurant space (303 m<sup>2</sup>)

## 5.0 SHARED PARKING & PARKING MANAGEMENT

“Shared parking” refers to a scenario where two or more land uses in close proximity share a supply of parking in order to reduce the overall parking supply for the site / area. The concept is successful where parking demand for different uses exhibit complementary patterns with peak demand experienced at different times of day. For example, an office building and multi-family residential are complementary land uses because office parking demand is typically highest during weekday working hours while residential demand is highest on weekday evenings and weekends. Parking must be shared (i.e., unreserved) for shared parking reductions to apply.

A time-of-day assessment was undertaken to identify the parking supply needed to accommodate the peak parking demand. The assessment is based on the un-factored expected parking demand values summarized in **Table 8** and focuses only on weekday conditions as it is assumed to represent the site’s peak period (weekend demand associated with office and Justice Institute uses is limited on weekend).<sup>29</sup>

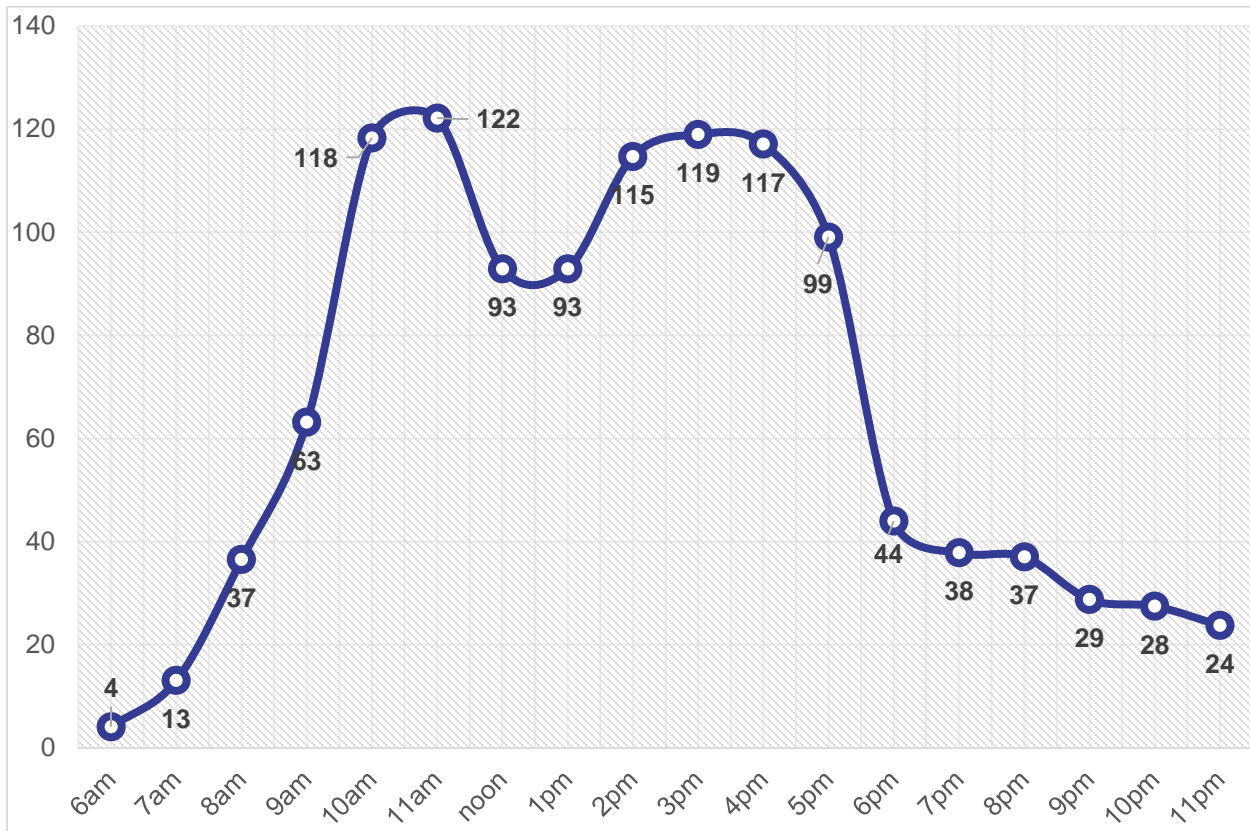
Only those parking supplies that are “shared” (i.e., unassigned) are included in the shared parking assessment. It is assumed that all resident parking will be accommodated in controlled access parking areas (i.e., behind a gate), eliminating 85 parking spaces from the pool of shared parking spaces. The remaining 115 parking spaces are assumed to be available to be shared among multi-family residential visitors, the Justice Institute, Library, Office, and Commercial/Retail uses. The reduction in parking supply achieved through sharing will decrease if portions of the on-site parking supply are made unavailable for sharing.

