

MEMORANDUM

To: Michael Fujii, Development Manager - District Group
From: Tim Shah, MCIP, RPP
Our File #: 2569.B01
Date: September 25, 2019
RE: Parking Variance Assistance, Scott Development

Watt Consulting Group was retained by District Group to review and provide parking variance assistance for the Scott Building site in the City of Victoria. The purpose of this memorandum is to [a] review and document the City of Victoria's minimum parking supply requirements (Schedule C), as well as related Official Community Plan policies that support increased density and sustainable transportation and [b] comment on transportation demand management (i.e., transit passes, carsharing, bike sharing, electric bike parking, etc.) and their impact on parking demand that may be suitable for the site to justify a parking variance.

1.0 SITE LOCATION + CONTEXT

The site consists of a consolidation of the following 3 addresses: 735 Hillside Avenue, 2659 Douglas Street, and 2649-2651 Douglas Street in the City of Victoria. Located at the intersection of Hillside Avenue and Douglas Street stands the historical Scott Building at 2659 Douglas Street. As part of this application the Scott Building is to be heritage designated with the City of Victoria. The following describes the context within which the site is located and which partially defines the transportation options available:

- Planning Context | The site is located within the Humber Green Large Urban Village, per the City of Victoria Official Community Plan. The Large Urban Village will consist of low to mid-rise mixed-use buildings with wide sidewalks and transit service. The OCP also directs 40% of future population growth in to Village and Centres, suggesting that this area may see significant redevelopment in future.
- Walking | The site is approximately 1-km from downtown (10-15 minute walk). The site has a Walk Score of 92 – “Walker’s Paradise: Daily errands do not require a car”.¹

¹ More information about the site's Walk Score is available online at:
<https://www.walkscore.com/score/2659-douglas-st-victoria-bc-canada>

- Cycling | The site benefits from direct access to the Douglas Street bus/bike only lane, which will offer future residents of the site a safe and direct commuting option along the Douglas Street corridor.
- Transit | The site has excellent access to frequent transit. There is a northbound stop immediately south of the subject site and a southbound stop at the intersection of Douglas Street and Hillside Avenue. These bus stops are served by over 18 bus routes that provide service to key employment hubs and destinations within the region including downtown Victoria, the University of Victoria, Camosun College, Swartz Bay, the West Shore (e.g., Colwood, Langford, and Metchosin), and Sidney. With access to a multiplicity of bus routes serving a variety of destinations, future residents can reliably use transit for both commuting and non-work trips. There is also a bus stop in front of the development on Hillside Avenue which provides access to two bus routes (one from Douglas Street and one from Gorge Road).

The Victoria Region Transit Future Plan provides guidance on future transit networks in the Victoria Region. The subject site is located directly on Douglas Street, which is identified as an exclusive corridor on the Rapid Transit Network (RTN). The RTN is intended to move high volumes of passengers between major regional destinations along key transportation corridors. The RTN will provide service frequency of 15 minutes or better between 7:00am to 10:00pm, 7 days a week.

In support of the Victoria Region Transit Future Plan, the Victoria Regional Transit Commission has approved investment of \$1.5 million dollars in bus/bike only lanes on Douglas Street.² The priority bus lanes on Douglas Street—between Fisgard Street and Tolmie Avenue—officially opened on November 5, 2018. The northbound bus priority lane from Tolmie Avenue to the Tillicum Bridge has recently been completed with plans for the southbound lane to be constructed in 2019. The priority bus lanes will shorten travel times for passengers, increase the reliability of public transit and reduce greenhouse gas emissions. Increased transit use will also lower the number of vehicles on the road, helping to reduce congestion. According to recent analysis, with the opening of the priority lanes the transit travel times on the Douglas Corridor have been reduced by up to 10 minutes. As additional infrastructure is added for bus priority further transit travel time savings will be accomplished.³

² BC Transit. (2018). Victoria Region Bus Lanes Project. Available online at: <https://www.bctransit.com/victoria/transit-future/victoria-bus-lane-douglas-hwy-1>

³ Bell, J. (2018). New bus priority lanes found to be saving riders 10 minutes. Available online at: <https://www.timescolonist.com/news/local/new-bus-priority-lane-found-to-be-saving-riders-10-minutes-1.23520721>

2.0 PROPOSED DEVELOPMENT

2.1 Land Use

The Scott Building includes a total of 151 apartment rental units comprising studio, one-bedroom, and two-bedroom units. The development also includes about 1,622.5m² of retail and commercial space.

