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Victoria High School
PARKING STUDY

Prepared for
Greater Victoria School District

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1.0 INTRODUCTION

Urban Systems Ltd. was retained by the Greater Victoria School District (School District no.61) to complete a parking study for the proposed seismic upgrades and addition to Victoria High School. This study is a comprehensive review of the parking requirement, parking supply needs and transportation demand management (TDM) opportunities associated with the proposed expansion.

1.1. LOCATION

Victoria High School is located at 1260 Grant Street in the centre of the Fernwood neighbourhood in the City of Victoria. Refer to **Figure 1**.

FIGURE 1. VICTORIA HIGH SCHOOL CONTEXT MAP

1.2. CONTEXT

1.2.1. Land Use

Victoria High School is within the City of Victoria. The City's Official Community Plan (OCP) identifies the site as **Public Facilities, Institutions, Parks and Open Space**[1]. See **Figure 2**. Areas designated as Public Facilities, Institutions, Parks and Open Space consist of recreational, institutional, or educational buildings prominently sited in landscaped open space and formal grounds with variable heights.

Neighbouring land uses are primarily designated Traditional Residential, with Small Urban Village uses within the Fernwood Village and higher-density Urban Residential uses to the south of the site.

FIGURE 2. URBAN PLACE DESIGNATIONS, VICTORIA OCP

[1] City of Victoria Official Community Plan, page 37. Retrieved from https://www.victoria.ca/assets/Departments/Planning~Development/Community~Planning/OCP/Up~to~date~OCP~and~Design~Guidelines/OCP_WholeBook.pdf

1.2.2. Travel Options

The following is an overview of the transportation infrastructure and services in close proximity to the site and the travel options available to students, staff and community members.

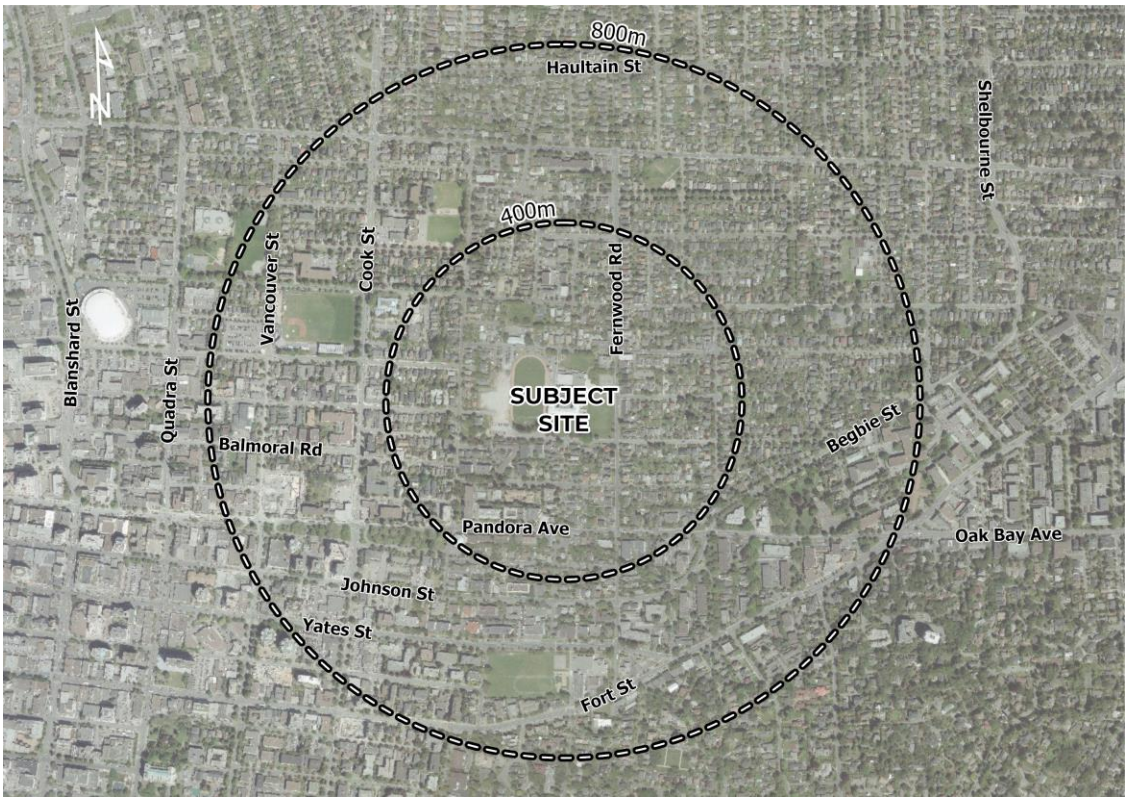
Walking:

The subject site located on Grant Street between Fernwood Road and Chambers Street. It is immediately adjacent to Fernwood Village, with the North Park Village approximately a 5-minute walk (400 m) to the west.

