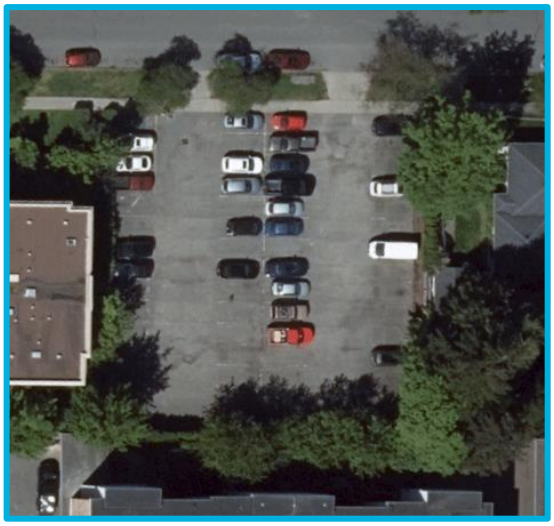
780 Blanshard Street

Parking & TDM Study

Reliance Properties Ltd.


WATT CONSULTING GROUP

February 13, 2024

WATT VICTORIA
#302, 740 Hillside Avenue
Victoria, BC V8T 1Z4
(250) 388-9877

780 BLANSHARD STREET

Parking & TDM Study

Tania Wegwitz, RPP, MCIP
Author

Tim Shah, RPP, MCIP, MA (Planning)
Reviewer

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File No.: 3135.B01

WATT Consulting Group

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EXECUTIVE SUMMARY

Watt Consulting Group (WATT) was retained by Reliance Properties Ltd. (Reliance) to provide transportation consulting support for the proposed rezoning and redevelopment of a heritage building at 780 Blanshard Street in Victoria, BC. The proposed redevelopment includes 98 condominium residential units, plus a 96-unit micro-hotel and 136m^2 in its related food and beverage service areas. The heritage nature of the site's existing building and desire to retain it precludes underground parking and the site's topography and physical constraints also limits any on-site surface space that can be used for parking. Due to these constraints, the proposed off-street parking supply for the building is 27 vehicle spaces (2 accessible on-site spaces plus 25 off-site spaces), as well as 161 long-term secure bicycle spaces and 19 public short-term bicycle spaces, of which 5 would be energized for plug in by e-bikes and 3 would be larger and suitable for non-standard bicycles such as cargo bikes.

The parking requirement for the site based on the City of Victoria's Zoning Bylaw No. 80-159 (Schedule C) is 106 vehicle spaces. This includes 72 condominium resident spaces, 10 visitor spaces and 24 spaces associated with the micro-hotel. The totals exceed the proposed supply by 79 vehicle spaces.

Since the expected parking demand exceeds parking supply, the applicant is proposing to commit to a comprehensive suite of TDM measures presented in **Section 4.0** to reduce vehicle parking demand and bring it closer to the proposed supply. Any in kind contribution to the public realm (e.g. Penwill Green improvements) and/or the interior of the building will need to be contemplated in conjunction with the land lift analysis, should the residual value allow for such provisions. The total expected parking shortfall, if all TDM measures are adopted, is 22 parking spaces. Managing the expected remaining shortfall—which may be less than shown due to the hotel being a micro-hotel and the food and beverage services currently expected to be unstaffed self-serve areas—will require use of parking management strategies like those presented in **Section 5.0**.

The table on the following page summarizes the proposed TDM measures and their estimated impacts on site-level parking demand. The table also notes the proposed "precinct-level" TDM measures which are expected to contribute to the City's larger

mobility goals expressed in its GoVictoria Sustainable Mobility Strategy and which may contribute to further reducing vehicle use not only at the site but also in the surrounding area and larger city. Likewise, several of the proposed precinct-level measures also support BC Transit's objectives of developing the Victoria Regional Transit System and transitioning its fleet to zero emission vehicles.

Therefore, since preservation of the site's heritage building precludes the ability to add underground parking it is recommended that the applicant commit to working with the City and BC Transit to implement the TDM and parking management measures outlined in Sections 4.0 and 5.0 to best align parking supply and demand.

Summary of TDM Measures + Parking Demand Reductions

TDM Option	Approx. Reduction (Percentage)	Approx. Reduction (# of spaces)	Approx. Reduction (Percentage)	Approx. Reduction (# of spaces)	Precinct-Level Benefits?	Precinct-Level Measure Benefit Description (Initiatives that may not be quantified for direct building parking demand reduction but which will contribute to reduced vehicle demand in area and City)
4.1 Pedestrian & Accessibility Improvements	-	-	-	-	✓	New pedestrian access on the southside of Burdett Avenue, pedestrian plaza, improved accessibility.
4.2 At-Grade Bicycle Parking Entrance	4%	3	4%	1		
4.3 Additional Long-term Bike Parking	6%	4	4%	1		
4.4 Non-Standard Bike Parking	5%	4	5%	1	✓	Proposal also includes exterior public energized bike parking spaces and non-standard bike parking spaces.
4.5 Bicycle Maintenance & Wash Facilities	2%	1	-	-	✓	In addition to the internal bike maintenance facility within the building, a public one is also proposed.
4.6 Bicycle End-of-Trip Facilities	-	-	2%	2		
4.7 E-Bikeshare Program / Public Bikeshare Space	10%	7	-	-	✓	E-Bikeshare program available to residents, hotel staff and guests. Provision for space for potential future public bikeshare
4.8 Potential Space for Transit Vehicle Electric Charging	-	-	-	-	✓	Reduced emissions and noise from buses parked on Fairfield Road.
4.9 Improved Passenger Amenities	-	-	-	-	✓	Supports transit network and streetside amenities; depends on amenity contribution negotiations and land lift analysis
4.10 Transit Pass Program (Residential; Employee)	15%	11	5%	1		
4.11 Carsharing - 3 Modo Spaces + Membership	25%	18	-	-	✓	Increased car share availability for the whole area, reduced emissions due to EV charging.
4.12 Curbside Management	-	-	-	-	✓	Increased flexibility for residents using off-site parking, others accessing area.
4.13 TDM Welcome Package (Residential; Employee)	2%	1	2%	0		
Total Estimated Parking Reductions by Land Use	**69%**	**50**	**22%**	**7**		
Total Site-Level Estimated Parking Reductions (Residential + Hotel Uses)		**57**				
Total Proposed Parking Supply		**27**				
Total Remaining Parking Shortfall to be Addressed Through Parking Management Strategies		**22**				

1.0 INTRODUCTION

Watt Consulting Group (WATT) was retained by Reliance Properties Ltd. (Reliance) to provide transportation consulting support for the proposed redevelopment at 780 Blanshard Street in Victoria, BC, which is currently moving forward towards rezoning and a heritage alteration permit.

The purpose of this study 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 TDM strategies and their impact on parking demand that may be suitable for the site to justify a parking variance. The parking supply requirements as outlined in Schedule C will be considered as the unadjusted expected parking demand for the site (base case).

1.1 SUBJECT SITE

The proposed development is located at 780 Blanshard Street in the City of Victoria (See **Figure 1**).

FIGURE 1. SUBJECT SITE

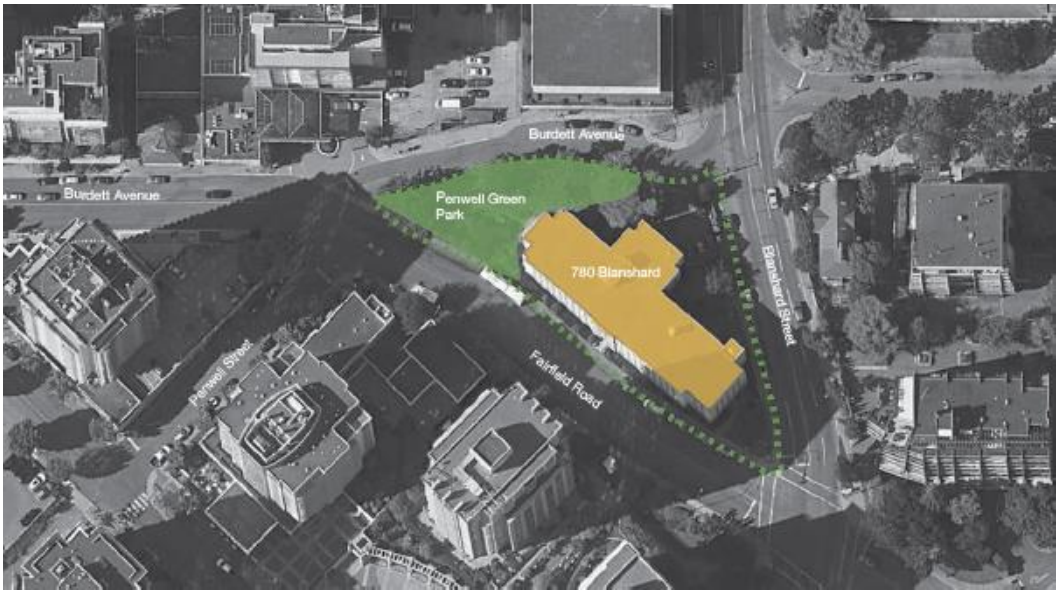


Figure source: office of mcfarlane biggar architects + designers

1.2 SITE CHARACTERISTICS AND POLICY CONTEXT

The following provides a discussion of the services and transportation options in proximity to the subject site. In addition, the City of Victoria Official Community Plan (OCP) and other community policies pertaining to sustainable transportation and parking management are summarized.

FIGURE 2. NEIGHBOURHOOD CONTEXT

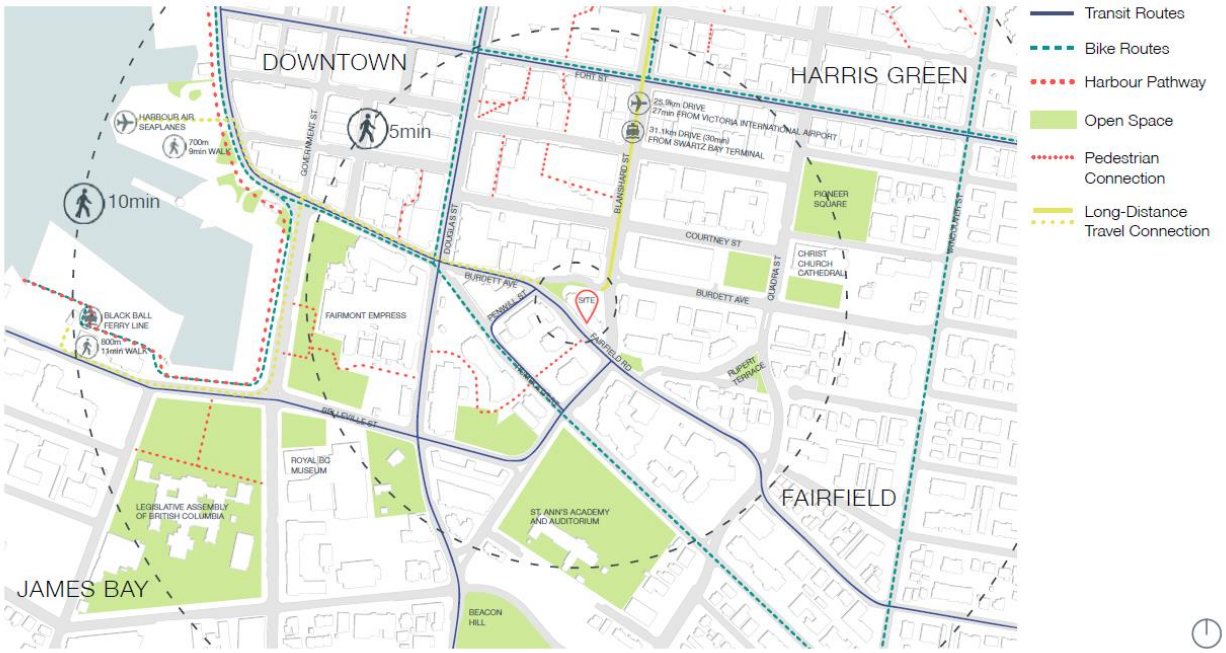


Figure source: office of mcfarlane biggar architects + designers

COMMUNITY POLICIES

The City of Victoria's OCP[1] provides policies and objectives to guide decisions on planning and land management. Most recently updated in March 2022, the OCP contains several 30-year goals in 17 distinct topic areas that give expression to Victoria's sustainability commitment and work toward the achievement of long-term sustainability goals. Section 7 of the OCP (Transportation and Mobility) contains goals and policy directions to reduce overall dependency on single occupancy vehicles and prioritize sustainable modes of travel including walking, cycling, and transit, among others.

