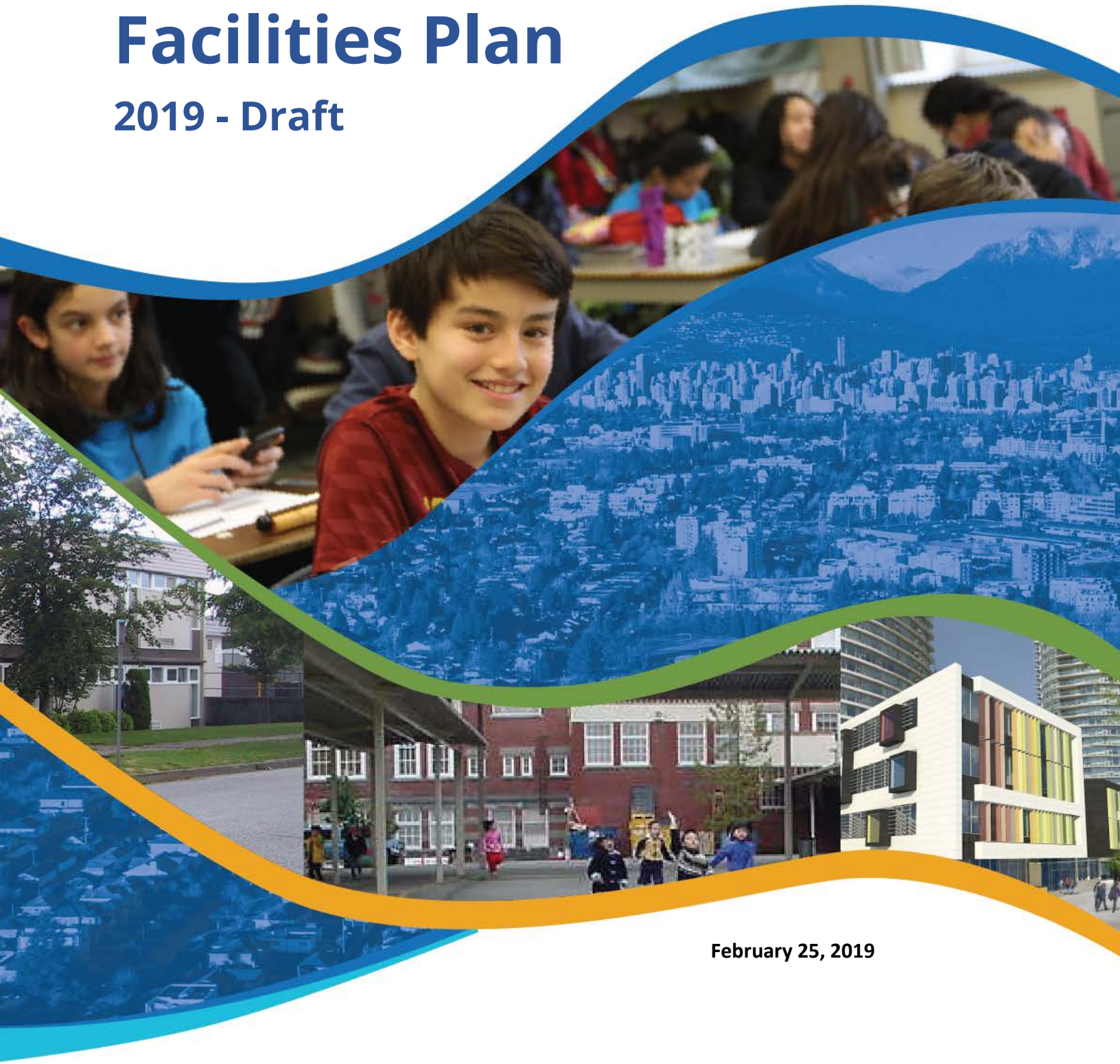
Vancouver School Board

Long Range Facilities Plan

2019 - Draft



February 25, 2019

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Executive Summary

School District No. 39 (Vancouver) developed a comprehensive Long Range Facilities Plan ("LRFP") in 2016. The 2018 LRFP document is the first revision to the 2016 Plan. It is Vancouver's mechanism to demonstrate that facility planning is taking place in support of the District's educational plans over a 10-year window, using 2017 as the base year.

As described in the Ministry of Education Capital Plan (CP) Instructions for 2019-2020 5-yr CP Submissions (Part 11 of Appendix C), the fundamental purpose of the LRFP is to provide a mechanism for districts to demonstrate they are managing facilities in an effective, economic and efficient way in support of educational goals. The LRFP places the need for capital projects in a district-wide context and becomes the basis for submission of capital project requests by the District and for investment decisions by the Ministry.

The Vancouver School District operates 77 Elementary schools, 18 Secondary schools, 13 Annexes, 8 District Schools (leased or district program sites), 6 District Support Facilities and 3 properties on which businesses operate, for 125 active facilities. The School District also has a number of portable classrooms. The operating capacity of the Districts' schools is 58,766. The September 2017 resident student enrolment was 48,634 for a capacity utilization of 82.8%. When the population of 1,741 tuition-paying international students of is factored in, the capacity utilization increases to 85.7%.