2.2 Parking Supply

Due to construction constraints with the existing heritage building—and the challenges with constructing underground parking—the proposal is to provide a total of 88 parking spaces comprising 53 residential spaces, 10 visitor parking spaces, and 25 commercial spaces. A detailed breakdown of the parking supply is available in the applicant's site plans and parking calculations.

The proposal also includes 212 bicycle parking spaces comprising 192 long-term spaces and 20 short-term spaces. The 192 long-term bicycle parking spaces are allocated as follows:

- 185 spaces for residential, or 1.23 spaces per unit
- 7 spaces for commercial / retail, or 1 per 200m²

3.0 OFF-STREET PARKING REQUIREMENT

The City of Victoria adopted its new Off-Street Parking Regulations (“Schedule C”) in July 2018.⁴ According to Schedule C, the proposed development at the Scott Building is required to provide 158 parking spaces (108 resident, 15 visitor, and 35 commercial). Therefore, with proposal to provide 88 parking spaces, the building would be short 70 parking spaces.

Schedule C also requires bicycle parking in the development. Specifically, 191 long-term bicycle parking spaces and 19 short-term spaces are required, which the applicant is exceeding by one space in each category.

4.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) refers to policies, programs and services that influence whether, why, when, where and how people travel.⁵ TDM initiatives typically aim to reduce single-occupant vehicle (“SOV”) trips and parking demand, and encourage alternative travel options such as walking, cycling, public transit and shared rides.

The applicant could consider the following TDM programs to support its parking variance, and more importantly, reduce the need for resident parking.

⁴ Schedule C is available online at:
<https://www.victoria.ca/assets/Departments/Planning~Development/Development~Services/Zoning/Bylaws/Schedule%20C.pdf>

⁵ Definition based on Transport Canada, TDM for Canadian Communities, March 2011

4.1 Transit Passes

As discussed above, the site has excellent transit access and as the Transit Future Plan becomes implemented, transit service is anticipated to improve significantly, which will make transit more appealing to future residents.

Consideration may be given to providing a subsidized transit pass program for 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., one to 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).

BC Transit currently offers the EcoPASS Program for New Developments, which is a program that provides Capital Regional District developers with a potential transit-oriented solution for parking variance requests. Under the EcoPASS Program, the occupants of a new residential, commercial or mixed-use development receive annual bus passes for a pre-determined number of years that are valid for use throughout the Victoria Regional Transit System. Each annual pass has a cost to the developer of \$1,000. The size and value of the TDM program is established by the municipal government, with a minimum required program value of \$5,000.

Other jurisdictions have implemented similar transit pass programs such as the ORCA Multifamily Development Passport in King County, Washington. The ORCA Multifamily Development Passport is an annual transportation pass that property managers can offer to residents where the costs are either covered in full by the property manager or through a 50% subsidy. This pass gives residents comprehensive access to transit services in the Puget Sound Region, including local and express bus service, Link light rail, and Sounder commuter rail, among others.⁶

Developers / property managers such as Sustainable Kirkland LLC are actively participating in the program. One of their properties offers the passport to all 290 residential units at a cost of \$24,000 USD (~\$83 USD per unit). Since the program was introduced at the property, transit ridership has increased by 150% among residents.⁷ It was reported that the ORCA program is generally successful once initially adopted by a property manager; however, where the program has had challenges is the inability for property managers to secure ongoing funding to continue the program for its tenants.⁸

⁶ King County Metro. (2018). ORCA Multifamily Development Passport. Available online at: <https://kingcounty.gov/depts/transportation/metro/fares-orca/orca-cards/multifamily-passport.aspx>

⁷ Email correspondence with King County Senior Transportation Planner on November 26, 2018.