As identified in Section 7.12 of the OCP, the City should consider reductions in parking requirements 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 building 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.*"

Lastly, the City of Victoria adopted "GO Victoria," its Sustainable Mobility Strategy in 2020.[2] The Strategy intends to address significant advancements occurring in the mobility space, such as the introduction of

[1] Official Community Plan, City of Victoria (2012). Retrieved from https://www.victoria.ca/assets/Departments/Planning~Development/Community~Planning/OCP/Up~to~date~OCP~and~Design~Guidelines/OCP_WholeBook.pdf

[2] City of Victoria. (2020). GO Victoria: Sustainable Mobility Strategy. Available online at: https://www.victoria.ca/assets/Community/Cycling/GoVictoria_2020DEC.pdf

new mobility modes, shared mobility services, ride hailing and e-mobility devices. The Strategy's mission is as follows:

"Stewarding and transforming the right-of-way to meet the demands of our growing city; increasing access to mobility choices, opportunities, and services; and promoting equity, accessibility, and environmental health through our transportation investments."

The Strategy also contains several targets and indicators, many of which are relevant for parking and for this parking study. By 2026, the City would like to reduce average vehicle ownership per household by 30% from 2017 levels. Further, by 2030, the City would like to see:

a. A doubling of transit ridership to, from, and within the City;
b. 55% of all trips made to, from, within Victoria are by walking, rolling, or cycling; and
c. All Victoria neighbourhoods are "complete" by design, where residents can meet their daily needs within a 15-minute walk.

Achieving these targets will require new developments to be approved in already walkable and compact areas with access to transportation options and where residents will not be reliant on their vehicles for most trips. The subject site is already conducive to a "car-light" lifestyle, as discussed in the following sections.

SERVICES

The subject site is in the urban core and as such has access to many services and amenities. The site has access to a full grocery store within 750m (about a 9-minute walk) and multiple other grocery retailers, pharmacies, other day-to-day services, and restaurants within 300m – 800m (about a 4-to 10-minute walk). The site is located approximately 450m (about a 5-minute walk) from Beacon Hill Park, offering many recreational opportunities within walking distance.

TRANSIT

The subject site has excellent access to transit. It is situated directly adjacent to the Fairfield Road at Blanshard Street transit exchange that is the terminus for multiple Frequent and Local transit routes. It is also within 260m (about a 3-minute walk) from a pair of bus stops on Douglas Street at Humboldt Street that are served by multiple routes, and which are on the alignment of the existing Blink RapidBus Line 95 and the future Peninsula RapidBus Line.[3]

The site is also within 450m/700m (about a 6- to 9-minute walk) of a pair of stops on Fort Street at Douglas Street and Yates Street at Broad Street / Douglas Street that are served by the region's east-west transit routes.

There are significant benefits associated with the subject site's proximity to transit, namely that it is within 800m (about a 10-minute walk) of every bus route in the Victoria Regional Transit System serving downtown Victoria.

This proximity means that the site easily connects to all major destinations across Greater Victoria (including schools and post-secondary institutions, shopping centres, hospitals, parks, and recreation centres) using reliable transit service. These include the Frequent Transit route 4 Downtown / UVic and route 21 Downtown / Interurban that stop directly adjacent to the site on Fairfield Road and which serve the University of Victoria and both campuses of Camosun College. This is further complemented by Frequent transit routes 27/28 Majestic / Gordon Head that stop across the street, plus Regional route 15 Esquimalt / UVic and Frequent route 14 Vic General / UVic that serve Fort Street and Yates Street stops and which also serve major employment centres.

[3] Victoria Regional RapidBus Implementation Strategy, BC Transit. Available online at: https://bctransit.com/victoria-regional-rapid-transit

Given the site's proximity to Douglas Street, BC Transit's Victoria Regional RapidBus Implementation Strategy[4] should be highlighted, which will deliver connected, frequent, fast, and reliable transit service between areas of highest travel demands in the region. In April 2023, the Route 95 Blink RapidBus Line was introduced (Phase 1), building on the priority bus lanes that have already been completed on Douglas Street. Route 95 connects Langford Exchange with the Legislature Exchange. In future years, the Peninsula RapidBus Line is expected to serve the same Douglas Street corridor and stations.

The City of Victoria OCP contains policies that support public transit, including the provision of rapid transit and frequent transit service. These policies include prioritizing public transit over general purpose traffic in rapid and frequent transit corridors (7.14.4), undertaking a study of options to provide potential cross-town priority frequent transit service connecting major destinations (7.14.5), and working with BC Transit to integrate new local transit service into neighbourhoods (7.14.6).

WALKING

With a Walk Score of 93,[5] the subject site is very walkable (i.e., daily errands do not require a personal vehicle). This is due to the high density of shopping, services, and other amenities in the area. Except for the northern edge of the site along Burdett Avenue between Fairfield Road and Blanshard Street, the adjacent streets to the site all have sidewalks on both sides with accessible curb let downs at pedestrian crossings. There are also signalized crossings at major intersections in the area.

[4] Victoria Regional RapidBus Implementation Strategy, BC Transit. Available online at: https://bctransit.com/victoria-regional-rapid-transit

[5] More information about the site's Walk Score is available at: https://www.walkscore.com/score/1039-meares-st-victoria-bc-canada

This existing infrastructure is complemented by walking improvements that have been implemented or are planned to take place in relation to the further expansion of the City's All Ages and Abilities (AAA) Cycling Network, discussed further in the Cycling section below. The site is also 400m from the David Foster Harbour Pathway.

CYCLING

The proposed development is in an area where daily errands can be accomplished on a bike. The site is 200m from the Humboldt Street AAA bike facility that connects Downtown to Fairfield / Oak Bay. The site is also within 400m of both the Wharf Street / Government Street AAA bike facilities that serves James Bay and also connect north through Downtown to the Galloping Goose and E&N Regional Trails and future expansion of the AAA network along Gorge Road.

The site is also less than 300m away from the Fort Street AAA bike facility that connects to downtown Victoria and 600m from the Vancouver Street AAA facility, which offer further high quality bicycle connections east, south and north of the site within the City of Victoria, as well as which link to other cycling infrastructure connecting major destinations within Saanich and Oak Bay.

The City of Victoria is continuing to expand its AAA bike network. Since this development project was initiated, in July 2022 City staff presented a plan to Council to also consider Blanshard Street for inclusion in the future development of the AAA bike network[6]. It is anticipated that the City's investments in active transportation over the medium term will have a significant impact in increasing the modal split for cycling—especially in the

[6] City of Victoria Committee of the Whole Meeting, July 7, 2022: https://pub-victoria.escribemeetings.com/FileStream.ashx?DocumentId=81806

downtown core—and make it easier for future residents of the subject site to bike for most trip purposes.

CARSHARING

Carsharing programs are an effective way for people to save on the cost of owning a vehicle while having access to a convenient means of transportation. The Modo Car Cooperative ("Modo") is the most popular carsharing service in Greater Victoria with a fleet of approximately 130 vehicles as of February 2023. There are 15 Modo vehicles within 500m (6- to 8-minute walking distance) of the subject site at the following locations:

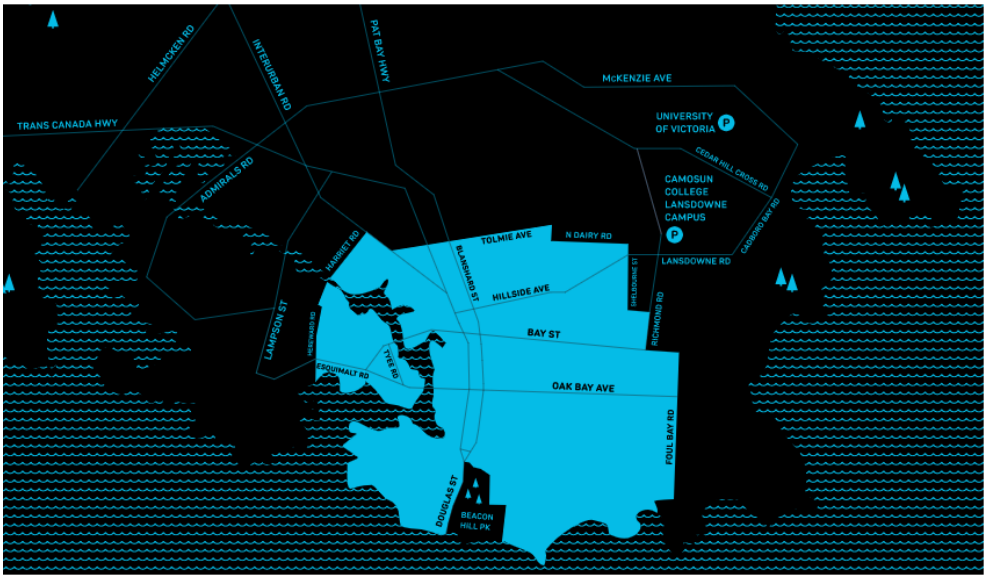
- Blanshard Street & Humboldt Street
- Belleville Street & Douglas Street
- Academy Close & Blanshard Street
- Rupert Terrace & Quadra Street
- Collinson Street & Quadra Street (x2)
- Convent Place & Quadra Street
- Burdett Avenue & Vancouver Street
- Broughton Street & Quadra Street
- Courtney Street & Blanshard Street (x2)
- View Street & Blanshard Street (x2)
- Burdett Aveneue & Quadra Street
- View Street & Quadra Street[7,8]

Additionally, in the summer of 2021, Evo Car Share introduced a fleet of 80 vehicles to Victoria.[9] This car share service allows members to pick up a car, use it for as long as needed, and drop it off at any permitted location within the 20-square kilometre Home Zone of where the subject site is

[7] Three carshare vehicles will be provided at the approved development at 1015 Cook Street. Available online at: https://www.thecharlesworth.ca/
[8] All Modo carshare vehicles are shown in the Car Map, available online at: https://modo.coop/car-map
[9] Times Colonist (July 30, 2021). *New car share service drives into Victoria this weekend*. Retrieved from https://www.timescolonist.com/business/new-car-share-service-drives-into-victoria-this-weekend-1.24347519

located (see **Figure 2**). End-of-trip parking includes City parkades, surface lots, reserved Evo spaces, and resident-only parking. There is also satellite parking at the University of Victoria and Camosun College's Lansdowne campus. [10]

FIGURE 2. EVO VICTORIA HOME ZONE



[10] More information about the Evo Car Share service is available online at: https://evo.ca/victoria

2.0 PROPOSED DEVELOPMENT

2.1 LAND USE

The proposed development includes a 20-storey mixed-use building with a micro-hotel, hotel amenities, and food and beverage services on the first 5 floors and a multi-family residential tower comprising 98 condominium units on floors 6-20, including a mix of studio, 1-bedroom, 2-bedroom and 3-bedroom units of varying sizes. While at this point it is anticipated that the food and beverage spaces within the hotel site would be unstaffed and self serve, this study has used the typical "restaurant" land use designation for those areas to ensure that they conservatively encompass all potential demand. The unit breakdown is summarized in Table 1.

A **micro-hotel** is a new type of hotel concept that provides smaller rooms and fewer amenities combined with downtown locations to attract value-conscious customers. Micro-hotels are able to provide competitive rates by unbundling amenities found in many traditional hotels – including parking. Micro-hotels are often marketed towards customers who focus on the experience of traveling and want to feel connected to the locale they are visiting. To this end, micro-hotels tend to promote local businesses and sustainable travel like shared bicycles and transit usage.