The School is centrally located within Victoria and is the primary secondary school for residents of the City. It is within walking distance of the Fernwood neighbourhood and, as illustrated in **Figure 3**, is within 800m (approximately 10-minute walk) from portions of the North Park, Harris Green, Fairfield / Gonzalez, Rockland and Oaklands neighbourhoods. This provides the opportunity for a number of students and staff to walk to school.

Sidewalks are provided on both sides of the majority of the streets in the vicinity of the site. Several designated greenways intersect the site or are near the site, including those on Grant Street, Gladstone Avenue, Chambers Street and Camosun Street.

FIGURE 3. VICTORIA HIGH SCHOOL WALKING SHEDS



Public Transit:

Bus routes are provided along a number of key streets nearby that allow students, staff and community members to access the school by transit. The site's Transit score is 66 ("Many nearby public transportation options").

Transit routes that can be accessed on Fernwood Road immediately adjacent to the subject site (Stop ID 100240, 100227) include:

- No. 22 – Vic General / Hillside Centre provides service between View Royal and Hillside shopping mall via downtown Victoria and Fernwood.

Transit routes that can be accessed from bus stops (Stop ID 100209, 100181) on Pandora Avenue (330 metres from the school) and Johnson Street (430 metres) are as follows:

- No. 27/28 – Gordon Head / Majestic / Downtown is identified as a Frequent Route (15-minute service) provides service between the Gordon Head neighbourhood in Saanich and downtown Victoria via Shelbourne Street; and
- No. 2 – James Bay / South Oak Bay / Willows provides service to and from James Bay and Oak Bay via downtown Victoria.

Transit routes that can be accessed from bus stops (Stop ID 100160, 100172) on Cook Street (550 metres) are as follows:

- No. 24 – Cedar Hill / Admirals Walk provides service between Esquimalt and the Cedar Hill neighbourhood in Saanich via downtown Victoria; and
- No. 25 – Maplewood / Admirals Walk provides service between Esquimalt and the Maplewood neighbourhood in Saanich via downtown Victoria.

Transit routes that can be accessed from bus stops (Stop ID 100191, 100187) on Yates Street (600 metres) and Fort Street (700 metres) are as follows:

- No. 11 – Tillicum Centre / UVic provides service between the University of Victoria and Tillicum Centre through downtown Victoria via Fort Street and Gorge Road;
- No. 14 – Vic General / UVic is a Frequent Route that provides service between the University of Victoria and Victoria General Hospital via Craigflower Road, Fort Street and Richmond Road; and
- No. 15 – Esquimalt / UVic is a Regional Route that provides service between the University of Victoria and Esquimalt Dockyard via limited stops on Esquimalt Road, Fort Street and Foul Bay Road.

Cycling:

The site has several nearby cycling routes that provide access to the school and connections to adjacent neighbourhoods and the broader regional cycling network. Cycling is facilitated by conventional bike lanes on Johnson Street, Pandora Avenue, Fort Street and Yates Street. West of Cook Street the Pandora Avenue corridor is a two-way protected bicycle lane, providing access to/from downtown.

Cycling infrastructure improvements are planned for Vancouver Street, with additional cycling routes identified in the OCP on Caledonia Avenue, Chambers Street and Bay Street.

1.3. PROPOSED DEVELOPMENT

The catalyst for the proposed redevelopment at Victoria High School is a need for seismic upgrades to the building. The proposal also includes an addition to the school building (2,047 m^2 floor area) to support a projected increase in students from 825 to up to 1,000 and Neighbourhood Learning Centre (NLC) activities, as well as a stand-alone daycare facility of approximately 300 m^2 in floor area fronting Gladstone Avenue.

Table 1 shows the increase in floor area between the existing Victoria High School and the proposed footprint of the renovated school. The proposed addition to the school building represents an approximately 12% increase in floor area.