⁸ Ibid.

The applicant has indicated that they are having conversations with BC Transit about the feasibility of a transit pass at the site.⁹ If the applicant is able to secure and administer a transit pass program and due to location of the site (being in one of the most transit accessible areas in the region, as mentioned in **Section 1**), a 15% reduction in resident parking demand would be supported. This would effectively reduce demand by 16 vehicles at the Scott Building.

4.2 On-Site Carsharing + Memberships

The Modo Car Cooperative ("Modo") is the most popular carsharing service in Greater Victoria. In 2015, there were 23 cars and 800 members; as of November 2018, there are 79 Modo vehicles and 2,565 members across the Greater Victoria region, suggesting that Modo is growing in popularity.¹⁰ By reviewing Modo's website, there appears to be no available Modo vehicle within 500m of the site. However, there are two vehicles within 850m of the site.

Consideration should be given to providing a "Modo Plus" carshare membership to each unit to increase the use of Modo and encourage residents to use the service. A "Modo Plus" membership is a one-time (refundable) \$500 fee and offers reduced rates for vehicle booking and utilization. Access to a Modo membership provides a strong incentive to residents to explore carsharing. Moreover, the applicant should consider working with Modo to provide a vehicle on-site.

Research has shown that carsharing programs have a significant impact on reducing vehicle ownership and thereby lowering parking demand. Below is a summary of key findings:

- One of the most comprehensive North American studies to date surveyed 6,281 households in carsharing organizations across the continent. The study found a statistically significant decrease in average vehicle ownership from 0.47 to 0.24 vehicles per household among households that joined carshare services, an approximately 50% reduction in vehicle ownership.¹¹
- A study of carshare programs in the City of Toronto found that vehicle ownership rates at condominium sites without carshare vehicles was 1.07 vehicles per unit, whereas buildings with one or more carshare vehicles had significantly lower rates at 0.53 vehicles per unit, which represents a 50% reduction in vehicle ownership rates.¹²
- A 2013 study from the City of Toronto looked at the relationship between the presence of carsharing in a residential building and its impact on vehicle ownership. This was one of the first studies to examine this relationship at the building level as previous research

⁹ Email correspondence with the District Group Development Manager on Thursday June 20, 2019.

¹⁰ Email correspondence with Modo's Business Development Manager on November 14, 2018.

¹¹ Martin & Shaheen. (2011). The Impact of Carsharing on Household Vehicle Ownership. Access Magazine, Spring 2011. Available online at: http://sfpark.org/wp-content/uploads/carshare/access38_carsharing_ownership.pdf

¹² City of Toronto. (2009). Parking Standards Review: Examination of Potential Options and Impacts of Car Share Programs on Parking Standards. Available online at: https://www1.toronto.ca/city_of_toronto/city_planning/zoning_environment/files/pdf/car_share_2009-04-02.pdf

explored impacts at the neighbourhood or city level. The study surveyed residents of buildings with and without dedicated carshare vehicles. According to the author's regression model, the presence of dedicated carshare vehicles had a statistically significant impact on reduced vehicle ownership and parking demand.¹³

- Two studies from Metro Vancouver explored the impact of carsharing on vehicle ownership. Over 3,400 carshare households participated in the study. The key findings are as follows:
 - On average, up to 3 private personal vehicles were shed per carshare vehicle.
 - A regression analysis found that those living in rental housing and in a smaller household size are statistically more likely to give up vehicle ownership compared to the reference case.¹⁴
 - The number of carshare vehicles within walking distance has a small but statistically significant relationship with apartment household vehicle holdings.¹⁵

Some municipalities use their development regulations and off-street parking requirements to provide a parking reduction in exchange for a carsharing program. The City of Vancouver, as an example, allows for a reduction of five spaces for each carshare vehicle purchased and parked on-site¹⁶, where a model regulation for King County (Seattle) suggests a reduction of four spaces.¹⁷

Similar regulations are in place in New Westminster, Coquitlam, and Richmond allowing for a 5-15% reduction where carshare vehicles are accessible. A similar reduction of 5-10% is recommended in *Parking Management Best Practices*.¹⁸