TABLE 1. SITE UNIT BREAKDOWN

Land Use	Total Units / Area
Non-Residential Uses (Floors 1-5)	
Hotel*	96 units
Food & Beverage Service*	136m^2
Residential Uses (Floors 6-20)	
<45m^2	59 units
>45m^2 & <70m^2	33 units
>70m^2	6 units
Residential Total	**98 units**

* As described above, the type of hotel proposed is a micro-hotel with smaller units and the Food & Beverage Service areas currently expected to be self-serve and unstaffed.

3.0 PROPOSED PARKING SUPPLY & REQUIREMENTS

3.1 VEHICLE PARKING

3.1.1 VEHICLE PARKING – PROPOSED SUPPLY

The heritage nature of the site's building and desire to retain it precludes underground parking. Further, the site's topography and physical constraints result in limited space for surface parking.

Due to these constraints, the proposed off-street parking supply for the building is 27 vehicle spaces, comprised as follows:

- **2 off-street accessible parking spaces located on the building site** adjacent to its main entrance.
- **25 off-street parking spaces** located off-site at a parkade beneath 940 Blanshard Street, which is approximately 100m from the 780 Blanshard Street site. The parkade's nearest pedestrian stair entrance and elevator is 135m-180m (or 2-minute walk) from the site. These spaces will be provided through the License Agreement with the Province for the site.

The proposed off-site parking site is in a pre-existing facility that predates the parking requirements of the current City of Victoria Schedule C. Likewise, the application process for the 780 Blanshard Street development also predates more recent changes to Schedule C relating to accessible parking requirements and therefore is exempt from those requirements.

In addition to those designated parking spaces (which would be available 24 hours per day, 7 days per week), the site's owner Reliance Properties also owns a commercial parkade at 910 Government Street (accessed off Broughton Street) which is 650m (about an 8-minute walk) from the site. 192 parking spaces are available in this parkade and Reliance Properties has expressed interest in providing overnight space in the parkade to augment the parking availability for the subject site.

3.1.2 VEHICLE PARKING - REQUIREMENTS

The City of Victoria's Zoning Bylaw No. 80-159 (Schedule C) identifies the parking requirements for the site based on several different factors for multi-family uses including:

- **Class of Use (i.e. Housing Tenure)** – Condominium (dwelling unit in a building owned by a Strata Corporation); Apartment (dwelling unit secured as a rental in perpetuity through a legal agreement); Affordable (affordable dwelling units secure in perpetuity through a legal agreement); All other multiple dwellings.
- **Location** – Core Area, Village/Centre and Other Area; and
- **Unit Size** – <45m² (< 485 sq.ft.), 45m² to 70m² (485 - 750 sq.ft.), and >70m² (>750 sq.ft.)

As per the City of Victoria's Schedule C Zoning Bylaw No. 80-159, the site is located in a geographic area that must refer to the City's Zoning Bylaw 2018 (18-072) to calculate parking requirements.

The City of Victoria's Zoning Bylaw also specifies a rate 0.25 per unit in the case of hotel use ("Transient Accommodation) in the Core Area. It does not specify vehicle parking requirements for the food and beverage service commercial use proposed for the site.

Table 2 shows the Schedule C vehicle parking requirements for the proposed uses.

TABLE 2. **SITE PARKING REQUIREMENT PER SCHEDULE C**

			Condominium Use	
Land Use		**Total Units or Area**	**Schedule C Rate (Spaces per Unit or m^2)**	**Required Vehicle Spaces**
Multiple Dwelling	< $45m^2$	59	0.65	38
	> $45m^2$ & < $70m^2$	33	0.80	26
	> $70m^2$	6	1.20	7
	Visitor	98	0.10	10
Hotel		96	0.25	24
Food & Beverage Service		136m²	0.00	0
		Total	**Total**	**106**

Based on the Schedule C requirements, the site is currently required to provide a total of 106 vehicle spaces. These totals include 72 condominium residential spaces, 10 residential visitor spaces and 24 spaces for the micro-hotel.

With 27 off-street parking spaces proposed, the site is short 79 vehicle parking spaces as per Schedule C. Therefore, TDM measures are required to reduce parking demand to meet the proposed parking supply (see **Section 4.0**).

3.1.3 ELECTRIC VEHICLE PARKING

Electric Vehicle (EV) parking requirements are defined per Schedule C. Based on the bylaw, the subject site is required to provide one energized EV outlet per resident parking space (72 spaces). Further, two energized EV outlets are required for the hotel land use, for a site total of 74 energized spaces. While the provision of EV charging is considered for the on-street Modo car share spaces, and potentially for one on-street public space, as part of the proposed TDM proposal, the site is not meeting EV outlet requirements for resident and hotel parking spaces and is therefore short by 74 energized vehicle spaces.

3.2 BICYCLE PARKING

3.2.1 BICYCLE PARKING– PROPOSED SUPPLY

A total of 19 short term Class 2 bicycle spaces are proposed and 161 long-term Class 1 secure bicycle parking spaces. **Table 3** shows the composition of the long-term bicycle parking spaces and their allocation between the residential and hotel/food and beverage services components of the building.

All long-term parking spaces are expected to be energized for e-bikes (1 double outlet for every two bikes, and therefore one outlet per bike). Further, 12 of the long-term spaces will be designed for non-standard or oversized bicycles (e.g., cargo bikes, tricycles, bikes with trailers) with dimensions of 0.9m (width) by 3.0m (length), which is consistent with the BC Active Transportation Design Guide.

The use of a movable rack system is also contemplated for the stacked bikes to enable easier access to all positions without the need to manually lift bikes into the upper tier.

TABLE 3. **PROPOSED LONG TERM BIKE PARKING BY TYPE & DISTRIBUTION**

	Standard-size Bicycle Parking				Non-Standard Bike Parking	**Total**
	Horizontal	Stacked (Bottom Tier)	Stacked (Upper Tier)	Vertical	Horizontal	
Residential	50	39	26	19	11	**145**
Non-Residential (Hotel + Food & Beverage Service)	4	-	-	-	1	**5**
Shared by Residential and Hotel uses	11 Shared E-bike	-	-	-	-	**11**
Total	**65**	**39**	**26**	**19**	**12**	**161**

The 19 public short-term bicycle spaces include 5 spaces which would be energized for plug in by e-bikes and 3 spaces that would be larger and suitable for non-standard bicycles such as cargo bikes. The energized spaces (including one suitable for a non-standard bike) are located on the Fairfield Road frontage near the transit stop to facilitate increased sense of security through “eyes on the street”, as well as multimodal connection. A public bicycle maintenance station is also proposed on this frontage.

3.2.2 BICYCLE PARKING - REQUIREMENTS

Schedule C also prescribes the minimum long-term and short-term bicycle parking requirement based on each land use. The applicable land uses are shown in **Table 4**. While at this point it is anticipated that the food and beverage spaces within the hotel site would be unstaffed and self serve, parking requirements have been developed based on the typical "restaurant" land use designation for those areas to ensure that they conservatively encompass all potential demand.

The land uses as shown in Table 4 result in total a requirement of 112 long-term bicycle parking spaces (108 residential, 4 non-residential). The applicant is exceeding this requirement by 36 spaces (33 additional residential spaces, 2 additional non-residential spaces, and 11 spaces for an e-bike share program available to residents, building staff and hotel guests).

As per Schedule C, at least 50% of the required spaces must be horizontal and ground oriented, which the proposed site is meeting as 61 of the residential spaces are configured in this way (54% of the required 112 spaces) and all of the non-residential spaces. Similarly, at least 10% of the required spaces are configured for non-standard cargo bikes.

The subject site is also required to provide a minimum of 14 short-term bicycle parking spaces, which the applicant is exceeding by 5 spaces.

TABLE 4. **BICYCLE PARKING REQUIREMENTS**

			Bicycle Parking			
			Secure Long-Term Spaces		Short-Term Spaces	
Land Use		Total Units or Area	Schedule C Rate (Spaces per Unit or m^2)	Required Spaces	Schedule C Rate (Spaces per Unit or m^2)	Required Spaces
Multiple Dwelling	< $45m^2$	59	1.00	59	0.10	6
	> $45m^2$ & < $70m^2$	33	1.25	41	0.10	3
	> $70m^2$	6	1.25	8	0.10	1
	Visitor	98	-	-	-	-
Hotel		96	1 per 25 rooms	3.8	1 per 40 rooms	2.4
Food & Beverage Service		136m²	1 per $400m^2$	0.3	1 per $100m^2$	1.4
		Total	**Total**	**112.0**	**Total**	**14**

4.0 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 typically aim to encourage sustainable travel, enhance travel options and decrease parking demand.

The following sections present a comprehensive suite of TDM measures that the applicant is proposing to pursue for the development. The measures are listed by mode of travel to show how they align with the sustainable transportation goals of the City of Victoria's *GoVictoria – Sustainable Mobility Strategy*.[11]

Based on a substantial collection of research, many of these measures are quantifiable in terms of their anticipated approximate reduction in parking demand for the site's future residents, staff and visitors. Those TDM items are noted as **site-level**

GoVictoria Sustainable Mobility Key Initiatives

The City of Victoria's Sustainable Mobility Strategy ("GoVictoria") was adopted in 2019 and outlines the City's mobility values, policy positions, and also six key initiative areas as a focus for improvement and investment:

1. **Adopt Vision Zero** - A systems-based model for improved road safety that prioritizes human life over ease of mobility and convenience. Vision Zero acknowledges the importance of safeguarding people with better design and minimized speed to reduce accident frequency and severity.
2. **Transform Public Transit** - A new dialogue and planned investments to accelerate our shift to rapid and frequent transit that will out-perform the automobile's convenience and speed, in a more affordable, sustainable and convenient way.
3. **Accelerate Accessible and Active Transportation** - A focus on investments to support safer, more sustainable, more convenient, attractive and enjoyable travel options for people of all ages and abilities.
4. **Shift to Zero Emissions** - An acceleration of mobility GHG reductions through the adoption of road allocations, incentives, electrification infrastructure and transportation demand management initiatives.
5. **Rethink the Curb** - A new approach to managing valuable curb space which incentivizes required changes to parking and loading zones, through re-allocation, configuration, pricing, performance, and other incentive schemes to ensure the highest and best usage.
6. **Harness Data and Technology** - The use of technology to enhance the integration, management and performance of our mobility systems to make travel safe and seamless, and use data to strengthen decisions and planning.

[11] City of Victoria. (2019) GoVictoria Sustainable Mobility Strategy. Available at: https://www.victoria.ca/assets/Community/Cycling/GoVictoria_2020DEC.pdf

TDM measures and an approximate reduction in parking demand for the site uses has been included for each.

However, beyond just impacts on travel behaviours to/from the site itself, many of the proposed TDM improvements may have "precinct level" impacts due to the site's location and placement next to adjacent uses. Items noted as **precinct-level measures** refer to the fact that some TDM measures may provide potential opportunity to not only offset parking demand within the building itself, but also offset parking demand in the surrounding area or work towards assisting the City and other stakeholders like BC Transit to reach larger community sustainable transportation goals. Since many of the precinct-level improvement impacts are harder to quantify based on available research, their community benefits and alignment with the City's Sustainable Mobility Strategy is outlined.

An overall summary of all proposed TDM measures and their estimated impacts / benefits is provided in Section 4.14. Given the constrained nature of parking at the heritage building site, a suite of parking management strategies to further manage parking demand to available supply is also presented in Section 5.0.

4.1 PEDESTRIAN REALM AND ACCESSIBILITY IMPROVEMENTS

Precinct-Level TDM Measure

4.1.1 OVERVIEW

Contributions towards off-site pedestrian and cycling infrastructure that completes gaps in the active transportation can support walking and cycling. The proposed site design includes many changes expected to improve the overall public realm of the site and its adjacent street frontages, as well as accessibility of the area and the currently underutilized adjacent Penwill Green Park space. These include:

- Transition of the existing building frontage on the corner of Blanshard Street at Burdett Avenue into a **multimodal accessible entry plaza** that can also be used as an entry point for the hotel and tower residents.

- **An upgraded and more accessible Penwill Green Park** on the corner of Fairfield Road and Burdett Avenue, featuring integrated seating + gathering spaces, bicycle parking and public bike maintenance station, and connections to urban bike, walking, and transit networks, as well as access to the public programs of the building.