Results of the time-of-day assessment suggest that the site’s peak demand is 122 vehicles among shared uses (i.e., excluding residents), an approximately 13% reduction from the un-factored expected parking demand of the shareable uses (141 vehicles). See **Figure 2**. Peak demand will be experienced on weekdays at 11:00am when efficiencies are gained due to residential, retail and restaurant parking demand at less than 100%. Conditions will remain within 10% of the peak period at 10:00am and between 2:00pm to 4:00pm. The detailed assessment is included in **Appendix B**.

<sup>29</sup> The shared parking analysis relied on the Urban Land Institute’s Shared Parking publication. Peak demand factors for each land use were adjusted by the consultants when the rates were found to be a poor representation of local conditions.

The proponent may wish to consider designing the underground parking areas in a way that does not restrict the residential parking spaces behind gates. By removing or modifying the location of the gates, a significantly larger portion of spaces will be available for shared parking and could be utilized among the various land uses.

**FIGURE 2. SHARED PARKING DEMAND BY TIME-OF-DAY**



## 5.1 PARKING MANAGEMENT

The analysis above assumes that sharing will take place between the surface and underground parking areas and that all users may park wherever is most convenient. However, there may be a need to assign portions of the shared parking supply to ensure efficient management, as follows:

1. CRU employees, office employees, JIBC staff and students, and library staff should be encouraged to park in the underground facility. These users are familiar with the site and will park for long periods of time. Signage should be installed in the surface parking area to deter staff and student parking.

2. CRU customers, officer visitors, residential visitors, and library patrons should be encouraged to parking in the surface parking area. These users are generally less familiar with the site and will park for shorter periods of time. Signage on the surface parking area should deter staff and students, and confirm the area is intended for customers and residential visitors.

The shared parking figures were re-calculated to reflect the allocation of surface parking (approximately 32 spaces) to customers / visitors and the underground area (76 spaces) to staff and students.

The peak demand for surface parking is 61 vehicles, which considers sharing among CRU customers, officer visitors, residential visitors, and library patrons. This is a reduction of approximately 19% from the combined expected demand figures. The peak is experienced at 5:00pm and exceeds the surface parking supply by about 29 vehicles. These vehicles would presumably seek parking in the underground area.

The total peak demand for underground parking was determined by combining the peak demand of the CRU employees, office employees, JIBC staff and students, and library staff. There is no efficiency gained through shared parking because peak parking demand among staff and students is experienced simultaneously (i.e., 10:00am to 3:00pm). The expected parking demand among staff and students is 66 vehicles, about 10 vehicles under the proposed underground parking supply of 76 vehicles that will be available to JIBC staff / students, office staff, and CRU employees. This results in 10 shareable spaces.

Therefore, of the 29 vehicle spillover from the surface parking area, approximately 10 vehicles could utilize the available parking in the underground during the peak times. The development should consider the transportation demand management (TDM) measures identified in the following section (Section 6) to further reduce parking demand to a level that can be accommodated by the proposed parking supply.

## 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 should be pursued to encourage sustainable travel, enhance travel options and decrease parking demand.

The following summarizes the TDM options that may be pursued and the estimated impact of each in reducing parking demand.

## 6.1 CARSHARE

The current carshare program in Greater Victoria is managed by Modo (formerly the Victoria Carshare). As of July 2015, the coop had over 20 vehicles and 800 members in Greater Victoria. 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.<sup>30,31</sup> Member-owner memberships are \$500 (refundable share purchase).

There is currently only one Modo vehicle in Esquimalt (located in the Skyline Residences at 924 Carlton Terrace, Esquimalt Rd / Head St) and no vehicles within walking distance of the subject site. To encourage carsharing, consideration may be given to the purchase of two carshare vehicle to be owned, operated, and maintained by the Modo carshare cooperative (cost assumed to be approximately \$20,000-\$25,000 each). Vehicles should be accommodated in assigned surface parking spaces, providing access to nearby off-site residents. Recent discussions as part of the Dockside Green planning, and parking regulations from Vancouver suggest that two vehicles is an appropriate allotment for a site up to 120 units.<sup>32</sup>

In the City of Toronto, buildings smaller than 30 units are entitled to a maximum parking reduction of one space if one carshare vehicle is provided; however, a 2009 study<sup>33</sup> suggested that buildings with 75 to 89 units could expect to see a reduction of five parking spaces if two carshare vehicles were provided. In light of these studies, two carshare vehicles for the subject site is suggested but should be confirmed with Modo to ensure they are supportive.