Overall, the research cited above confirms that proximate access to a carsharing vehicle and the provision of memberships is associated with reduced vehicle ownership and parking demand and is therefore appropriate as a TDM measure for the site. With the provision of the carshare memberships (\$500 per unit), a 10% reduction in resident parking demand is supported. If the proponent also provides a vehicle (for MODO) on-site or in the vicinity, a 15% reduction in resident parking demand is supported, which would lower demand by 16 vehicles at the Scott Building. However, the provision of a carshare vehicle on site would remove a parking

¹³ Engel-Yan, D., & D. Passmore. (2013). Carsharing and Car Ownership at the Building Scale. *Journal of the American Planning Association*, 79(1), 82-91.

¹⁴ Engel-Yan, D., & D. Passmore. (2013). Carsharing and Car Ownership at the Building Scale. *Journal of the American Planning Association*, 79(1), 82-91.

¹⁵ Metro Vancouver. (2014). The Metro Vancouver Car Share Study: Technical Report. Available online at: <http://www.metrovancouver.org/services/regional-planning/PlanningPublications/MetroVancouverCarShareStudyTechnicalReport.pdf>

¹⁶ Refer to City of Vancouver Bylaw no.6059, Section 3.2.2, available at: <http://vancouver.ca/your-government/parking-bylaw.aspx>

¹⁷ King County Metro, Right Size Parking Model Code, December 2013, pg21, available at: <http://metro.kingcounty.gov/programs-projects/right-size-parking/pdf/140110-rsp-model-code.pdf>

¹⁸ Litman, T. (2007). *Parking Management Best Practices*, American Planning Association. Available online at: https://www.vtapi.org/park_man.pdf

space from residents or visitors. As such, the applicant should consider providing the vehicle on a nearby residential street, such as Ross Lane, if they choose to purchase a vehicle for the site.

4.3 Bike Sharing

Bike sharing has become increasingly popular in the last decade. In October 2017, U-bicycle first launched in the City of Victoria and is now available in several municipalities in the CRD. U-bicycle was initially operated as a “dockless” model, which allowed users to pick-up and drop-off the bicycle wherever convenient for them. However, as of November 1, 2018, U-bicycle updated from a dockless bike share to a virtual parking zone system with 135 virtual parking zones where users can pick-up and drop-off the bicycles.¹⁹

The applicant could consider approaching U-bicycle to request a virtual parking zone at the Scott Building site.

Research on the impact of bike sharing on site-specific vehicle ownership is limited at this time, however, studies have been able to quantify the impacts of bike sharing at a larger network level. Below is a summary of key findings:

- Bike sharing has been estimated to substitute for vehicle trips by 2% in London, 7% in Washington DC, 19% in Melbourne, and as much as 21% in Brisbane.²⁰
- Examples from Canadian cities show that access to bike sharing has decreased vehicle ownership by 3.6% and 2% in Montreal and Toronto, respectively. Also, about 36% and 25% of bike share users drive less often in Montreal and Toronto, respectively.²¹
- In suburbs and small- to medium-sized cities where public transit can be sparse, bike sharing complements transit and provides better access to and from existing lines. In these places, bike sharing serves as an important first- and last-mile connector and increases public transit use.²²

Even though research on the impacts of public bike sharing systems is limited at this time, available data indicate that they can help reduce the need to drive a vehicle. Due to the limited research, a parking demand reduction for the site cannot be estimated. However, the provision of a U-bicycle virtual parking zone could facilitate more cycling trips and reduce the need to own a vehicle for future residents.

¹⁹ More information about U-bicycle is available online at: <https://www.u-bicycle.ca/locations-vancouver-island/>

²⁰ Godavarthy, R., et al. (2017). Evaluation Study of the Bike Share Program in Fargo, North Dakota. Available online at: <https://www.ugpti.org/resources/reports/downloads/suric17-005.pdf>

²¹ Shaheen, S & E Martin. (2015). Unraveling the Modal Impacts of Bikesharing. Available online at: <http://www.accessmagazine.org/wp-content/uploads/sites/7/2015/12/access47.shaheen.pdf>

²² Ibid.