TABLE 1. SUMMARY OF PROPOSED FLOOR AREA INCREASE

	Floor Area	Activities
Existing School	19,191 m^2	Secondary school uses
Proposed School Addition	2,047 m^2	Additional secondary school and neighbourhood learning centre uses
Proposed Daycare	300 m^2	Community daycare uses
Total	21,538 m^2	

1.3.1. Parking

The site parking supply will be primarily to the west of the existing track and playfield accessed from Grant Street. Existing parking along the southern edge of the track will be maintained, including accessible parking stalls. Another smaller lot to the north of the school, accessed from Gladstone Avenue, will be maintained and potentially expanded to accommodate additional parking demand as required. This area would include identified parking spaces for the adjacent daycare.

1.3.2. Access

Vehicle access to the site parking areas is primarily from Grant Street, accessed from Fernwood Road. Gladstone Avenue is the secondary site access.

2.0 PARKING REQUIREMENT

2.1. OFF-STREET PARKING REQUIREMENT

The required off-street parking supply is determined through the City's Zoning Bylaw no.80-159, Schedule C: Off-Street Parking Requirements. The required parking supply for the school is 283 spaces, as shown in **Table 2**. An additional 4 spaces are required specifically for the neighbourhood daycare.

TABLE 2. SUMMARY OF OFF-STREET PARKING REQUIREMENT

	Floor Area	Required Minimum Parking Supply	
		Supply Rate	Total
Victoria High School w/ Addition and NLC[2]	21,238 m^2	1 space per 75 m^2	283
Neighbourhood Daycare[3]	300 m^2	1 space per 80 m^2	4
		Total	**287**

The proposed school expansion will accommodate both additional public school activities, as well as an NLC function. This space has been treated entirely as "Secondary School" uses for the purpose of calculating the required parking supply.

2.2. PAST REQUIREMENT

Prior to a 2017 update to Schedule C, the minimum required parking supply was calculated based on the number of employees and students. The expanded school is intended to accommodate up to 1,000 students and 110 staff, which would have resulted in a requirement for 152 parking spaces (almost half the current requirement).

[2] Parking supply rate is Secondary School use in the City of Victoria Zoning Bylaw no.80-159, Schedule C: Off-Street Parking Requirements

[3] Parking supply rate is Care Facility in "Other Area" in the City of Victoria Zoning Bylaw no.80-159, Schedule C: Off-Street Parking Requirements

2.3. BICYCLE PARKING REQUIREMENT

Minimum long- and short-term bicycle parking requirements are determined through the Schedule C Off-Street Parking Requirements. Long- and short-term bicycle parking is defined by differences in security measures, weather protection, and parking dimensions.

As seen in **Table 3** the Victoria High School is required to include 172 short-term and 13 long-term bicycle parking stalls, based on the floor area requirements outlined in Schedule C. The School District has indicated that the required bicycle parking supply will be provided.

TABLE 3. SUMMARY OF BICYCLE PARKING REQUIREMENT

	Floor Area	Required Minimum Bicycle Parking Supply	
		Supply Rate	Total
Short-term Bicycle Parking	21,538 m^2	1 space per 125 m^2, or part thereof	172
Long-term Bicycle Parking		1 space per 1,600 m^2, or part thereof	13

3.0 ANTICIPATED PARKING DEMAND

Anticipated parking demand is considered below for each of the user groups on the Victoria High School site. Estimates are largely based on comparison, past records and correspondence with school administration. In-field observations of parking utilization were not undertaken as would commonly be included in a study such as this, as school operations were limited during the time of this study due to physical distancing requirements associated with the COVID-19 pandemic.

3.1. TEACHER / STAFF PARKING

A survey was circulated among current Victoria High School teachers and staff to understand typical commuting habits[4]. Among the 58 staff members who responded to the survey, 46 indicated that they require a parking space at least once per week. Refer to **Table 4**. This suggests that approximately 80% of staff commute to/from the school in a vehicle at least once per week. This is relatively high compared to the typical driving mode share among Victoria residents, but is perhaps an indication that a number of teachers and staff reside elsewhere in Greater Victoria, as well as a result of unpaid parking being offered on-site as compared to paid parking in certain other locations in the City.

The school administrator has indicated an anticipated need for staff parking for up to 80 vehicles based on the current parking demand among teachers and staff. This represents a parking supply rate of approximate 0.73 spaces per teacher.