To further encourage carsharing among residents, consideration may be given to purchasing Modo carshare memberships for each of the multi-family residential units (\$500 per unit). The Modo membership would be tied to the unit, and not the resident. Residents will be responsible for usage fees.

Municipal parking regulations provide insight on the anticipated decrease in parking demand associated with a carshare vehicles. The City of Vancouver, as an example, allows for a reduction of five spaces for each carshare vehicle purchased and parked on-site.<sup>34</sup> Similar regulations are in-place in New Westminster, Coquitlam, and Richmond allowing for a 5-15% reduction where carshare vehicles are accessible. Correspondence from Victoria Carshare

---

<sup>30</sup> Wilson, C. (2015). Car-share firm offers new way to zip around Victoria. Available online at: <http://www.timescolonist.com/business/car-share-firm-offers-new-way-to-zip-around-victoria-1.1986669>

<sup>31</sup> More information about the Modo Car Cooperative is available online at: <http://modo.coop/about/>

<sup>32</sup> City of Toronto. (2009). Parking Standards Review: Examination of Potential Options and Impacts of Car Share Programs on Parking Standards. Exhibit 5, pg. 7, available online at: [https://www1.toronto.ca/city\\_of\\_toronto/city\\_planning/zoning\\_environment/files/pdf/car\\_share\\_2009-04-02.pdf](https://www1.toronto.ca/city_of_toronto/city_planning/zoning_environment/files/pdf/car_share_2009-04-02.pdf)

<sup>33</sup> Ibid.

<sup>34</sup> Refer to City of Vancouver Bylaw no.6059, Section 3.2.2, available at: <http://vancouver.ca/your-government/parking-bylaw.aspx>

Cooperative (now Modo)<sup>35</sup> suggests a 5-10% reduction in parking demand where memberships are provided and a vehicle easily accessible, and a similar reduction of 5-10% is recommended in *Parking Management Best Practices*.<sup>36</sup>

Given the above discussion – and the unique characteristics of the subject site – a 15% reduction in resident parking demand is supported if residents have access to two carshare vehicles and are provided with free memberships. Lesser reductions are supported if only one of the vehicles or memberships are pursued.

## 6.2 BICYCLE PARKING

The Township of Esquimalt's Parking Bylaw does not contain bicycle parking requirements. However, the OCP includes policy supporting secure bicycle parking for both residential and office uses. Bicycle parking should be considered for many of the site's uses, as follows.

### Office & Commercial/Retail

The OCP suggests one bicycle parking space per ten full-time employees with a minimum of one space for each new building. In addition, all new commercial buildings are encouraged to provide six bicycle parking spaces for temporary visitors.<sup>37</sup> The Township's Parking Bylaw permits a reduction of two vehicle parking spaces for every two or more secure bicycle parking spaces provided on site. A total of 44 secure bicycle parking spaces are proposed in the parkade where both the office and commercial/retail uses will be located. Given the generous supply of proposed bicycle parking spaces, a reduction in four vehicle parking spaces is supported.

### JIBC & Library

Both the Parking Bylaw and OCP do not require or recommend any bicycle parking for institutional uses, such as the JIBC and library. However, both uses will have employees (and students in the case of the JIBC) that would benefit from the provision of long-term bicycle parking, similar to the Office and Commercial uses, and should be granted the same supply reduction. As such, a decrease in parking demand of four parking spaces is supported.

---

<sup>35</sup> Correspondence from Victoria Carshare Cooperative (now Modo), received August 2009

<sup>36</sup> Litman, T. (2007). *Parking Management Best Practices*, American Planning Association.

<sup>37</sup> The Township of Esquimalt's Official Community Plan is available online at:  
[https://www.esquimalt.ca/sites/default/files/docs/business-development/bylaw\\_2646\\_-\\_ocp\\_consolidation\\_-\\_no\\_maps\\_2014a.pdf](https://www.esquimalt.ca/sites/default/files/docs/business-development/bylaw_2646_-_ocp_consolidation_-_no_maps_2014a.pdf)

## Residential

The OCP suggests that all new multi-family residential development should provide secure bicycle storage for residents in the ratio of 1.5 storage spaces per dwelling unit,<sup>38</sup> and the development proposal includes a supply consistent with the OCP. This is higher than any other local municipality requiring bicycle parking, including the City of Victoria.

Available research is unclear on the decrease in parking demand that would result from the provision of secure bicycle parking. However, based on the generous amount of proposed bicycle parking, a 5% decrease in resident parking demand is supported for the provision of 1.5 secure bicycle parking spaces per unit.

## 6.3 BICYCLE END-POINT FACILITIES

Given the proximity of the site to the E&N Rail Trail, commuting by bicycle may be a practical option for employees and students at the JIBC, along with those who work in the offices, commercial/retail use, and the library. One way to encourage higher commuting by bicycle is through the provision of end of trip bicycle facilities such as lockers, showers, and changing rooms. The Township's OCP also encourages end-point bicycle facilities.