4.4 Electric Bike Parking

Electric Bikes (E-Bikes) are an emerging transportation phenomenon that are gaining popularity worldwide. With supportive cycling infrastructure in place, E-Bikes have the potential to substitute for, or completely replace, almost all trips taken by a gasoline powered car, which could address congestion issues and mitigate parking challenges within urban areas.

Research has reported that one of the main barriers facing prospective E-Bike users is the lack of secure parking available, which is critical for helping minimize theft of the electric bike.²³ As part of a larger strategy to discourage vehicle ownership for future residents, the applicant could consider designing up to 10% of the long-term bicycle parking spaces to accommodate electric bikes, which is about 20 spaces. Electric bikes are typically longer than regular bicycles because they are capable of carrying cargo and/or multiple passengers with the assistance of the battery. Electric cargo bikes can be as long as 2.5m.

In addition to designing larger long-term bicycle parking spaces, the applicant could consider the provision of additional security features such as video surveillance and self-contained bicycle lockers as well as access to an 110V wall outlet for each E-Bike parking space. Specifically, the applicant should consider providing 50% of the long-term bicycle parking spaces with direct access to an 110V electrical outlet, which is what the City of Vancouver is now requiring in their off-street bicycle parking regulations.²⁴

As electric bikes are an emerging form of mobility, there is limited research that has quantified the impact of these bikes on vehicle ownership / parking demand. A recent study presented results of a North American survey of electric bike owners. The study reported that E-Bikes have the capacity to replace various modes of transportation commonly used for utilitarian and recreational trips including motor vehicles, public transit, and regular bicycles. Specifically, the study reported that 62% of E-Bike trips replaced trips that otherwise would have been taken by car. Of these trips previously taken by car, 45.8% were commute trips to work or school, 44.7% were other utilitarian trips (entertainment, personal errands, visiting friends and family, or other), and 9.4% were recreation or exercise trips. The average length of these previous car trips was 15 kilometres.²⁵

Given that E-Bikes have the potential to replace private motor vehicles, especially in the Victoria context, a 10% reduction in resident parking demand would be supported at the site if the applicant commits to designing 10% of the long-term bicycle parking spaces to accommodate

²³ WATT Consulting Group. (2018). Capital Region Local Government Electric Vehicle + Electric Bike Infrastructure Backgrounder. Available online at: https://www.crd.bc.ca/docs/default-source/climate-action-pdf/reports/electric-vehicle-and-e-bike-infrastructure-backgrounder-sept-2018.pdf?sfvrsn=a067c5ca_2

²⁴ City of Vancouver. (2016). Section 6: Off-street Bicycle Space Regulations. Available online at: <https://bylaws.vancouver.ca/parking/sec06.pdf>

²⁵ MacArthur, J., Harpool, M., & D. Scheppke. (2018). A North American Survey of Electric Bicycle Owners. National Institute for Transportation and Communities, NITC-RR-1041.

larger bicycles such as cargo bikes and 50% of the spaces are provided with access to an 110V wall outlet to facilitate charging for the user. If the applicant committed to designing a larger share of the long-term bicycle parking spaces to accommodate E-Bikes, a larger reduction in resident parking demand would be supported.

A 10% reduction would lower resident parking demand by 11 vehicles at the Scott Building.

4.5 TDM Summary

Table 1 presents a summary of the impact of the TDM measures in reducing resident parking demand for the site. The reduction may be as high as 43 vehicles, which would reduce the required resident parking supply from 108 to 65 vehicles.