Renderings of proposed new upper pedestrian plaza at Burdett Avenue and Blanshard Street (top) and Penwill Green improvements off Fairfield Road (bottom). (Source: office of mcfarlane biggar architects + designers)

- **Expanded sidewalks and improved pedestrian transitions** on Blanshard Street and Fairfield Road**, as well as a new sidewalk** along the south side of Burdett Avenue to improve overall pedestrian and transit passenger connections in the area, as well as directly link the proposed upper entry plaza and the lower Penwill Green. The improvements to the south side of Burdett Avenue are made possible through the proposed transition of Burdett to a fully one-way operation between Blanshard Street and Fairfield Road. One limitation with the potential sidewalk on the southside of Burdett Avenue is that while it would enhance pedestrian connection in the precinct, the existing street grades exceed 5% and so a sidewalk in this location would not, consequently, meet accessibility thresholds.

- **The addition of multimodal wayfinding signage** is also proposed for the site to direct and orient residents, employees and visitors to transportation services and available infrastructure, such as transit, bike share, car share, bicycle parking, public bike maintenance facility, etc.

Improving pedestrian or cycling infrastructure in the vicinity of the subject site helps to enhance overall connections in the network for active modes and increase the accessibility and appeal of walking or cycling for future residents of the site. Improved infrastructure can further encourage modal shift for residents of this development.

The City of San Francisco's Transportation Demand Management Technical Justification Report estimated a 2% reduction in vehicle miles travelled as a result of pedestrian improvements in the adjacent road network.[12] In addition, a detailed transportation demand management study prepared for the City of Hamilton identifies off-site cycling infrastructure connections as the most effective walking & cycling TDM measure.[13]

4.1.2 ESTIMATED IMPACTS

These pedestrian improvements represent both a site-level and a precinct-level TDM measure. While a specific parking reduction estimate cannot be assigned to the changes, the proposed new pedestrian connection on Burdett Avenue and other walkability improvements fill a gap in the City's current pedestrian network and directly support GoVictoria's Initiative 3 - Accelerate Accessible and Active Transportation as well as work towards initiative 1 – Adopt Vision Zero.

[12] City of San Francisco. (2016). Transportation Demand Management Technical Justification. Retrieved from: https://default.sfplanning.org/plans-and-programs/emerging_issues/tsp/TDM_Technical_Justification.pdf

[13] IBI Group. (2016). Pier 7/8 Transportation Demand Management Detailed Report. Retrieved from: https://www.hamilton.ca/sites/default/files/media/browser/2016-06-08/west-harbour-pier6-7-8-transportation-demand-management-report.pdf

4.2 IMPROVED ACCESS TO LONG-TERM BIKE PARKING

Site-Level TDM Measure

4.2.1 OVERVIEW

Quality bicycle parking can help to legitimize cycling, "signaling to cyclists that they are invited and welcome". Allocating an entrance that is accessible to cyclists and separated from vehicular traffic increases the safety and convenience of cycling as an everyday mode of travel.[14] Strategies aimed at making cycling convenient, safe, and pleasant are considered "very beneficial" in shifting motor vehicle travel to alternative modes.[15] Further, for cycling to be an attractive alternative, it is important to ensure users have safe, convenient, and secure places to park. Best practice dictates that secure bicycle parking be located at grade and have a dedicated entrance for cyclists.

The proposed design of 780 Blanshard Street complies with this best practice since the entrance to the long-term bike facilities for both residents and hotel services staff and visitors is at-grade and accessed from the east entrance off Fairfield Road. In addition to being at grade, this entrance is also conveniently oriented closest to the Humboldt Street AAA bike facility.

4.2.2 ESTIMATED IMPACTS

A **4% reduction** in resident parking demand is supported if 100% of the long-term bicycle parking spaces are provided at-grade, which is the case for the proposed development.[16]

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[14] HUB Cycling. Not Just Bike Racks: Informing Design for End of Trip Cycling Amenities in Vancouver Real Estate. Available online at: https://bikehub.ca/sites/default/files/hub_cycling_amenities_report.pdf

[15] Victoria Transport Policy Institute (2019). Bicycling Improvements. Strategies to Make Cycling Convenient , Safe and Pleasant. Available online at: https://www.vtpi.org/tdm/tdm93.htm

[16] This estimate was derived from the City of Vancouver's Transportation Demand Management for Developments in Vancouver, which is available online at: https://vancouver.ca/files/cov/transportation-demand-management-for-developments-in-vancouver.pdf

4.3 ADDITIONAL LONG-TERM BIKE PARKING

Site-Level TDM Measure

4.3.1 OVERVIEW

The provision of additional bicycle parking spaces can support residents to satisfy potential bicycle demand in the present and future. Insufficient bicycle parking is considered a key barrier to promoting cycling, with additional bicycle parking associated with an increase of cycling by 10 to 40%.[17]

4.3.2 ESTIMATED IMPACTS

A 2% reduction in resident parking demand is typically supported for every additional 10% of resident long-term bicycle parking spaces provided beyond what is required in Schedule C, and a 1% reduction in non-residential parking demand is typically supported for every additional 10% of non-residential long-term bicycle parking spaces.[18] Based on the proposed provision of an additional 33 residential long-term bicycle parking spaces above the requirement (29% greater) and 2 additional non-residential spaces beyond the requirement (67% greater), a **6% reduction in residential parking demand and 4% in non-residential demand** is supported (2% x 3 for the 29% higher residential spaces and a conservative 1% x 4 for the 67% higher non-residential spaces). The projected impact on non-residential demand is a conservative estimate.

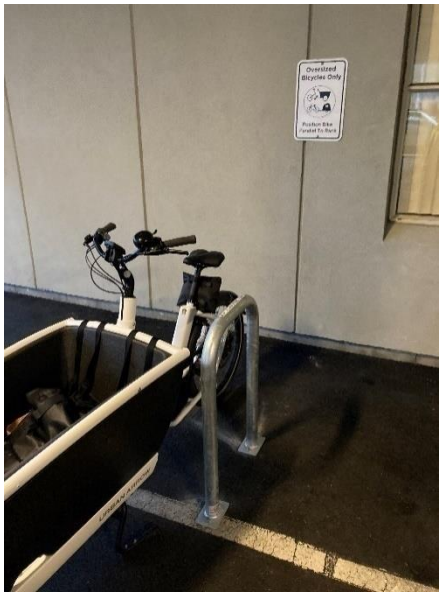
[17] Hein, E. & Buehler, R. (2019). Bicycle parking: a systematic review of scientific literature on parking behaviour, parking preferences, and their influence on cycling and travel behaviour. *Transport Reviews, 39*(5).
[18] This estimate was derived from the City of Vancouver's Transportation Demand Management for Developments in Vancouver, which is available online at: https://vancouver.ca/files/cov/transportation-demand-management-for-developments-in-vancouver.pdf

4.4 NON-STANDARD BICYCLE PARKING

Site-Level & Precinct-Level TDM Measures

4.4.1 OVERVIEW

Non-standard bicycles are longer, wider, and heavier than a typical bicycle, which makes them more challenging to park than a regular bike. Non-standard bikes include tricycles, electric cargo bikes, or a bike with a trailer, for example. Because of their size, they require different parking configurations. As electric bicycles and other non-standard bikes become more commonplace, it will be important that new developments provide the right parking to allow users to securely and conveniently park their bicycles.



Example of a non-standard bike parking space at Royal Jubilee Hospital.

Including long-term bicycle parking to accommodate non-standard bicycles is a way to reduce vehicle parking demand. According to research completed in Greater Victoria, one of the top barriers facing prospective e-bike users is the fear that their bicycle might be stolen.[19] Further this research showed that users would feel more comfortable if they could park their bicycle in a locked or supervised area.

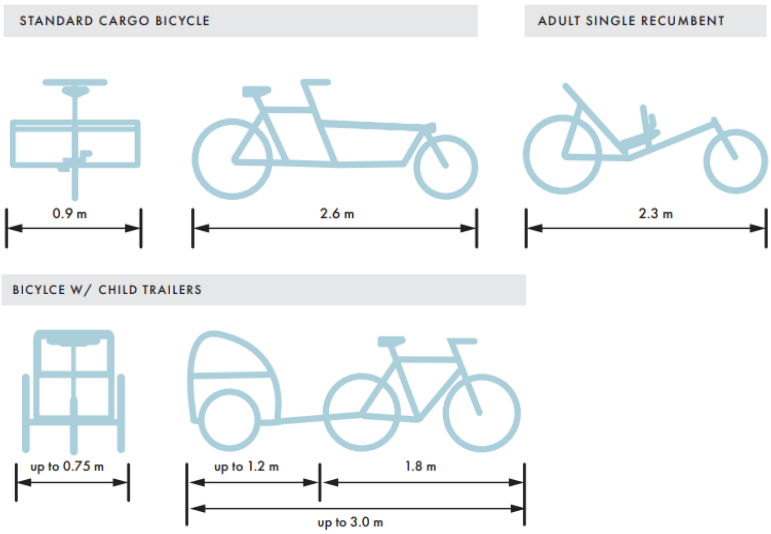
The Capital Region Local Government Electric Vehicle + Electric Bike Infrastructure Planning Guide[20] includes e-bike parking design guidelines to help address the concerns of current and prospective e-bike owners as well as to increase overall e-bike ownership in the Capital Region. The e-bike parking design guidelines include three key

[19] 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

[20] WATT Consulting Group. (2018). Capital Region Local Government Electric Vehicle + Electric Bike Infrastructure Planning Guide. Available online at: https://www.crd.bc.ca/docs/default-source/climate-action-pdf/reports/infrastructure-planning-guide_capital-region-ev-ebike-infrastructure-project-nov-2018.pdf?sfvrsn=d767c5ca_2

recommendations: (1) that all e-bike parking spaces be in a secure location (2) that 50% of the long-term bike parking spaces have access to an 110V wall outlet and (3) 10% of the spaces be designed for non-standard bicycles.

Non-standard bikes, like cargo bikes, are typically electric-assist (e-bikes) that are longer than regular bicycles because they are capable of carrying cargo and/or multiple passengers with the assistance of the battery. These types of bikes can be a popular option for young families. They can be as long as 3.0 m and as wide as 0.9 m. A figure has been included below to illustrate the dimensions of different non-standard bicycles.



Typical dimensions for non-standard bicycles. Source: BC Active Transportation Design Guide

4.4.2 ESTIMATED IMPACTS

Based on the site's proposal to provide 100% of the long-term bicycle parking in a secured facility with access to a 110V wall outlet, and to provide non-standard bicycle parking spaces for 10% of the residential long-term spaces and 20% of the non-residential spaces for hotel staff, a **5% reduction to residential demand and non-residential demand** is supported. The current proposed design of non-standard long-term bike parking spaces complies with best practices, based on size and ground-mounted orientation.

In addition to the long-term non-standard bike parking, the proposed site also offers precinct-level benefits through its inclusion of 5 energized short-term bike parking

spaces plus 3 spaces suitable for larger non-standard cargo bikes, one of which would be energized.

4.5 BICYCLE MAINTENANCE AND WASH FACILITIES

Site-Level & Precinct-Level TDM Measures

4.5.1 OVERVIEW

Residential developments can provide dedicated on-site bicycle maintenance facilities, such as bicycle repair tools, pumps, wash stations, etc., to support ongoing bicycle use among building users.[21] This is particularly beneficial for residents living in smaller dwelling units where space is at a premium and/or access to a bicycle repair service may be inaccessible or present a financial barrier. The site is proposing to include a bicycle maintenance facility on the same floor as the long-term bike parking. Such a facility would typically include the following amenities at a minimum:

- **Repair Tools:** Bicycle repair tools including: two identical tire levers; two screwdrivers (one flat head and one phillips); double sized wrenches at following sizes 8, 9, 10, 11, 15, 32 mm; allen wrenches at the following sizes 2.5, 3, 5, 6, 8 mm; a tire pump that works with Schrader and Presta valves.
- **Bike Repair Stand**
- **Lighting**: The facility should be well-lit (inside and out).
- **Information:** Cycling network maps, information on bicycle shops, and an advertising space for scheduled events.

In addition to the above, **a bike wash station** with a hose and drain is also proposed to be located as part of the interior amenities in the detailed design.

