

MEMORANDUM

To: Jessica Gibson, Development Manager - District Group
From: Tim Shah, RPP, MCIP
Our File #: 2569.B01
Date: October 29, 2019
RE: Parking Variance Review: The Parkway Development

Watt Consulting Group was retained by District Group to review a proposed parking variance for the Parkway Development 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, [b] comment on transportation demand management (i.e., transit passes, carsharing, electric bike parking, etc.) and their impact on parking demand that may be suitable for the site to justify a parking variance, and [c] identify parking management approaches to inform the parking allocation at the site.

1.0 SITE LOCATION + CONTEXT

The proposed development is located at 1050 Pandora Avenue and 1518 Cook Street in the City of Victoria. The existing Wellburns Market Building at 1050 Pandora Avenue is a heritage registered building in 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 core area of the City. The OCP identifies the site as "core residential", which supports multi-unit residential buildings from three storeys up to 20. The OCP also directs 50% of future population growth in to Urban Core, suggesting that this area may see significant redevelopment in future.
- Walking | Being located within the Urban Core, the site benefits from proximity to a number of commercial destinations including grocery stores, cafés, pharmacies, and more. The site has a WalkScore of 97 – "Walker's Paradise: Daily errands do not require a car".¹
- Cycling | The site is directly located on the Pandora Avenue Two-Way Cycle Track, which will offer future residents, employees, and customers access to an all ages and abilities bike route. Access to this separated bike lane can result in improved safety, convenience, and comfort for future residents of the site who cycle and can help make

¹ More information about the site's Walk Score is available online at:
<https://www.walkscore.com/score/1058-pandora-ave-victoria-bc-canada>

cycling a viable commuting option which thereby reduces the need to own a vehicle. In addition, Vancouver Street is proposed as one of the north-south connections in the City's All Ages and Abilities (AAA) cycling network, which will enhance cycling opportunities for future residents / customers at the site.

- Transit | Bus stops are located directly in front of the building (on Pandora and Cook Streets) and is served by five bus routes (2, 24, 25, 27, 28). The site is also located within a 2-minute walk (300m) of Yates Street, which is served by seven bus routes that provide frequent transit service during peak hours. The Victoria Transit Future Plan identifies Pandora Avenue, Johnson Street, and Yates Street as frequent transit corridors, which will greatly enhance the site's access to frequent transit service.

2.0 PROPOSED DEVELOPMENT

2.1 Land Use

The proposal for the Parkway development is to include 103 units comprising a mix of studio, one-, two-, and three-bedroom units. The proposal also include approximately 1,054m² of commercial space comprising 888m² of retail / grocery store and 166m² of restaurant use.

2.2 Parking Supply

Due to construction constraints with the existing heritage building—and the challenges with constructing underground parking due to the heritage structure—the proposal is to provide 44 parking spaces, which will comprise 33 residential, 5 commercial, 4 visitor spaces, and two Modo carshare spaces. A detailed breakdown of the parking supply is available in the applicant's site plans and parking calculations.

The proposal also includes 172 bicycle parking spaces comprising 154 long-term spaces and 18 short-term spaces. Of the 154 long term spaces, 40 (26%) will be electric and cargo bike spaces.

3.0 OFF-STREET PARKING REQUIREMENT

The City of Victoria adopted its new Off-Street Parking Regulations ("Schedule C") in July 2018.² Using the Schedule C requirements, the two properties are required to provide 93 parking spaces comprising 66 resident spaces, 10 visitor spaces, and 17 commercial spaces. Therefore, with the proposal to provide 44 parking spaces, the building would be short 49 parking spaces.