Based on the Township of Esquimalt Parking Bylaw, the subject site is entitled to a reduction for commercial uses (e.g., office, CRU) of two vehicle parking spaces if shower and change rooms are provided within the building.<sup>39</sup> However, proponents are only granted this reduction if they meet all of the criteria in Section 13(5) of the bylaw, which includes the provision of six visitor bicycle parking spaces, two or more secure bicycle parking spaces, and if the building is within 200 metres of a regional bus route.<sup>40</sup>

Notwithstanding the requirements of the parking bylaw, the provision of end-point facilities in and of themselves have the potential to reduce parking demand. Providing showers and clothing lockers at workplaces has been found to be effective at encouraging bicycle use, particularly among bicycle commuters who have a long commute or who require professional clothing attire.<sup>41</sup> Therefore, irrespective of the parking bylaw, assuming the office, CRU, JIBC and library uses provide their own shower / change facility, a parking supply reduction of 8 parking spaces may be achieved.

---

<sup>38</sup> The Township of Esquimalt's Official Community Plan is available online at:  
[https://www.esquimalt.ca/sites/default/files/docs/business-development/bylaw\\_2646\\_-\\_ocp\\_consolidation\\_-\\_no\\_maps\\_2014a.pdf](https://www.esquimalt.ca/sites/default/files/docs/business-development/bylaw_2646_-_ocp_consolidation_-_no_maps_2014a.pdf)

<sup>39</sup> Note, this parking reduction is subject to other criteria being met including the site being located within 200 metres of a regional bus route, for example.

<sup>40</sup> The Township of Esquimalt's Parking Bylaw is available online:  
[https://www.esquimalt.ca/sites/default/files/zoning\\_parkingbylaw2008.pdf](https://www.esquimalt.ca/sites/default/files/zoning_parkingbylaw2008.pdf)

<sup>41</sup> City of Victoria. (2011). Bicycle Parking Strategy. Available online at:  
<http://www.victoria.ca/assets/Departments/Engineering~Public~Works/Documents/parking-bicycle-strategy.pdf>

## 6.4 TRANSIT PROGRAMS

### Transit Access

The site is located on Esquimalt Road, which is identified as a BC Transit Frequent Transit Corridor<sup>42</sup> and is expected to attract a high rate of transit ridership among residents. In addition, as stated in the Township of Esquimalt Parking Bylaw, commercial uses on the subject site are entitled to a reduction of two parking spaces given its location within 200m of a regional bus route; however, as discussed, this is subject to meeting all of the criteria.<sup>43</sup>

Notwithstanding the bylaw, with two commercial uses on the subject site (Office, CRU), a reduction of four parking spaces is supported. As discussed in Section 1, with the Frequent Transit Network projected to carry a large share of the future transit system's total ridership, the subject site will benefit from frequent, reliable, and convenient service. This is expected to result in a reduction in parking demand, irrespective of whether all of the criteria in the parking bylaw are met.

### Transit Passes

Consideration may be given to providing a subsidized transit pass program for site residents. BC Transit offers monthly transit passes for regular customers. Residents of each residential unit would be provided with monthly transit passes upon move-in for a defined time period (i.e., three years). The developer contribution could be a full subsidy or a fund set aside for 50-50 matching (the latter helps ensure that contributions are used to subsidize transit among only those that use it).

The reduction in parking demand will be dependent on the magnitude and length of the contribution, but could be up to a 10% reduction in parking demand among residents.<sup>44</sup> Some assurance that the pool of funds or the time period that the subsidy is offered is of importance if it is to be used as justification for reduced parking supply.

## 6.5 TDM SUMMARY

The TDM program options available to the subject site and the corresponding decrease in parking demand associated with each option is summarized in **Table 9**. The total reduction may

---

<sup>42</sup> A Frequent Transit Corridor is defined in BC Transit's long-range planning as providing frequent service (15 minutes or better between 7am and 10pm, 7 days per week) with improved transit travel times achieved by fewer stops and transit priority measures and enhanced bus stop infrastructure.