[21] Victoria Transport Policy Institute. (2015). *Parking Management: Strategies for More Efficient Use of Parking Resources*. Retrieved from: www.vtpi.org/tdm/tdm28.htm#_Toc128220491

An **exterior public bike maintenance facility** is also proposed for the site along its Fairfield Road frontage that would include bicycle repair tools, and pump.

The inclusion of bicycle repair station amenities to the proposed development would typically result in a parking demand reduction as they would promote cycling for residents by providing accessible and functional facilities.

Example of an all-in-one bicycle maintenance station. (Image source: Dero, Kearney Centre)

4.5.2 ESTIMATED IMPACTS

A **2% reduction** in resident parking demand is supported with the provision of a bicycle maintenance facility. The public bicycle maintenance facility also represents a precinct-level benefit that directly supports GoVictoria's Initiative 3 - Accelerate Accessible and Active Transportation.

4.6 END OF TRIP FACILITIES

Site-Level TDM Measure

4.6.1 OVERVIEW

Bicycle end-of-trip facilities encourage the use of cycling. These facilities typically contain change rooms and showers, bicycle repair tools, and personal lockers. The provision of end-of-trip facilities has the potential to reduce parking demand. In particular, providing showers and clothing lockers at workplaces has been found to be effective at encouraging bicycle use, particularly among commuters who require professional clothing attire.

The facility would be access controlled and should include the following:

- **Personal lockers:** A combination of day lockers and long-term lockers provided for storing helmets, cycling clothing/gear, and other personal items.
- **Showers and change rooms:** Showers and change rooms should be available.

A common best practice is to provide at least one on-site shower with a changing facility for any building with 100 or more workers (per gender), with an additional shower for every 150 new workers thereafter.

4.6.2 ESTIMATED IMPACTS

A **2% reduction** in non-resident parking demand is supported with the provision of end-of-trip facilities, which are currently incorporated in the design and intended for use by site hotel staff.

4.7 SHARED E-BIKE PROGRAM + SPACE PROVISION FOR PUBLIC BIKESHARE

Site-Level and Precinct-Level TDM Measure

4.7.1 OVERVIEW

Bikeshare programs enable users to make use of a shared fleet of bicycles, typically administered through payment systems, membership and pass fees, and per-hour usage fees. The programs may be public and open to anyone within a community who has signed up, downloaded the app and provided payment information (such as current bikeshare programs in the cities of Vancouver and Kelowna), or they may be privately based and focused on serving the residents or users of a specific residential or hotel development, large employer site or post-secondary campus.

Two examples of pubic bikeshare systems, including one with bicycle docks (City of Vancouver's Mobi system, top) and a dockless HOPR model with home zone's for bicycles indicated using pavement markings (bottom).

Depending on the type of system and program used, bicycles can be standard fully pedal powered models or pedal assist e-bikes. They may also use docking stations or may be "dockless," with drop off zones typically indicated through pavement markings and iconography that correspond to geofenced "home" locations indicated through GPS. (The fully dockless model that was previously used by the now defunct U-Bicycle program in Victoria has now generally fallen out of favour in the bikeshare industry).

As there is currently no public bikeshare program within the City of Victoria at this time, there is an opportunity to implement a **site-based bikeshare program** at the site that would make use of e-bikes. However, there is also an opportunity as part of the site's exterior design to **designate a contingency space to support a public bikeshare program** should the City implement one in the future. Both opportunities are discussed here.

- **Site-Based E-Bikeshare Program** - E-bikes are electric bicycles with an electric motor of 500 watts or less and functioning pedals that are limited to a top speed of 32 km/h without pedalling. They are an emerging transportation mode that is 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.

  A 2018 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, it found that 62% of e-bike trips replaced trips that otherwise would have been taken by car.[22] A more recent study found that approximately 39 kilometres of driving per week is displaced by the average e-bike adopter along with 14 kilometres of travel by conventional bicycle.[23] Lastly, a 2020 study found that people who purchased an e-bike increased their bicycle use from 2.1 to 9.2 km per day on average.[24]

  The proposed development includes provision for a shared e-bike program with 11 bicycles that would be available for use by residents, site staff and hotel guests. The development has secured a letter of interest from bike and scooter sharing company HOPR[25] which would provide the required app and

[22] MacArthur, J., Harpool, M., & D. Scheppke. (2018). A North American Survey of Electric Bicycle Owners. National Institute for Transportation and Communities, NITC-RR-1041.
[23] Bigazzi, A & E Berjisian. (2019). Electric Bicycles: Can they reduce driving and emissions in Canada. Plan Canada Fall 2019.
[24] Fyhri, A & H.B. Sundfor. (2020). Do people who buy e-bikes cycle more? *Transportation Research Part D*, 86, 1-7.
[25] HOPR: https://gohopr.com/

administrative support. Such a program would provide a transportation option to residents who may not own a vehicle or for residents who own a vehicle but may not require it for all trip purposes. By extending it to site staff and micro-hotel guests, the program also provides the ability to reduce emissions and reliance on vehicles for others working at the site or visiting in the area. HOPR's letter of interest is included as Appendix A to this report.

The e-bike program would include the following:

- The e-bikes would be owned and maintained by the building, with maintenance provided under contract by a local bike shop.
- The e-bikes would have designated spaces in a secure bike room.
- The process to reserve an e-bike would likely be first come first serve basis.

- **Space Provision for Potential Future Public Bike Share** – In addition to the proposed site-level e-bikeshare program, the site has also created space provision in its exterior site design for placement of a public bikeshare program should a modernized version of the program become reintroduced within the City in future. While the suggested site-level private e-bikeshare program would be the responsibility of the applicant to house and operate through contract with a bikeshare operator, operation of any future public bike share would be the responsibility of the City. However, as space for bicycles can be a limiting factor in deploying public bikeshare programs, there is opportunity as part of the site's redevelopment to plan for and designate potential space for this.

  The location of bikeshare, type of bicycles used, whether docked or dockless, and the feasible number of bikes for placement at any location would typically be decisions for the City and contracted bikeshare operator(s). However, the 780 Blanshard Street site design has included notional space provision for a public bikeshare location that meets the 8m by 4m specifications to host a 10-bike docked system since a docked system usually takes up more space.

  The suggested bikeshare provisional space has been placed on Fairfield Road for the following reasons:

- It is adjacent to the Fairfield Road transit terminus enabling multi-modal connections, as well as connection to the site itself.
- The suggested space is also nearest the Humboldt Street AAA bike facility, as well as surrounding other nearby multi-family residential, hotel, commercial, and institutional uses.
- It places all of the bikeshare bikes together on one location at the site rather than splitting them between multiple points, which is attractive to public bikeshare operators as it is easier to maintain and serve bikes if they are clustered.
- It offers more opportunities to potentially expand the number of bikes at the site if demand warrants it.

4.7.2 ESTIMATED IMPACTS

An **10% reduction** in residential parking demand is supported for the provision of a site-based shared e-bike program with 11 bikes (approximately 11% of the total residential units). This program would be available to all building residents and would also serve as a sustainable transportation option for site micro-hotel guests and staff. Furthermore, it is also noted that the shared e-bike program could help facilitate the use of the additional overnight parking available at 910 Government Street (approximately an 8 minute walk but only 3 minute bike ride) if used by micro-hotel staff as part of valet services. Overall e-bike utilization should be carefully monitored in the first year. If demand is consistently high, consideration should be given to adding more e-bikes to the fleet after year 1.

The placement of provisional space to support future potential public bikeshare is also a **precinct-level measure** that contributes to mobility options in the larger neighbourhood and which supports GoVictoria's initiatives 3 - Accelerate Accessible and Active Transportation and 5 – Rethink the Curb.

4.8 SPACE FOR TRANSIT VEHICLE ELECTRIC CHARGING

Precinct-Level TDM Measure

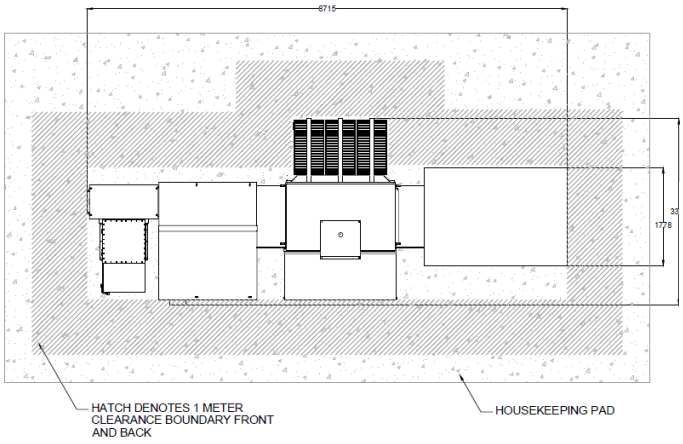
4.8.1 OVERVIEW

In conjunction with other transit improvements proposed for the site's Fairfield Road transit terminus, the applicant is proposing to potentially incorporate space that would facilitate placement of electrical cabinets needed to support future electric bus charging stations.

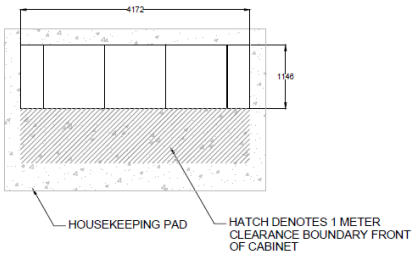
Example of transit vehicle overhead electric charging system at New Westminster's 22nd Street Skytrain Station (Image source: TransLink).

- Electric charging infrastructure at this location not only provides the opportunity support the transit system's shift to zero emission vehicles, but it would also reduce the noise and emissions of transit vehicles in the area, which will have benefit for all surrounding residences.
- Rapid charging equipment costs are very high (in the upper six figures) and as such charging infrastructure would typically be funded and owned by BC Transit, which is an entity that would also be able to access federal and provincial funding streams for this.
- While a final equipment vendor has not been selected, BC Transit provided the following diagrams to show their desired space requirements for electrical equipment to support bus charging as well as future electrical requirement considerations. This includes typical dimensions and clearances for the supporting substation, charging cabinet and pantograph. When discussing placement of these elements with the project team, BC Transit advised that the conceptual placement of the charging cabinet away from the active passenger zone and in a proposed space closer to the building on the Fairfield Road frontage would work.

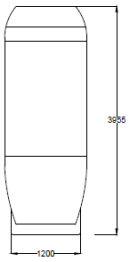
Bus EV Charger Substation, Cabinet and Pantograph Typical Dimensions