² Schedule C is available online at:
<https://www.victoria.ca/assets/Departments/Planning~Development/Development~Services/Zoning/Bylaws/Schedule%20C.pdf>

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.³ 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 City of Victoria supports TDM and parking management strategies as outlined in sections 7.11 and 7.12 of the OCP.⁴ Specifically, Section 7.12 indicates that reductions in the parking requirements should be considered where:

7.12.1 Geographic location, residential and employment density, housing type, land use mix, transit accessibility, walkability, and other factors support non-auto mode choice or lower parking demand

7.12.2 Activities and circumstances of land uses, structures or buildings include the provision of a comprehensive suite of permanent on-site alternative travel supports and active transportation infrastructure, including such things as short-term and long-term bicycle parking facilities including shower and locker facilities, ridesharing, car-share co-ops, payroll transit passes and other automobile trip reduction measures.

The applicant could consider the following TDM programs to support its parking variance, and more importantly, reduce the need for resident parking. These measures also align with policy direction from the OCP.

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

³ Definition based on Transport Canada, TDM for Canadian Communities, March 2011

⁴ City of Victoria. (2017). Official Community Plan, Section 7: Transportation and Mobility. Available online at: https://www.victoria.ca/assets/Departments/Planning~Development/Community~Planning/OCP/Replaced/OCP_Sec7_Jul2017_web.pdf

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.

The applicant could consider approaching the City and BC Transit in the future to learn more about this program and whether it may be feasible during long-term operations of the building,

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.⁵

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 per unit). Since the program was introduced at the property, transit ridership has increased by 150% among residents.⁶ 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.⁷

If the applicant is able to secure and administer a transit pass program, a 10% reduction in resident parking demand would be supported. This would effectively reduce demand by 7 spaces at the site.

⁵ King County Metro. (2018). ORCA Multifamily Development Passport. Available online at: <https://kingcounty.gov/depts/transportation/metro/fares-orca/orca-cards/multifamily-passport.aspx>

⁶ Email correspondence with King County Senior Transportation Planner on November 26, 2018.

⁷ Ibid.

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 June 2019, there were 82 Modo vehicles and 2,849 members across the Greater Victoria region, suggesting that Modo is growing in popularity.⁸ There are currently four Modo vehicles located within a 500 meter walk of the development:

- Two Modo vehicles are located on Johnson St & Chambers St (250 meters from the site)
- One Modo vehicle is located on Yukon St & Chambers St (350 meters from the site)
- One Modo vehicle is located on North Park St & Vancouver St (500 meters from the site)

The applicant has committed to the provision of two Modo vehicles and parking spaces directly on-site (see letter from Modo dated October 28, 2019 for more details). This agreement commits the applicant to make a one-time financial contribution of \$59,000 for the purchase of two vehicles. Modo will provide the applicant with a 'Partnership Membership' valued at \$59,000, which allows for a maximum of 118 residents to have membership privileges and not have to pay the \$500 membership fee. The membership would be valid for the lifetime of the development and be tied to each unit. Access to a Modo membership provides a strong incentive to residents to explore carsharing.

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.⁹
- A 2009 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.¹⁰
- 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

⁸ Email correspondence with Modo Director of Business Development on June 24, 2019.

⁹ 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

¹⁰ 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

the first studies to examine this relationship at the building level as previous research 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.¹¹

- 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.¹²
 - The number of carshare vehicles within walking distance has a small but statistically significant relationship with apartment household vehicle holdings.¹³

Regulations in New Westminster, Coquitlam, and Richmond allow for a 5-15% reduction where carshare vehicles are accessible. Correspondence with the Victoria Carshare Cooperative (now Modo)¹⁴ supported a 5-10% reduction in parking demand where memberships are provided and where a vehicle is easily accessible. A similar reduction of 5-10% is recommended in *Parking Management Best Practices*.¹⁵

Overall, the research cited above confirms that access to a carsharing vehicle and the provision of memberships is associated with reduced vehicle ownership and parking demand. With the applicant committing to two carshare vehicles directly on-site, and memberships for each unit, a 30% reduction in resident parking demand is supported, which would lower demand by 20 spaces at the site.

4.3 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.

¹¹ Engel-Yan, D., & D. Passmore. (2013). Carsharing and Car Ownership at the Building Scale. *Journal of the American Planning Association*, 79(1), 82-91.

¹² Ibid, pg. 54.