<sup>43</sup> The Township of Esquimalt's OCP is available online at:  
[https://www.esquimalt.ca/sites/default/files/docs/business-development/bylaw\\_2646\\_-\\_ocp\\_consolidation\\_-\\_no\\_maps\\_2014a.pdf](https://www.esquimalt.ca/sites/default/files/docs/business-development/bylaw_2646_-_ocp_consolidation_-_no_maps_2014a.pdf)

<sup>44</sup> City of Seattle. (2008). Best Practices in TDM. Available online at:  
<http://www.seattle.gov/transportation/docs/ump/07%20SEATTLE%20Best%20Practices%20in%20Transportation%20Demand%20Management.pdf>

be as high as approximately 21% of the total parking demand, resulting in a reduction of up to 46 parking spaces.<sup>45</sup>

**TABLE 9. SUMMARY OF TDM PROGRAMS + PARKING DEMAND REDUCTIONS**

| TDM Option  | Parking Reduction |  |                                    |
|---|-------------------|--|------------------------------------|
|   | Quantity / Rate   | Applicable Users / Uses                              | Approx. Total Reduction (vehicles) |
| <b>Two Carshare Vehicles + Memberships</b>        | 15%               | Residential (excluding visitors)                     | Condo = - 10<br>Apartment = - 3    |
| <b>Bicycle Parking</b>                            |                   |  |                                    |
| Office / CRU                                      | 4 spaces          | Office / CRU   | - 4                                |
| JIBC / Library                                    | 4 spaces          | JIBC / Library                                       | - 4                                |
| Residential                                       | 5%                | Residential  | Condo = - 3<br>Apartment = - 1     |
| <b>Bicycle End-Point Facilities</b>               |                   |  |                                    |
| Shower, change rooms, lockers in office buildings | 8 spaces          | Office / CRU / JIBC / Library (employees + students) | - 8                                |
| <b>Transit Programs</b>                           |                   |  |                                    |
| Transit Access (Office + CRU)                     | 4 spaces          | Office / CRU (employees)                             | -4                                 |
| Resident Transit Pass                             | 10%               | Residential (excluding visitors)                     | Condo = - 7<br>Apartment = - 2     |

<sup>45</sup> There is still some uncertainty on the extent to which the development proposal will include TDM and, as such, the total parking demand reduction due to TDM may vary.



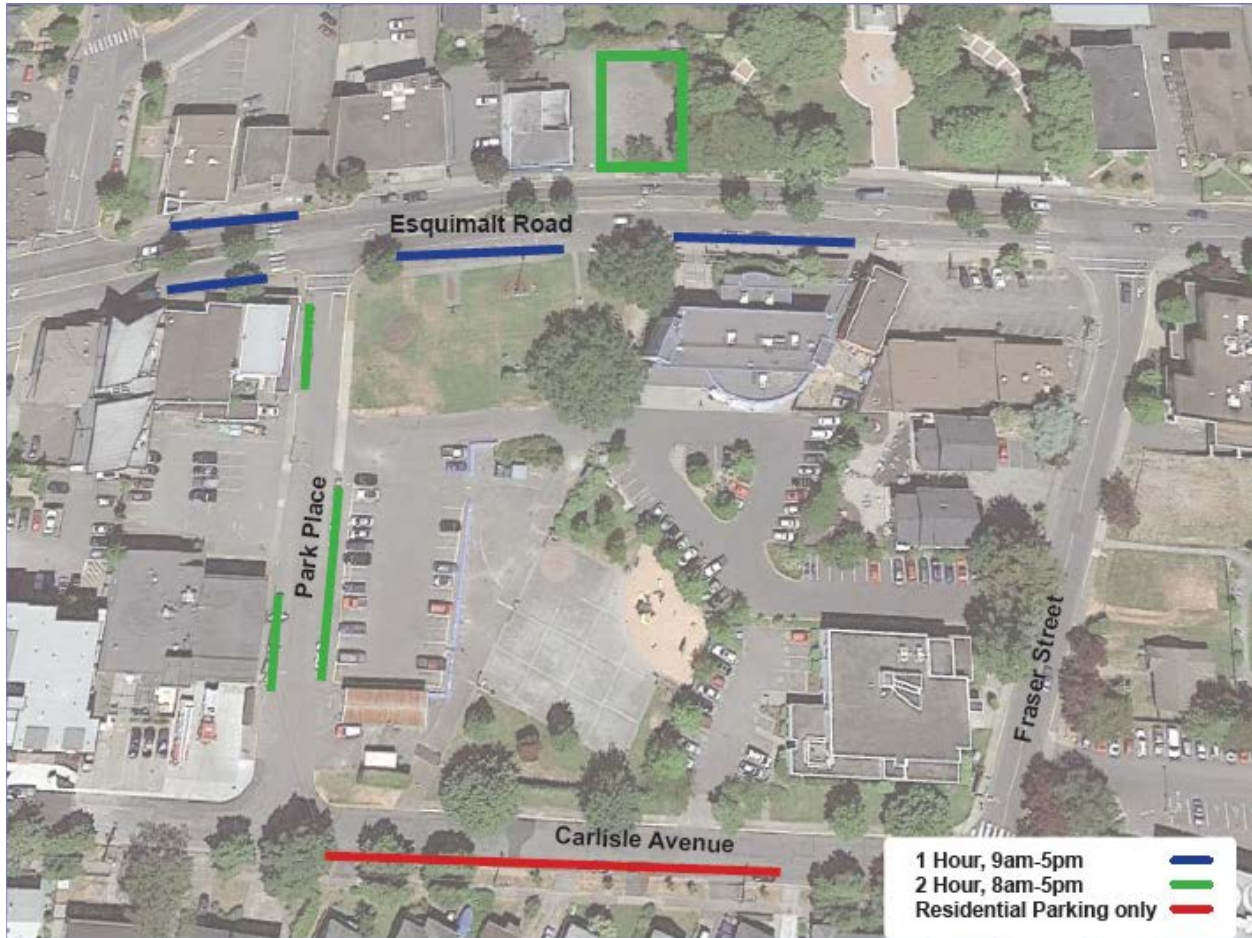
**TABLE 10. SUMMARY OF EXPECTED PARKING DEMAND FACTORED FOR TDM**