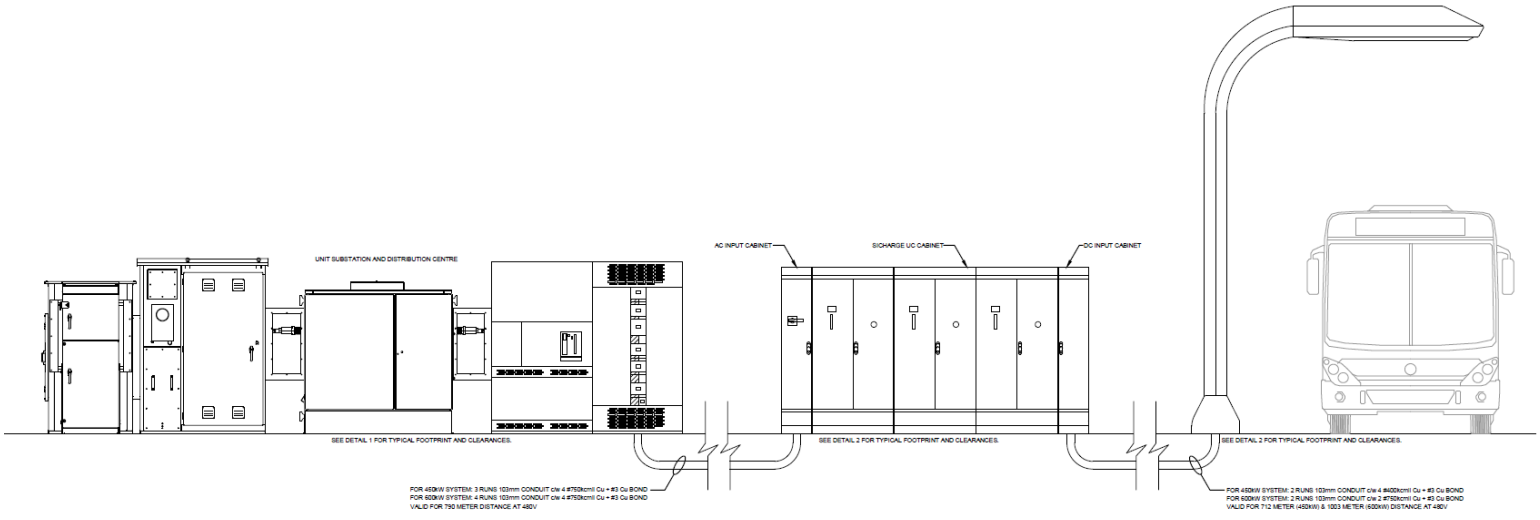
DETAIL 1 1:50 UNIT SUBSTATION PLAN VIEW



DETAIL 2 1:50 EV CHARGER CABINET AND PANTOGRAPH PLAN VIEW



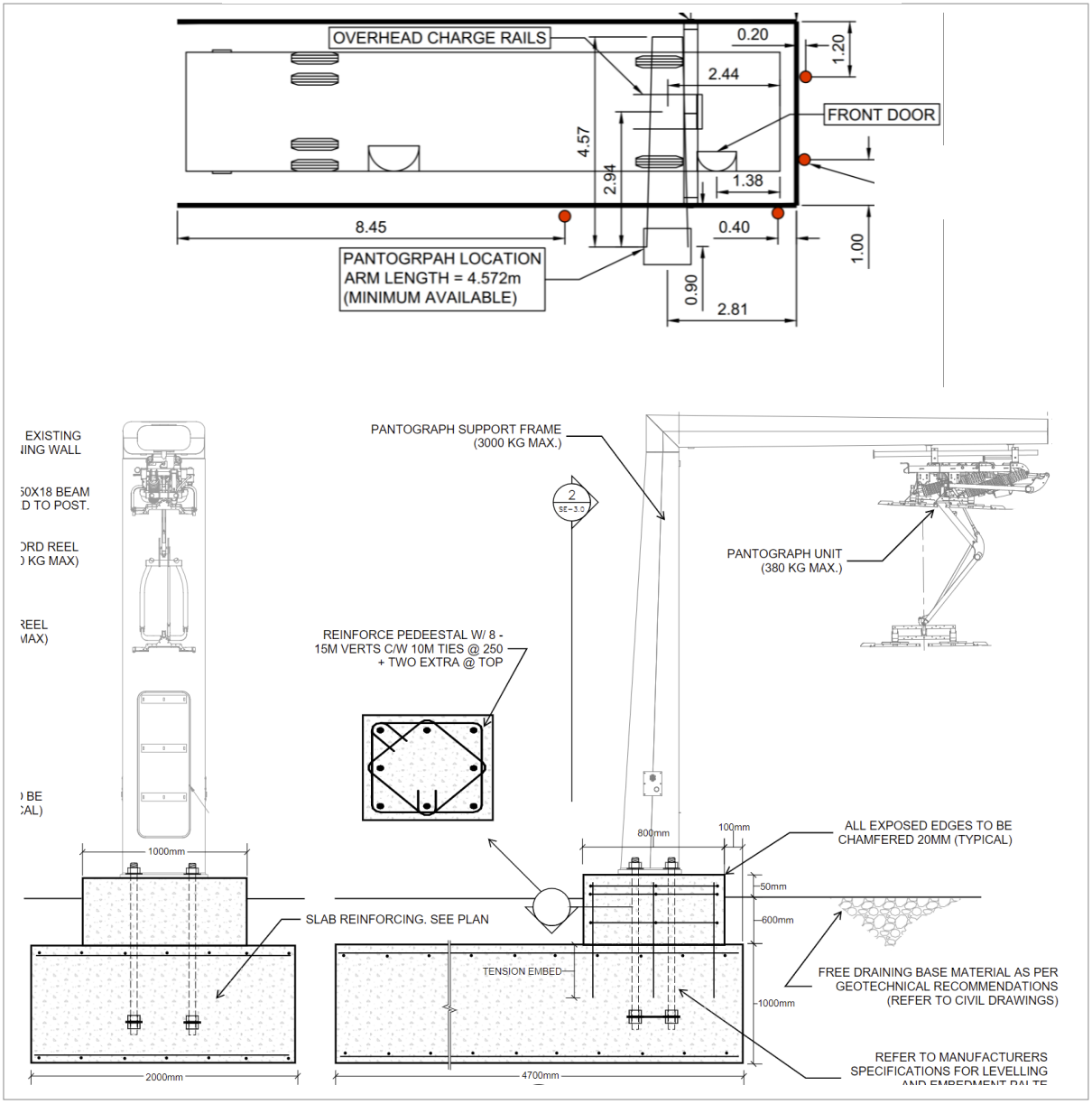
DETAIL 3 1:50 PANTOGRAPH PLAN VIEW



DETAIL 4 1:30 TYPICAL ELEVATION VIEW

- BC Transit also provided the following schematics showing charging pantograph alignment and dimensions, with the top image below showing relative placement of a bus when at the charging pantograph and the bottom diagram showing profile view including the required foundation. With these diagrams BC Transit also noted that as these drawings were excerpted from another project, the red bollards shown in the top drawing are not relevant.

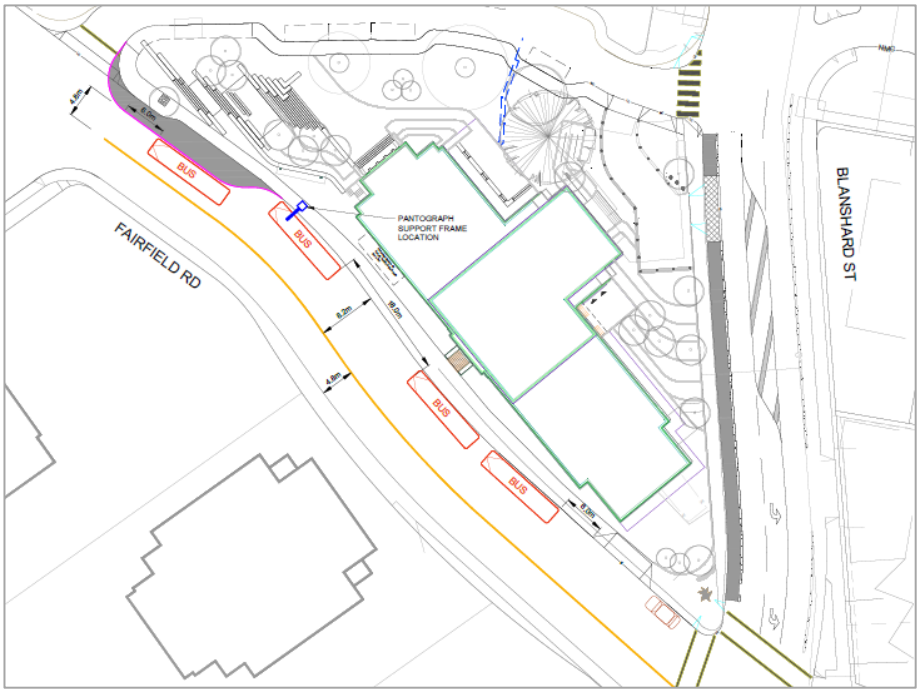
Charging Pantograph Dimensions and Placement



BC Transit had not yet decided on a minimum setback from the curb but advised to assume that it would be at least 0.5m and noted that buses need to park perpendicular to the pantograph for the charging rails to make proper contact and therefore a straighter curb on the approach to the charger, if possible, is desired in the 10-20m before the charger.

- BC Transit also provided feedback on the design and layout of transit area on the site's Fairfield Road frontage, which included the following requests as shown in the diagram below:
    - Add a "bus bulge" to the westmost end of the bus zone closest to the intersection of Fairfield Road at Burdett Avenue. This area would be where passenger activity would be focused, with buses pulling up to this spot to allow passengers to board.
    - Locate the bus charging area and pantograph in the next space behind this passenger zone, i.e. the area immediately east of the bus bulge.
    - Locate bus layover space in the remaining areas of the Fairfield Road frontage where practicable to do so.

Initial Fairfield Road Conceptual Design Showing Bus Bulge and Bus Zone Configuration



The resulting revised site design submission has incorporated the feedback from BC Transit into its transit elements, with the revised design showing the potential space provision that could accommodate placement of charging equipment if BC Transit wishes to pursue investment in charging infrastructure at this location in future.

The revised site plan also shows the proposed bus bulge, layover spaces and charging area, and complies with BC Transit's Infrastructure Guidelines. The area behind the bus bulge can accommodate three vehicles on layover (two in the designated layover spaces and one in the charging zone) if preserving the ability for buses to independently arrive and leave the charging area. However, it could potentially accommodate a fourth vehicle at peak times between the charging area and other two layover spaces if vehicles arrive and depart as "first in, first out."

Once out of the charging / layover area, buses would manoeuvre to the bus bulge to board passengers This would allow buses to serve a passenger stop without pulling out of the lane, reducing dwell times and creating space for passenger amenities. The distance shown between the northeast corner of Fairfield Road at Burdett Avenue and the front of the bus in the bus bulge complies with BC Transit guidance for nearside bus stops and therefore could enable the future placement of a crosswalk at that site.

The revised design also enables the placement of a parking space for a Modo carshare vehicle at the east end of the Fairfield Road frontage closest to Blanshard Street. (See **Section 4.11**)

4.8.2 ESTIMATED IMPACTS

The proposed Fairfield Road frontage design and potential space for electrical equipment would support BC Transit's ability to place electric bus charging stations at the terminus. If the applicant commit to this, this would constitute as a **precinct-level measure** that could [a] support a quieter neighbourhood (since the electric buses that would therefore be prioritized for that location would make significantly less noise than the existing diesel buses) and [b] provide a key opportunity to support the electrification of the Victoria Regional Transit System fleet and the continued development of the system. This measure also directly supports GoVictoria's initiatives 2 – Transform Public Transit and 4 Shift to Zero Emissions.

4.9 IMPROVED PASSENGER AMENITIES

Precinct-Level TDM Measure

4.9.1 OVERVIEW

Plans for the site include proposed improvements to amenities for waiting transit passengers. This includes the opportunity for additional seating and expanded waiting space for bus facilities on Fairfield Road integrated as part of the Penwill Green improvements and Fairfield Road bus bulge. The enhanced landscaping features and additional trees also work to integrate the transit zone as part of a complete street and give it a sense of place. Expanded transit passenger facilities could also potentially be designed to include placement by BC Transit of electronic real time "next bus" displays at the terminus.

4.9.2 ESTIMATED IMPACTS

As both **building-level** and **precinct-level** TDM measures, the proposed transit passenger amenity improvements make it more pleasant and convenient to take transit to the site, and support neighbourhood transit ease of use and ridership. These measures also directly support GoVictoria's initiatives 2 – Transform Public Transit.

4.10 TRANSIT PASS PROGRAMS (RESIDENTIAL + EMPLOYEE)

Site-Level TDM Measure

4.10.1 OVERVIEW

The site has excellent transit access, both in terms of its proximity to the Fairfield and Blanshard Transit Terminus and nearby access to existing and future Rapid Transit, Frequent Transit and Local Transit routes on Douglas Street and other stops within the downtown area. Based on this, transit will be appealing to future residents, site customers and employees.

A recent study by the Urban Studies Program at Simon Fraser University in Vancouver, BC shows the impact of transit subsidies on hotel employees in Vancouver. The study found that between 4-10% of employees became new transit commuters when a new 15% transit subsidy was made available and between 9-14% of employees became new transit commuters when a 50% subsidy was made available.[26] The effect of the subsidy was particularly noted in cases where pay parking was in place and where the workplace was located near rapid transit.

In Victoria, the transit pass programs are developed in concert with BC Transit and can include:

- 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.