TABLE 1. SUMMARY OF TDM PROGRAMS + PARKING DEMAND REDUCTIONS

TDM Option	Parking Reduction	
	Quantity	Approx. Total Reduction (resident vehicles)
Transit Passes	15%	- 16
Carsharing (Vehicle + Memberships)	15%	- 16
Electric Bike Parking	10%	- 11
TOTAL		- 43

5.0 PARKING MANAGEMENT

5.1 Shared Parking, Visitor & Commercial

The peak parking demand for residential visitor parking occurs in the evening whereas the peak parking demand for commercial uses such as cafés and retail is typically during the lunch period. The peak demand for these uses occur at different times of the day, which may allow for some of the parking to be shared. According to the Urban Land Institute, visitor parking demand typically peaks after 7:00PM. Therefore, from 6am to 6pm, few visitor vehicles are expected to visit the subject site. Commercial demand typically peaks at lunchtime (between 12:00PM and 1:00PM) with the exception of restaurant uses, where demand is close to 100% in the evening.

Even though the applicant is required to provide 15 visitor parking spaces, a shared parking arrangement would allow the applicant to share the commercial parking spaces between commercial users and visitors, which would eliminate the need to provide designated visitor spaces.

Given the discussion above, the applicant could consider reallocating the 10 visitor parking spaces to residential spaces, which would increase the residential supply to 63 spaces. A total of 65 spaces were estimated for residential parking demand if all the TDM strategies are

adopted. **Table 2** presents the recommended parking allocation for the site with two core assumptions: (1) all TDM strategies are adopted by the applicant and (2), commercial and visitor parking spaces are shared.

TABLE 2. RECOMMENDED PARKING ALLOCATION

Land Use	Number of Parking Spaces
Multi-Family Residential	65
Commercial / Retail / Visitor (Shared)	25
TOTAL	90

5.2 Resident Parking, Rental Process and Long-term Monitoring

While all of the TDM strategies are recommended to the applicant, the only one directly outside of their control is the transit pass program, which would require coordination and cooperation from BC Transit. In the event that a transit pass program cannot be secured, then the resident parking demand—adjusted for TDM—would be 81 spaces, or 16 more than the recommended parking allocation in **Table 2**. If the applicant finds itself in this situation, then consideration should be given to a resident parking management strategy.

The ability to attain actual parking demand more in alignment with the proposed parking could be positively influenced based on rental practices. The applicant is planning to have a property manager who will be managing the building after completion. The property manager can include in the Residential Tenancy Agreement that prospective tenants cannot rent a unit if they own a vehicle. Section 13(2) of the Residential Tenancy Act (RTA) allows a landlord to state all of the requirements in a tenancy agreement.²⁶ Further, this section of the Act allows a landlord to indicate the standard terms of the agreement and which services / facilities are included in the rent. The property manager can use the RTA to prevent tenants from purchasing a vehicle after they have rented, if there are no available parking stalls, by including a clause in the tenancy agreement.

It is recommended that the applicant seek a legal opinion to determine whether the RTA is a viable mechanism to restrict vehicle ownership.

²⁶ British Columbia Residential Tenancy Act. Available online at:
http://www.bclaws.ca/civix/document/id/complete/statreg/02078_01#division_d2e1270

6.0 SUMMARY

The proposed parking supply for the Scott Building site is 88 parking spaces, which is 70 short of the Schedule C requirement (158 spaces).

The site benefits from access to frequent transit service, high walkability, and access to cycling infrastructure, which helps reduce the need to own a vehicle. A number of TDM measures were also identified including transit passes for future tenants, the provision of a carsharing vehicle and memberships for each unit, securing a virtual parking zone with the U-bicycle bike share system, and the provision of long-term bicycle parking spaces to accommodate electric bikes.

Committing to the TDM measures could help the applicant see a significant reduction in the need to provide resident parking. The analysis showed that transit passes, carsharing (vehicle + memberships), and electric bike parking could reduce resident parking demand by 43 vehicles at the Scott Building site. This would effectively lower the required amount of parking to 115 parking spaces at the Scott Building, which is 27 more than proposed.

A parking management framework was also described outlining how the commercial and visitor parking spaces could be shared, which would allow the applicant to reallocate the visitor spaces to residential. In addition, a resident parking management strategy was also recommended in the event that a transit pass program cannot be secured at the site.

Please contact me if there are any questions or comments regarding this memorandum. Thank you.

Sincerely,

Watt Consulting Group



Tim Shah, MCIP, RPP
Transportation Planner