The District has experienced declining enrolment for a number of years, with 4,700 fewer students in 2017 than were in schools in 2007. The declining enrolment trend is projected to continue with a further decline of 2,300 students anticipated by 2027.

As described in the Ministry of Education Capital Plan Instructions for 2019-2020 5-yr CP Submissions (Part III of Appendix C), the LRFP is not simply identification for needed capital projects but rather it is a comprehensive plan outlining how the District will manage its school facilities in order to deliver its educational programs. This requires a two-step approach:

- examining how to best utilize the current operational and maintenance resources of the District to best maintain its facilities, and
- identifying the capital project requirements at the end of a facilities life {or to meet changing needs}.

The VSB's inventory of schools consists of many older buildings with significant seismic safety concerns and deferred maintenance requirements. With current surplus capacity of 10,132 student seats, and anticipated surplus capacity in 2027 of over 12,000 seats, the District's focus, with respect to capital investment needs, has been on the Seismic Mitigation Program. With limited new capital investment opportunities, until the District addresses the reality of surplus capacity, that focus will remain along with attention required to address the ongoing deferred maintenance challenge. The District should consider the development of a strategy to reduce surplus capacity to ensure that all students and staff will be in seismically safe schools in the future and the District will be in a position to address facility end-of-life realities with capital requests for new schools over the longer term.

The District also needs to identify opportunities and put in place a plan to generate capital fund revenue to be able to enhance seismic upgrade projects, contribute to new schools in the future, and support district initiatives, such as workforce housing. The development of a Capital Asset Management Plan in 2018 positions the District to develop a plan to generate capital revenue.

The intent of a Long Range Facilities Plan is to provide a strategic framework and direction for the District's annual review of its Five-Year Capital Plan and the proposed projects in that plan. This report contains several recommendations in support of that process. The following is a summary of the recommendations in this revision of the Long Range Facilities Plan:

1. That the District should develop an Administrative Procedure setting out guiding principles and detailed procedures for governance and stakeholder consultation for SMP projects. the;

2. That the District establish guidelines on preferred school size with the goal of determining appropriate ranges of schools' size to inform planning decisions;

3. That the District should continue the investigation of consolidating Alternate Programs in a central location and initiate a process to identify, suitable options to co-locate District alternate programs and related services;

4. That the District should continue to explore options that enable it to implement the Board approved recommendations of the French Program Review;

5. That the District undertake an Enrolment Data Validation process to for all facility and education planning purposes. This process would consist of an annual validation study of short, medium, and long-range enrolment projections as well as updating student yield metrics for areas of the District with significant development and redevelopment proposed or underway;

6. That the Board of Education reiterate their commitment to use the capital funds generated from the sale of the underground airspace at Lord Roberts Annex to BC Hydro for the construction of Coal Harbour Elementary and a replacement K-7 elementary school at Lord Roberts Annex;

7. That the District continues to work with the City of Vancouver to construct Coal Harbour Elementary and develop a catchment and enrolment plan for the school;

8. That the District build on the initial work done on a Capital Asset Management Plan to develop a comprehensive strategic plan to guide the District in effectively managing the asset inventory in the future;

9. That the Board of Education approve an annual budget allocation for the next three years to hire real estate consultants to negotiate financial arrangements with developers to generate capital fund revenue to support enhancing capital projects and the workforce housing initiative;

10. That the District updates the addition and expansion project requests in the 2020-2021 Five-Year Capital Plan for Board of Education approval, including determining the need for elementary schools at Olympic Village, East Fraser Lands and WestBrook at UBC, secondary school space at King George Secondary and the need for additional capacity in the North Hamber study area;

11. That the District continues to explore enrolment management options to balance enrolment with capacity in the Kitsilano study area, the North Hamber study area and the South Hamber study area and report to the Facilities Planning Committee on a quarterly basis;

12. That, in accordance with Policy 14 – School Closure, the District provide the Board with the name(s) of secondary schools, elementary schools and annexes for consideration for closure for the 2020 school year by September 30, 2019;

13. That the District should conduct detailed analysis on the impact of reducing school capacity through the SMP ('right sizing') in relation to the goals and priorities of the Long Range Facilities Plan;

14. That the District decide if an seismically upgraded Sir Guy Carleton Elementary should be used as temporary accommodation for the SMP or as an enrolling school;

15. That the District consider the implications of the School Consolidation Feasibility Analyses contained in Section 10 of this report to prioritize seismic upgrades for secondary schools;

16. That the District consider the implications of the School Consolidation Feasibility Analyses contained in Section 10 of this report to prioritize seismic upgrades for elementary schools;

17. That the District consider the implications of the School Consolidation Feasibility Analyses contained in Section 10 of this report to inform revisions to the Temporary Accommodation Plan in the SMP.