TABLE 4. SUMMARY OF STAFF PARKING SURVEY

Survey Questions	Yes	No
Do you require a parking spot, more than once per week?	**46 (79.3%)**	12 (20.7%)
Do you require bike storage more than once per week?	**35 (60.3%)**	23 (39.7%)
Do you primarily use alternate transportation (walk, bus, etc.)?	10 (17.2%)	**48 (82.8%)**

[4] Staff survey administered by school administration, June 2020

3.2. STUDENT PARKING

Since the graduated licencing approach was introduced in British Columbia, parking demand among high school students has declined as students generally cannot secure a driver's license until at least their Grade 12 year. The result is fewer students driving than in past and many schools in the Capital Region with large student parking areas that are under-utilized.

Victoria High School administration indicated that 22 students have registered for a parking pass in 2019-2020. Assuming an increase in student parking permits approximately consistent with the anticipated growth in student population (from 825 to 1,000), the anticipated future student parking demand is approximately 25 vehicles.

Victoria High School administration have indicated they do not anticipate future growth in student parking as a result of the expansion[5], suggesting the added growth estimate represents a conservative estimate.

3.3. OFFICE / VISITOR PARKING

The school attracts visitors over the course of a typical school day. These may include visitors to the office, mail/courier drop-off, and parents and community members visiting teachers, their children or attending special events.

The parking demand patterns for these activities varies considerably over the course of a typical school day. A parking supply allocation of approximately 15 spaces is estimated to accommodate the day-to-day needs for short-term parking, with some added capacity for peak demand periods and when special events occur during school hours. This estimated parking demand is supported by school administration as appropriate[6].

One important distinction is that the majority of special events that may attract a larger number of visitors (i.e., sports games, theatre performances, etc) are assumed to typically occur outside peak school hours (i.e., late afternoon, evening or weekend) when staff / teacher and student parking demand is lower and visitors may utilize these parking areas.

[5] Email correspondence received June 11, 2020
[6] Email correspondence received June 18, 2020

3.4. AUXILIARY STAFF / NEIGHBOURHOOD LEARNING CENTRE

The school also attracts auxiliary and itinerant staff that are above-and-beyond the permanent teacher complement. These may include teachers-on-call (i.e., substitute teachers), educational assistants and educators providing specialist training (e.g., speech therapy). These individuals work on-site typically only for a portion of the school day and may travel between schools and are commonly more reliant on a vehicle for their daily activities.

Included in this user group are staff associated with the Neighbourhood Learning Centre (NLC) space, anticipated to be approximately 3 staff during the school day (there may be more NLC staff outside school hours when more community activities are offered).

Based on current demand and anticipated need identified by school administration, a parking supply of up to 20 spaces is recommended to account for auxiliary and NLC staff parking demand.

3.5. ACCESSIBLE PARKING

A dedicated supply of accessible parking spaces is important to ensure staff, students and visitors with limited mobility are accommodated. There currently is no requirement for accessible parking, although the City is currently in the process of updating Schedule C Off-Street Parking Requirements to include accessible parking requirements.

Under the previous BC Building Code, the site requirement would have been for no less than three accessible parking spaces. To ensure that the diverse needs of students, staff, and other school users is met, a supply of five accessible spaces is recommended.

3.6. DAYCARE

The final addition to the Victoria High School site is the neighbourhood daycare to be built on the site's northwest corner. The daycare centre is to consist of two modular buildings, each with approximately three staff members on-site at any one time (up to six vehicles). An additional two parking spaces should be assigned for drop-off / pick-up activities, for a total supply of 8 spaces associated with the daycare use. Some additional drop-off / pick-up activity may occur on Gladstone Avenue.

3.7. SUMMARY

The preceding analysis suggests that site parking demand will be approximately 153 vehicles. Refer to **Table 5**. This accounts for peak parking demand during school days and is anticipated to exceed the site's parking needs during periods outside typical school hours. As possible, site parking supplies should be shared between the various user groups so that parking is used efficiently and under-utilized parking areas can be utilized by other site users.