¹³ Metro Vancouver. (2014). The Metro Vancouver Car Share Study: Technical Report. Available online at: <http://www.metrovancouver.org/services/regional-planning/PlanningPublications/MetroVancouverCarShareStudyTechnicalReport.pdf>

¹⁴ Correspondence from Victoria Carshare Cooperative (now Modo), received August 2009.

¹⁵ Litman, T. (2007). *Parking Management Best Practices*, American Planning Association.

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.¹⁶ As part of a larger strategy to discourage vehicle ownership the applicant has designed the long-term bicycle parking spaces to accommodate 40 cargo and electric bikes, which will allow E-Bike users to park in the bicycle parking room and avoid having to bring their heavy bicycle to their unit. 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 should 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 provide each electric / cargo bike parking space with direct access to an 110V wall outlet (approx. 26% of all the long-term bike parking spaces). This would help facilitate charging opportunities for future E-Bike users at the site, especially for those who may have an E-Bike that has a more typical bicycle length and can park in a regular long-term bicycle parking rack.

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.¹⁷

Given that E-Bikes have the potential to replace private motor vehicles, and with the applicant committing to provide 40 long-term cargo E-Bike parking spaces, a 20% reduction in resident parking demand is supported, which would lower vehicle parking demand by 13 spaces. Access to an 110V wall outlet should accompany all of the cargo and E-Bike parking spaces to facilitate E-Bike charging with consideration to add more outlets to support opportunities for future E-Bike users.

¹⁶ 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

¹⁷ MacArthur, J., Harpool, M., & D. Schepke. (2018). A North American Survey of Electric Bicycle Owners. National Institute for Transportation and Communities, NITC-RR-1041.

4.4 TDM Summary

Table 1 presents a summary of the impact of the TDM measures in reducing resident parking demand. The reduction may be as high as 40 spaces, which would reduce the required resident parking supply from 66 to 26 spaces.

TABLE 1. SUMMARY OF TDM PROGRAMS + PARKING DEMAND REDUCTIONS

TDM Option	Parking Reduction	
	Quantity	Approx. Total Reduction (resident parking spaces)
Transit Passes	10%	- 7
Carsharing (Two On-site Vehicles + Memberships)	30%	- 20
Electric Bike Parking	20%	- 13
TOTAL		- 40

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 6:00AM to 6:00PM, 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.

Given the above discussion, the applicant could consider sharing the commercial parking spaces between commercial users and visitors, which would eliminate the need to provide designated visitor spaces. Further, given the availability of on-street parking in the vicinity of the building, visitor vehicles would likely use on-street parking and take advantage of free evening parking when they are more likely to visit the site.

With shared parking between visitor and commercial, the applicant could consider reallocating the 4 visitor parking spaces to residential spaces, which would increase the residential supply to 37 spaces. **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.

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 33 spaces, which is still within the recommended parking allocation in **Table 2**.

TABLE 2. RECOMMENDED PARKING ALLOCATION

Land Use	Number of Parking Spaces
Multi-Family Residential	37
Commercial / Visitor (Shared)	5
Modo Carshare	2
TOTAL	44

6.0 SUMMARY

The proposed parking supply for the Parkway development is 44 parking spaces, which is 49 spaces short of what is required from the City under Schedule C (93 spaces). The site benefits from access to frequent transit service, high walkability, and a protected bicycle lane, which helps reduce the need to own a vehicle. A number of TDM measures were also identified including transit passes for each unit, the provision of two carshare vehicles on-site and memberships for each unit, and the provision of long-term bicycle parking spaces to accommodate electric bikes.

Committing to the recommended TDM measures could reduce resident parking demand by 40 parking spaces at the Parkway site. This would effectively lower the required amount of parking to 53 parking spaces at the site, which is still 9 more than proposed. The applicant could also consider sharing the commercial and visitor parking spaces, which would allow the applicant to reallocate the 4 visitor spaces to residential.

Sincerely,

Watt Consulting Group



Tim Shah, RPP, MCIP
Transportation Planner