[26] Hall, P., Perl, A., Sawatzky, K., & S. Tornes. (2021). Employer-paid transit subsidies and travel behaviour: Experimental evidence from Vancouver hotels. *Journal of Urban Mobility (1), 1-8.* Retrieved from https://tinyurl.com/efsps7rz

- EcoPASS program terms thus far have been for one year but BC Transit is able to accommodate programs for a longer period of time; the length of the program is typically contingent on the size of the parking variance and the number of units. BC Transit also confirmed that the EcoPASS program assigns passes to units and not individual residents. Developers are required to submit a record of the person to whom each pass is assigned in order for BC Transit to provide replacement passes and to discourage fraudulent use or resale. A 3-5 year commitment is typically desired. At $1,000 per pass and 98 condominium units, that represents $98,000 per year (or $294,000 and $490,000 for 3 years and 5 years, respectively).

- **The ProPASS program** is a permanent bus pass purchased by an employee through payroll deductions. The program's primary goal is to reduce rush-hour traffic by encouraging employees to use transit whenever possible and has thus far been a major contributor to increasing transit ridership. In the case of a potential hotel use, the structure of a ProPASS program for hotel employees would be relatively straight forward.

  The key elements of the ProPASS program are as follows:
  - Paid through ongoing payroll deduction, over a 12-month period.
  - To join the program, an employer must have at least five employees who are willing to enroll; the ProPASS is valid as long as the employee remains on the payroll deduction program.
  - Employees are required to sign on for one year. Employees may opt-out of the ProPASS Program if their work shift changes, or they have a change in job or residence that makes the ProPass ineffective for them.

BC Transit staff have indicated that since these two pass programs have now recently transitioned over to the Umo electronic fare platform, they may be restructuring some of the pass programs. BC Transit staff are in the process of developing a new proposal for EcoPASS which they are anticipating to put forward to the Victoria Regional Transit Commission (VRTC) for consideration in spring 2024.

- These changes could create a total transit pass fund for the development in line with the current per pass and unit amounts described for the existing EcoPass program.
- Passes assigned to site residents (and potentially employees) could draw upon this fund, with each trip taken by registered residents deducted from this total pass budget.
- This would optimize usage of the funds by allowing multiple residents in each unit to receive passes or alternately to allow the passes to be extended over a longer period of time if fewer residents take advantage of the program.
- The other advantage of this potential change is that it would potentially provide BC Transit and local governments such as the CoV with improved data on usage of the program and the ridership it generates.

Therefore, due to the above potential upcoming changes to the EcoPASS program, BC Transit staff recommended that any wording or agreement related to EcoPASS be calculated using the current practice but be expressed as a total proposed transit pass budget allocation, with the final formal agreement of how that budget is applied to the EcoPASS program developed closer to the time of building occupancy so that it reflects the most current version of the program at that time.

4.10.2 ESTIMATED IMPACTS

Due to the location of the site, if the applicant is able to secure and administer a transit pass program for residents and employees, up to a **15% reduction** in residential parking demand and **5% reduction** in non-residential would be supported depending on the level of subsidy.

4.11 CARSHARING

Site-Level and Precinct-Level TDM Measure

4.11.1 OVERVIEW

As indicated in **Section 1.2**, there are 15 Modo vehicles within 500 m of the subject site. Supporting the continued expansion of Modo vehicles and availability, the site is proposing to add **three designated Modo carshare spaces - two along its improved Burdett Avenue frontage and one on Fairfield Rd – three electric Modo cars, and the curbside EV charging equipment to service them.** Installation of the chargers creates the potential for a public vehicle charging space on Burdett Avenue between the two Modo space since each charger is capable of charging two vehicles and via a pole mount it is feasible to reach the middle site. If the third space is not supported by the City in this area, the public space can be removed and the two Modo spaces retained to serve residents and visitors to the area.

It is also proposed that accompanying Modo memberships be provided for all residential units and $100 promotional credits be provided to each new sign up as a further incentive. As a potential option, one of the three spaces could instead be allocated as a parking space for Evo Car Share instead but this would be a precinct-level measure that would not have a quantifiable impact on building transportation usage and therefore parking demand.

Part of the reason why carsharing is expanding locally and being supported by municipalities is because of its ability to reduce household vehicle ownership and parking demand.

A 2018 study from Metro Vancouver analyzed 3,405 survey respondents from carsharing users in the region and found that the users of Car2go and Modo reported reduced vehicle ownership after joining a carsharing service. The impact was larger for Modo users; households joining Modo reduced their ownership from an average of 0.68

to 0.36 vehicles. Further, Modo members were close to five times more likely to reduce car ownership compared to Car2go users. Additional research has found the following:

- A 2016 study in San Francisco reported that the potential for carsharing to reduce vehicle ownership is strongly tied to the built environment, housing density, transit accessibility, and the availability of parking.[27]

- 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. The study surveyed residents of buildings with and without carshare vehicles. The study found that the presence of dedicated carshare vehicles has a statistically significant impact on reduced vehicle ownership and parking demand. Specifically, 29% of carshare users gave up a vehicle after becoming a member and 55% of carshare users decided against purchasing a car because of carsharing participation.[28]

While a study has not yet been completed in Greater Victoria to understand the impacts of carsharing on vehicle ownership or the specific placement of the vehicle, the results would likely be similar especially for households living in more urban areas such as Victoria where there is greater access to multiple transportation options.

A letter of interest from Modo is attached as Appendix B.

4.11.2 ESTIMATED IMPACTS

The proposed carsharing initiatives are both a **building-level** and **precinct-level** TDM measures.

The proposed addition of three Modo electric vehicles and charging equipment adjacent to the site plus a Modo membership for each unit ($500 non-refundable membership

[27] Clewlow, R.R. (2016). Carsharing and sustainable travel behaviour: Results from the San Francisco Bay Area Transport Policy, 51, 158-164.
[28] Engel-Yan, D., & D. Passmore. (2013). Carsharing and Car Ownership at the Building Scale. Journal of the American Planning Association, 79(1), 82-91.

per unit) would allow residents to access Modo vehicles without paying the up-front membership cost and only pay for usage.

With the applicant's commitment to the purchase of three Modo cars (which come with associated memberships for each unit), a **reduction of 25%** in resident parking demand is supported.

In addition to expected reductions to the building's residential parking demand, the addition of further Modo spaces also better enables other residents and daytime employees in vicinity to the site live car-free or reduce their reliance on private vehicles. Similarly, the electric-charging infrastructure and the electric Modo vehicles that would be available can help to reduce emissions in the neighbourhood. Use of curb space for Modo also enables this space to be used by as many potential vehicle users (i.e. carshare members) as possible. These measures therefore also directly support GoVictoria's initiatives 4 – Shift to Zero Emissions and 5 – Rethink the Curb.

As mentioned previously, one of the three Modo spaces could instead be allocated as a parking space for Evo Car Share but this would be a precinct-level measure that would not have a quantifiable impact on the site's transportation usage and therefore parking demand.

Creating a public EV charging space with the infrastructure in place for the car share vehicles similarly creates a precinct level amenity that would not have a quantifiable impact on the site's parking demand.

4.12 CURBSIDE MANAGEMENT

Site-Level and Precinct-Level TDM Measure

4.12.1 OVERVIEW

In addition to proposed space for three carshare vehicles, the applicant is also proposing reconfiguration of curbing and vehicle space in its vicinity to serve other transportation and goods movement needs. These include:

- **Short-term pick up and drop off vehicle parking areas** that are integrated into the site's front plaza to support both the hotel and residential uses.
- **A further short-term parking zone created through the realignment of the south side of Burdett Avenue.** This on-street zone would serve the site—particularly in the case of a hotel use—and would also enable reconfiguration of the space to serve a variety of destinations in the precinct, including the transit terminus and other area institutional, office and commercial locations. This space could serve short term passenger drop off and pick up needs of private automobiles, commercial loading for food delivery or courier vehicles, taxis / ride-hailing vehicles, or could also be designated in future as a parking space for EVO carshare vehicles. Finally, the inclusion of such a space also supports resident use of the off-site parking associated with the site since it would enable them to pick up or drop off heavier items at their residence before then moving their vehicle to the off-site parking space in the 600 block of Blanshard Street at St. Ann's Academy
- **Loading zone** located on-site on Fairfield Road near the corner of Blanshard Street.

4.12.2 ESTIMATED IMPACTS

The curbside management changes are both a building-level and precinct-level TDM measures that help to manage vehicles in the vicinity of the site. These measures also directly support GoVictoria's initiative 5 – Rethink the Curb.

4.13 WELCOME PACKAGE

Site-Level TDM Measure

4.13.1 OVERVIEW

Travel behaviour research has shown that people that move to a new place or start a new job have a behaviour change opportunity as they need to determine travel options and are more willing to try new modes of transportation. Providing information about alternatives to driving alone before that decision has been finalized can increase the rate at which residents carpool, bike, walk, or take transit to work and other types of trips. It is an opportunity to create a new behaviour rather than change an existing habit.

The purpose of a TDM-focused welcome package to all new building occupants and staff is about educating them about transportation options available at their new residence or employer. This package is meant to include information and incentives related to alternative transportation modes to owning a vehicle such as transit, cycling and carsharing.

Incentives and promotions have been valuable in encouraging use of alternative modes of transportation. However, if residents and site staff are not aware of the available TDM options, they will likely not consider using them. Information about available TDM programs for the site should be included as part of marketing the development and as part of a welcome package for new tenants. Marketing the TDM programs is particularly valuable for influencing travel behaviour. In particular, information about carsharing and the proposed shared e-bike program should be actively part of marketing efforts. Carsharing could provide future residents / employees with viable transportation options that may allow them to not own a vehicle at the site. Therefore, marketing this information can be an important incentive for prospective tenants.

Once residents move into the site and for established employees, on-going contests, promotions, and incentives should be used to maintain awareness of the available TDM programs. The use of an annual week-long contest—similar to a commuter challenge or Victoria's Go by Bike Week—would encourage use of alternative transportation modes

that residents or staff may not normally consider or try. Prizes for participation and high TDM utilization could include gift certificates for local grocery stores, complimentary gym passes for the Crystal Pool and/or the YMCA, BC Transit vouchers or bicycle equipment such as helmets and bike lights.

4.13.2 ESTIMATED IMPACTS

A **2% reduction** in resident parking demand and **2% reduction** in non-resident parking demand would be supported for the provision of a TDM-focused welcome package that includes at minimum the following:

- BC Transit map
- BC Transit tickets (minimum 10 tickets per unit)
- CRD Bike Map
- Minimum of $500 per unit, provided in the form of a gift card as an incentive for the purchase of a bike (monetary incentive will be available only for use at designated bike stores in the area)
- Information on other TDM programs offered at the site

4.14 TDM SUMMARY

Table 5 on the following page is a summary of the recommended TDM measures and their potential impact on parking demand, as well as description of the benefits of the precinct-level measures that could lower parking demand in the larger area and City.

A resident parking demand reduction of 69% is supported if all the proposed TDM measures are provided. A reduction of 22% for non-residential uses is also supported.

For the total site (residential plus hotel/food and beverage service use) the estimated total parking demand reduction is 57 spaces, leaving a shortfall of 22 spaces based on the proposed supply. This gap would need to be managed through the parking management policies described in **Section 5.0**.