TABLE 5. SUMMARY OF ESTIMATED PARKING DEMAND, BY USER GROUP

User Group	Estimated Parking Demand
Staff / Teachers	80
Students	25
Office / Visitor	15
Auxiliary Staff / Neighbourhood Learning Centre	20
Accessible	5
Daycare	8
Total	**153**

4.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) refers to infrastructure and program initiatives aimed at supporting alternatives to single-occupancy vehicle travel. Ultimately the level of parking demand reduction that is achieved through TDM is dependent on program commitment and investment. Research supports reductions in parking demand of 20% or higher where TDM is pursued.

Possible TDM strategies for the Victoria High School site are summarized below, with an overview of the potential impacts for user groups included in **Table 6**.

4.1. SHORT-TERM BICYCLE PARKING

Providing short-term (Class II) bicycle parking to cater to primarily to students and school visitors encourages more trips by bicycle. Students, staff, and visitors to Victoria High School, can all use short-term bicycle parking. Bike parking should be placed in convenient locations throughout the site and ensure security through well designed racks, visibility for casual surveillance and weather protection where possible.

4.2. LONG-TERM BICYCLE PARKING

Long-term (Class I) bicycle parking emphasizes many of the same characteristics as Class II bicycle parking including security, visibility, weather protection, but to a greater degree. Long-term parking is typically located in covered areas often with a locked door, gate, and/or fence. Class I parking is for users who will spend most of the day at the school and are often designed simultaneously with the end-of-trip facilities, like showers and changerooms, described below.

4.3. BICYCLE SHOWER + CHANGE FACILITIES

End-of-trip facilities including showers and changerooms are important features of a comfortable experience for active transportation users. Providing the opportunity to transition from travel to the workplace is a key function of these facilities, allowing opportunities for commuters to securely store necessary items at work and change from commuting clothes to work attire. Consideration should be given to the proximity of bicycle parking relative to shower and changeroom areas to appeal to staff that may bicycle over longer distances.

4.4. TRANSIT SUBSIDY

Transit subsidies are among the most common financial incentives to encourage alternatives to private vehicle travel. Subsidy programs are typically administered by employers who provide vouchers or cash to employees using transit as their primary mode of commuting. This may also be achieved more formally through BC Transit's ProPASS program, where employers committing ten or more employees to the program are eligible for a reduced rate on the cost of monthly transit passes.

For students, the City of Victoria instituted a free bus pass program for children under the age of 18, so most students can readily access transit if they choose to apply to the program.

4.5. COMMUTER CASH-OUT PROGRAM

Commuter cash-out programs provide financial incentive to employees commuting by means other than private vehicle. There are costs to the employer (i.e., the School District) in administering the program, however the successful implementation may also lead to reduced construction costs through parking supply reduction, in addition to the healthy and environmental benefits associated with sustainable travel modes.

4.6. PROMOTION / EDUCATION

Educational campaigns can be effective for encouraging changing mobility behaviours among a variety of user groups. There are established regional campaigns such as Bike to Work Week that celebrate active transportation, that can be supplemented with in-school efforts, including competitions between classes and/or teachers or student-led promotional events that encourage walking, cycling or taking transit to school. Pursuit of promotional activities may be done within Victoria High School itself or more broadly at schools throughout the School District.

TABLE 6. SUMMARY OF TDM OPTIONS + POTENTIAL IMPACT, BY USER GROUP

TDM Options	User Group	
	Staff	Students
Short-term Bike Parking (i.e., bike racks)	◐	◐
Long-term Bike Parking (i.e., lockers)	●	○
Bicycle Shower + Change Facilities	◐	○
Transit Subsidy	●	◐
Commuter Cash-Out Program	●	○
Promotion / Education	◐	◐

Anticipated level of impact in reducing site parking demand:

● High

◐ Moderate

○ Low

5.0 SUMMARY

The preceding assessment considers an appropriate site parking supply for the Victoria High School expansion based on an understanding of the proposed site land uses and the anticipated parking demand associated with each land use and activity. Consideration is given to parking demand characteristics for staff, students, and visitors and the potential to share parking between user groups, as well as transportation demand management (TDM) approaches to reduce site parking demand.

5.1. RECOMMENDATIONS

The following are the key recommendations of this study:

1. The recommended site parking supply is 150 to 160 parking spaces. This is expected to accommodate peak parking demand during school days.
2. Site parking areas are to remain unassigned (i.e., available to all users) to the extent possible to make more efficient use of available parking.
3. There may be the opportunities to further reduce the site parking supply if TDM strategies are pursued.