| Land Use                 |                         | Expected Parking Demand      |                           |
|--------------------------|-------------------------|------------------------------|---------------------------|
|                          |                         | Without TDM<br>(per Table 8) | With TDM<br>(per Table 9) |
| Multi-Family Residential | Resident, Strata Owned  | 66                           | 46                        |
|                          | Resident, Market Rental | 19                           | 13                        |
|                          | Visitor                 | 10                           | 10                        |
| Library                  |                         | 49                           | 45                        |
| Justice Institute        |                         | 29                           | 25                        |
| Office                   |                         | 28                           | 22                        |
| Commercial/Retail        | Restaurant              | 24                           | 18                        |
|                          | Café                    |                              |                           |
| <b>Total</b>             |                         | <b>225</b>                   | <b>179</b>                |

## 7.0 ON-STREET PARKING

On-street parking observations were completed on Wednesday March 30 at 1:30pm and Tuesday April 5 at 3:00pm to determine parking availability nearby the subject site. A total of 59 public parking spaces were observed during the count, spread out over various streets surrounding the subject site including Park Place and Esquimalt Road. A public parking lot immediately adjacent of the Town Hall was also included in this count where about 15 parking spaces are available for public use (see **Figure 3**).

FIGURE 3. ON-STREET PARKING & PUBLIC PARKING LOT SURROUNDING THE SITE



The Tuesday April 5<sup>th</sup> exhibited higher parking utilization, with a total occupancy of 47% (25 vehicles). Below is a summary of key findings:

- Park Place – 9 observed vehicles, 71% peak occupancy
- Esquimalt Road – 12 observed vehicles, 67% peak occupancy
- Public Parking Lot across Esquimalt Town Centre – 11 observed vehicles, 73% peak occupancy

These results suggest that in the event that the subject site contributes spillover parking to nearby public parking, approximately 15 spaces would be available. Additional on-street parking is available beyond the blocks immediately adjacent the site.

**Appendix C** provides a full summary of the on-street parking and vehicle count.

## 8.0 PARKING DIMENSIONS & AISLE WIDTH ANALYSIS

A review of parking dimensions and aisle widths was also undertaken as part of this study. The proposed underground parking stall dimensions are 5.1m X 2.6m, with 7.0m wide aisle widths. This differs from the dimensions specified in Esquimalt's Parking Bylaw, which call for 5.5m X 2.6m stalls with 7.6m wide aisle widths, with up to 50% of stalls eligible for small-car dimensions at 4.5m X 2.6m.

Overall, for two rows of perpendicular stalls sharing the same aisle (with 50% as small-car), this results in a reduction of 0.4m from the Bylaw (17.2m vs. 17.6m). Despite the reduction, the proposed dimensions are functional and are used in similar parking lots in other urban jurisdictions. The proposed dimensions match those in the City of Victoria's Zoning Regulation Bylaw (No. 80-159), Schedule C. Therefore, there is precedent for the proposed dimensions within the Capital Regional District, in an area similarly urbanized to Esquimalt. The proposed dimensions are therefore considered suitable and appropriate. For the surface parking lot, Esquimalt's parking bylaw dimensions are being used.

## 9.0 SUMMARY

The proposal for the Esquimalt Town Centre redevelopment will act as a mixed use urban centre for Esquimalt. The development will include a mix of retail, residential, and commercial uses in addition to accommodating the new Public Library and teaching and administration space for the Justice Institute of British Columbia (JIBC), a public post-secondary institution. The proposed parking supply is 200 spaces, about 228 spaces less than the Township's parking requirement.