TABLE 5. SUMMARY OF TDM MEASURES + PARKING DEMAND REDUCTIONS

TDM Option	Approx. Reduction (Percentage)	Approx. Reduction (# of spaces)	Approx. Reduction (Percentage)	Approx. Reduction (# of spaces)	Precinct-Level Benefits?	Precinct-Level Measure Benefit Description (Initiatives that may not be quantified for direct building parking demand reduction but which will contribute to reduced vehicle demand in area and City)
4.1 Pedestrian & Accessibility Improvements	-	-	-	-	✓	New pedestrian access on the southside of Burdett Avenue, pedestrian plaza, improved accessibility.
4.2 At-Grade Bicycle Parking Entrance	4%	3	4%	1		
4.3 Additional Long-term Bike Parking	6%	4	4%	1		
4.4 Non-Standard Bike Parking	5%	4	5%	1	✓	Proposal also includes exterior public energized bike parking spaces and non-standard bike parking spaces.
4.5 Bicycle Maintenance & Wash Facilities	2%	1	-	-	✓	In addition to the internal bike maintenance facility within the building, a public one is also proposed.
4.6 Bicycle End-of-Trip Facilities	-	-	2%	2		
4.7 E-Bikeshare Program / Public Bikeshare Space	10%	7	-	-	✓	E-Bikeshare program available to residents, hotel staff and guests. Provision for space for potential future public bikeshare
4.8 Potential Space for Transit Vehicle Electric Charging	-	-	-	-	✓	Reduced emissions and noise from buses parked on Fairfield Road.
4.9 Improved Passenger Amenities	-	-	-	-	✓	Supports transit network and streetside amenities; depends on amenity contribution negotiations and land lift analysis
4.10 Transit Pass Program (Residential; Employee)	15%	11	5%	1		
4.11 Carsharing - 3 Modo Spaces + Membership	25%	18	-	-	✓	Increased car share availability for the whole area, reduced emissions due to EV charging.
4.12 Curbside Management	-	-	-	-	✓	Increased flexibility for residents using off-site parking, others accessing area.
4.13 TDM Welcome Package (Residential; Employee)	2%	1	2%	0		
Total Estimated Parking Reductions by Land Use	**69%**	**50**	**22%**	**7**		
Total Site-Level Estimated Parking Reductions (Residential + Hotel Uses)		**57**				
Total Proposed Parking Supply		**27**				
Total Remaining Parking Shortfall to be Addressed Through Parking Management Strategies		**22**				

5.0 PARKING MANAGEMENT STRATEGIES

The historic approach to parking management in cities has been to provide space to accommodate the anticipated demand. However, in constrained urban sites and increasingly as a best practice, the other approach is to manage demand to fit the available supply.

This second approach has become increasingly feasible as more people seek to live in vibrant walkable settings that do not require ownership of a car, particularly among younger generations. For instance, the Capital Regional District's 2017 Origin-Destination Household Travel Survey showed that vehicles per household in Victoria's downtown was 0.66 vehicles per household. This confirms that parking demand is already low in the downtown core and that many of the larger sustainable transportation improvements either already undertaken or planned within the City are expected to only further reduce vehicle parking demand.[29]

The applicant is proposing to manage the residential components of the site once constructed. As such, there are three strategies that are available that could be pursued by the applicant to limit vehicle ownership at the site and monitor parking demand. The strategies are as follows:

1. **Marketing a Car Free Lifestyle** | The building's residential units—and potentially those of the hotel—could be specifically marketed as a location where tenants or owners do not require a vehicle. Given the site's proximity to downtown Victoria's many services and the many immediately adjacent transportation options, future residents can benefit from a car free lifestyle, which can allow them to realize significant costs savings. The details of a marketing plan would be determined at a later time, but it is suggested that it be premised on a vibrant downtown Victoria "car free" lifestyle with convenience and options at their door step. Further, to help prospective

[29] https://www.crd.bc.ca/docs/default-source/regional-planning-pdf/transportation/crd-2017-od-survey-report-20180622-sm.pdf?sfvrsn=4fcbe7ca_2

residents better understand the full costs of owning a vehicle, the applicant could utilize or adapt the CAA driving costs calculator as part of the marketing plan.[30]

2. **Parking Pricing** | Aside from marketing a car free lifestyle, the chief way of managing parking demand is through parking pricing. The applicant is proposing that off-street parking supply for the residential uses be unbundled from the purchase price for each unit. Parking spaces will be sold or rented separately from the residential units, so that residents have the option of purchasing a parking space at an additional cost. Therefore, the property buyer could save money by not purchasing a parking space.

   Similarly, it is proposed that parking costs for hotel guests be unbundled from the cost of a stay at the site so they are subject to parking prices at market rates in the downtown (where parking is upwards of $16 per day). This would act to disincentivize guests with cars from staying at the site, while also promoting the site's easy access to other modes. The hotel rooms are proposed to be smaller "micro-hotel" rooms, which cater toward more price sensitive customers. These customers may be especially disincentivized compared to customers of typical hotel properties. Separate parking payment would also help to offset potential valet costs, such as if the parkade at 910 Government Street is used to help handle any overflow of parked vehicles from overnight guests.

   To make a difference on parking demand, the pricing must be high enough that residents with vehicles will self-select away from purchasing a residential property in the building, such as making it clear that parking is offsite and costs extra.

3. **Parking Demand Monitoring** | Given the unique nature of this development and its uses, the proponent could also commit to closely monitoring overall

[30] More information about the Driving Costs Calculator is available online at: https://carcosts.caa.ca/

parking demand once the building is constructed and operational. This monitoring could also potentially include undertaking a follow up parking study for the site 1-2 years post-completion. Doing so would enable the applicant to adapt its parking management approach by re-allocating parking spaces between uses if demand warrants. It could also explore TDM strategies or other parking options to manage parking demand for residents and other users, such as potentially further exploring how additional parking available at 910 Government Street may be used to offset demand depending on time of day and season.

Finally, committing to undertaking a follow up study would also provide valuable data to the City of Victoria as it continues to refine its approaches to parking to support heritage preservation, the larger GoVictoria sustainable mobility goal of reducing use of single occupant vehicles, and overall increases to housing availability and mobility choice.

6.0 CONCLUSIONS

The proposed redevelopment of the heritage building at 780 Blanshard Street includes 98 residential condominium units, plus a 96-unit micro-hotel and 136m^2 in its related food and beverage service areas. The heritage nature of the site's existing building and desire to retain it precludes underground parking and the site's topography and physical constraints also limits any on-site surface space that can be used for parking. Due to these constraints, the proposed off-street parking supply for the building is 27 vehicle spaces (2 accessible on-site spaces plus 25 off-site spaces), as well as 161 long-term secure bicycle spaces and 19 public short-term bicycle spaces, of which 5 would be energized for plug in by e-bikes and 3 would be larger and suitable for non-standard bicycles such as cargo bikes.

The parking requirement for the site based on the City of Victoria's Zoning Bylaw No. 80-159 (Schedule C) is 106 vehicle spaces. This includes 72 condominium resident spaces, 10 visitor spaces and 24 spaces associated with the micro-hotel. The totals exceed the proposed supply by 79 vehicle spaces.

Since the expected parking demand exceeds parking supply, the applicant is proposing to commit to a comprehensive suite of TDM measures presented in **Section 4.0** to reduce vehicle parking demand and bring it closer to the proposed supply. Any in kind contribution to the public realm (e.g. Penwill Green improvements) and/or the interior of the building will need to be contemplated in conjunction with the land lift analysis, should the residual value allow for such provisions. The total expected parking shortfall, if all TDM measures are adopted, is 22 parking spaces. Managing the expected remaining shortfall—which may be less than shown due to the hotel being a micro-hotel and the food and beverage services currently expected to be unstaffed self-serve areas—will require use of parking management strategies like those presented in **Section 5.0**. The expected parking shortfall does not account for other potential reductions to vehicle use at the site and surrounding area due to precinct-level TDM measures whose impacts are harder to quantify.

7.0 RECOMMENDATIONS

The subject site presents a unique situation with also potentially unique opportunities.

A key factor influencing the currently proposed limited parking at the subject site is **its nature as a heritage building** which is constrained by its lot size, geographic shape, and topography. **Therefore, preservation of the building precludes the ability to add underground parking.**

However, the site also provides tremendous opportunities to build towards the City of Victoria's larger land use, housing and sustainable transportation goals expressed in its Official Community Plan and its GoVictoria Sustainable Mobility Strategy. It also presents opportunities to support BC Transit's objectives of developing the Victoria Regional Transit System and fully transitioning its fleet to zero emission vehicles.

Therefore, it is recommended that the applicant commit to working with the City and BC Transit to implement the TDM and parking management measures and any kind contributions outlined in Sections 4.0 and 5.0 to best align parking supply and demand. It is in the best interest of the applicant, the City of Victoria and the site's occupants / visitors to aim for the preservation of the heritage building which at the same time offers opportunities / challenges accommodating parking / alternative measures to fit the site and immediate context needs.

APPENDIX A: LETTER OF INTEREST FROM HOPR

May 13, 2022

Reliance Properties
305-111 Water St
Vancouver, BC V6B 1A7

Attention Jonathan Lim

Dear Jonathan,

Re: E-Bikeshare Program at 780 Blanshard Street, Victoria

This letter confirms that HOPR is interested in potentially supporting a bikeshare program at the proposed mixed-use development at 780 Blanshard Street in Victoria, particularly if a public bikeshare program is still not available within Victoria by the time of the building's completion.

We understand that the proposed development encompasses 102 residential units plus a 77-unit hotel. The proposed site plan for the development includes a secure bike storage room designed to store and support an 11 e-bikeshare program that could be used by site residents and hotel guests.

HOPR is US-based company in business since 2011 that supports community sharing of bikes and scooters. HOPR supports private bikeshare programs in a range of communities and contexts, including the University of British Columbia's bikeshare program, existing development-based bikeshare programs in Victoria and elsewhere, and many existing hotel-based bikeshares in Chicago and Florida.

If using our typical private bikeshare model for the 780 Blanshard Street development:

- Reliance Properties would purchase the 11 ebikes from our company and subscribe to our program, which in turn would facilitate user access to our app and the e-bikes.
- Reliance would also provide the space for the bikeshare on the site.
- As HOPR does not currently have any staff in Victoria, maintenance for the bikes would need to be arranged by Reliance, usually via contract with a local bike shop.

The HOPR private bikeshare model uses GPS on the bikes and geofencing to designate where "home" is, such as the proposed bikeshare bike room (as well as any other permitted spaces that can be used as an official drop off zone). Users are typically charged a per minute or per hour fee and are not charged until the trip has ended. If the bike is not returned, an additional fee is applied. Users download the app and provide

payment info to HOPR. This model means that users could for instance check out a shared ebike from the 780 Blanshard Street development, go to the grocery store or other destination(s) and lock up there using the lock on the bike, and then bring it back. This is similar to the same model used by Modo carshare.

HOPR is interested in potentially working with 780 Blanshard Street and to increasing mobility choice and access to its residents and visitors and reducing car dependence in our communities.

Sincerely,

Mia Kohout
on behalf of Cyclehop Corp Canada (dba HOPR)

APPENDIX B: LETTER OF INTEREST FROM MODO

INFORMATIONAL AND NON- BINDING

April 06, 2022

Reliance Properties
305 - 111 Water Street
Vancouver, BC V6B 1A7

Attention: Jonathan Lim

Dear Jonathan,

Re: Carshare arrangements at 780 Blanshard Street, Victoria

This letter confirms that Modo sees the location of the proposed mixed-use development at 780 Blanshard Street in Victoria as having good potential for carsharing. Under the following arrangements, Modo would be willing to enter into an agreement with Reliance Properties (the "Developer") to provide carsharing services:

1. Developer will arrange, at no cost to Modo, the provision of three (3) surface level, ungated, designated parking stalls at/adjacent to the proposed development and each equipped with a Level 2 electric vehicle charging station;

2. Modo will review the final parking drawings and visit the development site to ensure that the stalls to be designated for Modo are suitable for Modo's operational needs;

3. Assuming occupancy of the proposed development in 2027, the Developer will provide Modo with financial contribution of $99,000.00 plus GST (the "Project Fee") to be used by Modo toward the ownership costs of three (3) new shared vehicles with electric motorization to be located in the parking stalls designated for carsharing;

4. Modo will provide Developer with a multi-user membership in Modo with a public value equivalent to the Project Fee, valid for the lifetime of the proposed development and allowing a minimum of 207 occupants of the proposed development to simultaneously benefit from Modo membership privileges and lowest usage rates without the need to themselves pay a $500 membership fee; and

5. Modo will provide a promotional incentive worth $100 of driving credits to each resident joining Modo for the first time.

Based on demand for Modo carsharing services upon occupancy of the proposed development, Modo, at its sole discretion, may phase the delivery of one of the three shared vehicles until demand warrants such shared vehicle to be added. Modo's capacity to support three shared vehicles at this location and ensure positive long-term outcomes is contingent on the possibility to employ such implementation tactic

Modo is interested in working with 780 Blanshard Street and be part of the development at 780 Blanshard Street whose occupants and nearby residents may no longer need to own a car of their own for their personal and business needs.

Thank you for your support of carsharing.

Regards,

Sylvain Celaire
Director of Business Development