The expected peak parking demand rates were developed for each land use and calculated for a total site demand of 225 vehicles. This exceeds the proposed parking supply by 25 spaces.

A shared parking assessment was undertaken to explore opportunities for efficiencies. The assessment assumed that all resident parking will occur in secured parking areas and cannot be shared, customer and visitors will be accommodated in the surface parking area, and staff and students will park in the underground area. The sharing assessment concluded that parking demand in the surface area will exceed supply by approximately 29 vehicles; however, it was found that the underground area would be able to accommodate approximately 10 vehicles from surface spillover.

Transportation demand management (TDM) approaches are outlined in Section 6 that include carsharing, bicycle parking, transit access, transit passes, and end-point bicycle facilities. These approaches may reduce parking demand by up to 46 vehicles (21%) if pursued in full, resulting in approximately 179 vehicles, which is well under the proposed parking supply.

## 9.1 RECOMMENDATIONS

1. The proposed parking supply (200 spaces) is appropriate for the site if parking is managed as suggested and the majority of identified TDM measures are adopted. Assuming all TDM measures are adopted, the expected parking demand will be 179 vehicles, which will provide the proponent with some buffer.
2. Resident parking will be access controlled and should only contain enough spaces to meet expected parking demand (final number dependent on TDM);
3. Surface parking spaces should be prioritized for customers, patrons and visitors. Employees and students should be directed to park in the underground parking area, along with spillover from the surface parking area; and
4. During the JIBC's busiest times (October and March), when approximately 100 students are in the building per day, the Institute may consider encouraging both its students and staff to use public transit, walk, or cycle to reduce pressure on on-street parking spaces.

## APPENDIX A. Parking Plan



## APPENDIX B. Shared Parking Analysis

**Shared Parking Demand Assessment**  
 Esquimalt Town Centre  
 Esquimalt, BC

**SHARED PARKING ASSESSMENT**  
 Weekday

| Land Use  | User Group | Peak Parking Demand <sup>3</sup><br>(by user) | Time of Day |           |           |           |            |            |           |           |            |            |            |           |           |           |           |           |           |           |      |
|---|------------|---|-------------|-----------|-----------|-----------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|
|   |            |   | 6am         | 7am       | 8am       | 9am       | 10am       | 11am       | noon      | 1pm       | 2pm        | 3pm        | 4pm        | 5pm       | 6pm       | 7pm       | 8pm       | 9pm       | 10pm      | 11pm      |      |
| <b>Multi-Family Residential<sup>2</sup></b>         | Visitor    | 10  | 0%          | 10%       | 20%       | 20%       | 20%        | 20%        | 20%       | 20%       | 20%        | 20%        | 20%        | 20%       | 40%       | 60%       | 100%      | 100%      | 100%      | 100%      | 100% |
| <b>Justice Institute<sup>2</sup></b>                | Student    | 24  | 10%         | 10%       | 25%       | 100%      | 100%       | 100%       | 100%      | 100%      | 100%       | 100%       | 100%       | 100%      | 50%       | 25%       | 25%       | 25%       | 0%        | 0%        | 0%   |
|   | Employee   | 5   | 10%         | 10%       | 25%       | 100%      | 100%       | 100%       | 100%      | 100%      | 100%       | 100%       | 100%       | 100%      | 50%       | 25%       | 25%       | 25%       | 0%        | 0%        | 0%   |
| <b>Library<sup>2</sup></b>                          | Customer   | 42  | 0%          | 0%        | 0%        | 0%        | 100%       | 100%       | 25%       | 25%       | 75%        | 100%       | 100%       | 100%      | 0%        | 0%        | 0%        | 0%        | 0%        | 0%        | 0%   |
|   | Employee   | 7   | 0%          | 0%        | 0%        | 0%        | 100%       | 100%       | 100%      | 100%      | 100%       | 100%       | 100%       | 100%      | 100%      | 100%      | 0%        | 0%        | 0%        | 0%        | 0%   |
| <b>CRU, Restaurant<sup>2</sup></b>                  | Customer   | 15  | 0%          | 0%        | 0%        | 0%        | 15%        | 40%        | 75%       | 75%       | 65%        | 40%        | 50%        | 75%       | 95%       | 100%      | 100%      | 100%      | 95%       | 75%       |      |
|   | Employee   | 3   | 0%          | 20%       | 50%       | 75%       | 90%        | 90%        | 90%       | 90%       | 90%        | 75%        | 75%        | 100%      | 100%      | 100%      | 100%      | 100%      | 100%      | 100%      | 85%  |
| <b>CRU, Cafe<sup>2</sup></b>                        | Customer   | 6   | 5%          | 10%       | 100%      | 100%      | 100%       | 100%       | 100%      | 100%      | 90%        | 60%        | 55%        | 60%       | 0%        | 0%        | 0%        | 0%        | 0%        | 0%        | 0%   |
|   | Employee   | 1   | 15%         | 20%       | 30%       | 40%       | 75%        | 100%       | 100%      | 100%      | 90%        | 70%        | 60%        | 70%       | 0%        | 0%        | 0%        | 0%        | 0%        | 0%        | 0%   |
| <b>Office<sup>1</sup></b>                           | Employee   | 26  | 3%          | 30%       | 75%       | 90%       | 100%       | 100%       | 90%       | 90%       | 100%       | 100%       | 90%        | 50%       | 25%       | 10%       | 7%        | 3%        | 1%        | 0%        | 0%   |
|   | Visitor    | 2   | 0%          | 1%        | 20%       | 60%       | 100%       | 45%        | 15%       | 45%       | 100%       | 45%        | 15%        | 10%       | 5%        | 2%        | 1%        | 0%        | 0%        | 0%        | 0%   |
| <b>TOTAL (combined parking demand with sharing)</b> |            |   | <b>4</b>    | <b>13</b> | <b>37</b> | <b>63</b> | <b>118</b> | <b>122</b> | <b>93</b> | <b>93</b> | <b>115</b> | <b>119</b> | <b>117</b> | <b>99</b> | <b>44</b> | <b>38</b> | <b>37</b> | <b>29</b> | <b>28</b> | <b>24</b> |      |

Notes:

<sup>1</sup> Peak demand factors (%) based on recommended time-of-day factors from Urban Land Institute, *Shared Parking*, 2nd Edition; Page 16/17, Table 2-5.

<sup>2</sup> Peak demand factor (%) estimates developed by Boulevard Transportation Group (no relevant land use provided in ULI's *Shared Parking* or ULI rates considered poor representation of local conditions)

<sup>3</sup> Distribution of parking demand (total) between user groups is based on recommended base parking ratios from Urban Land Institute, *Shared Parking*, 2nd Edition, Page 11, Table 2-2.



## APPENDIX C. On-street Parking Summary

**Neighbourhood On-Street Parking Conditions**  
*Esquimalt Town Centre Parking Study*

| Location  | Side | Parking Supply | Notes, Restrictions                       | Wed Mar 30, 2016<br>1:30PM |            | Tues Apr 5, 2016<br>3:00PM |            |
|---|------|----------------|---|----------------------------|------------|----------------------------|------------|
|   |      |                |   | Observed Vehicles          | Occupancy  | Observed Vehicles          | Occupancy  |
| Carlisle Avenue,<br>Comerford to Park                         | N    |                | No Paking                                 | n/a                        | n/a        | n/a                        | n/a        |
|   | S    |                |   | n/a                        | n/a        | n/a                        | n/a        |
| Carlisle Avenue,<br>Park to Fraser                            | N    |                | No Parking                                | n/a                        | n/a        | n/a                        | n/a        |
|   | S    | 12             | Residents Only                            | 3                          | 25%        | 4                          | 33%        |
| Park Place,<br>Carlisle to Esquimalt Road                     | E    | 6              | 2 hour parking only<br>(Mon-Fri, 8am-5pm) | 3                          | 50%        | 4                          | 67%        |
|   | W    | 7              | 2 hour parking only<br>(Mon-Fri, 8am-5pm) | 3                          | 43%        | 5                          | 71%        |
| Fraser Street<br>Carlisle to Esquimalt                        | E    |                | No Parking                                |                            |            |                            |            |
|   | W    |                |   |                            |            |                            |            |
| Esquimalt Road,<br>Park to Fraser                             | N    | 3              | 1 hour parking only<br>(Mon-Fri, 9am-5pm) | 2                          | 67%        | 2                          | 67%        |
|   | S    | 9              | 1 hour parking only<br>(Mon-Fri, 9am-5pm) | 5                          | 56%        | 6                          | 67%        |
| Esquimalt Road,<br>Grenville to Park                          | N    | 3              | 1 hour parking only<br>(Mon-Fri, 9am-5pm) | 3                          | 100%       | 2                          | 67%        |
| Esquimalt Road,<br>Comerford to Park                          | S    | 4              | 1 hour parking only<br>(Mon-Fri, 9am-5pm) | 2                          | 50%        | 2                          | 50%        |
| Parking Lot on Esquimalt Road<br>across Esquimalt Town Centre |      | 15             | 2 hour parking only<br>(Mon-Fri, 8am-5pm) | 8                          | 53%        | 11                         | 73%        |
| <b>On-Street Total</b>  |      | <b>59</b>      |   | <b>21</b>                  | <b>36%</b> | <b>25</b>                  | <b>42%</b> |