1 Long Range Facilities Plan Development

1.1 Update on Recommendations from 2016 LRFP

The Vancouver School District's first LRFP was submitted to the Ministry of Education in January 2016 as an interim report and received final approval by the Board of Education on May 24, 2016. The context in which that plan was developed is as follows:

- The December 23, 2015 letter from the Deputy Minister of Education outlining the Ministry's expectations of the LRFP
- Intended to guide facilities Planning to 2030 and ensure timely completion of the Seismic Mitigation Program ("SMP")
- In the 2014 Memorandum of Understanding between the VBE and the MOE, the VBE agreed to submit a LRFP to indicate how to increase operating utilization from 84.6% to 95%
- Achievement of the plan would be indicated through the SMP and maximizing existing surplus capacity for temporary accommodation.

The guiding principles approved by the Board of Education for the development of the 2016 plan (as per Recommendation #2) were:

- Safe and sustainable schools;
- Facilities that support innovative, educational approaches, ultimately providing effective learning environments;
- Schools located where they can support school-aged populations now and in the future;
- Planning that takes into account economic, community and environmental benefits for students, families and all citizens of Vancouver; and
- Improved facility conditions.

There were ten other recommendations in the 2016 LRFP. Those other ten recommendations included having staff consider factors for prioritizing seismic projects, identifying temporary accommodation sites and school closure. In addition, nineteen schools were identified for immediate priority in the SMP and eight seismic schools were identified for review as part of a zone planning process. The current status of these recommendations is in Appendix A. The guiding principles in Recommendation #2 have been expanded on the 2018 LRFP in Section 2.3 below.

1.2 Regulations, Policy, and Compliance

The development of a Long Range Facilities Plan is done in accordance with all regulations, Orders-in-Council, School Act Ministerial Orders as well as policies, instructions and guidelines provided by the Ministry of Education. The LRFP is a planning document and has no authority to amend the intent or direction of any of the legislative documents that guide the development. While the LRFP may identify a potential school closure or property disposition, the implementation of those processes is guided by other regulations and policies. The Ministry's School Opening and Closure Order M194/08 the Disposal of Land or Improvements Order M193/08 guide those processes. The requirements of those orders have been included in the Board of Education's Board Policy Handbook as:

- Policy 14 - School Closure
- Policy 20 - Disposal of Land or Improvements

The Ministry of Education Capital Asset Management branch defines specific requirements in the Long Range Facility Plan Guidelines to which school Districts are expected to adhere.

In addition, the Memorandum of Understanding that governs the Vancouver Seismic Mitigation Project Office requires the District to submit a LRFP to the Province annually for approval.

1.3 Guiding Principles

The following guiding principles for the 2018 LRFP reflect the District's emphasis on student safety, student learning, effective use of school resources, connection to community, and strengthening partnerships:

- Improve the overall safety and quality of facilities.
- Plan for innovative learning environments that promote student engagement, student inclusion, and the delivery of diverse high-quality programs.
- Effectively use school District resources and facilities in alignment with long-term financial and sustainability goals.
- Work towards a future where all students wishing to attend their catchment school have the option to do so.
- Sustain and strengthen our relationships with the City of Vancouver, and community partners to facilitate the delivery of services to the broader community.

These guiding principles build on the principles used to develop the 2016 LRFP. They are still focused on safe schools, improved building conditions and innovative learning environments. They are more specific in addressing the desire to have students have access to their catchment schools and to strengthen relationships with the City of Vancouver and other community partners.

1.4 Goals of Implementing the LRFP

Implementing the recommendations of the LRFP will move the District towards achieving the following goals:

- Provide safe schools that best serve the needs of students in their communities
- Maximize operating funds directed to student programs and services
- Capitalize on opportunities to leverage current asset value to meet future capital needs

1.5 Priorities

The LRFP sets out four priorities to guide decision-making.

Maximize the number of students in safe schools

The number of safe seats in the District is equivalent to the operating capacity of facilities that are seismically safe. The BC Ministry of Education Capital Asset Management Division is committed to funding sufficient Safe Seats via the SMP for all enrolled students. To ensure that all students are located in seismically safe facilities, the District will need to reduce surplus capacity.

Increase Capacity Utilization by decreasing excess capacity

Capacity utilization is the ratio of enrolment (headcount) divided by the operating capacity and is expressed as a percentage.

FIGURE 1.5-1: **shows the District capacity utilization.**

District Capacity Utilization	
Total Operating Capacity	58766
Enrolment BC Residents	48634
Surplus Capacity – Seats	10132
Capacity Utilization	82.75%

When excess capacity is reduced capacity utilization increases. Moving forward with reducing excess capacity in areas of enrolment decline, will fundamentally shift the VSB towards a future where we can offer improved educational programs and opportunities to students going to school in safer higher quality facilities.

The current status or continuation of the status quo with respect to surplus capacity presents and will continue to present an exceedingly challenging strategic and operational environment for the District. The challenges presented by operating the VSB with more than 10000 surplus seats can be broadly stated as:

- It is a challenge for the government to fund major capital projects (new schools) within the context of resources currently available to the District.
- Inability of the District to maximize funding of front-line student services and student programs due to the resources required to operate and maintain an oversized inventory of facilities.

Reduce Enrolment Pressure at Full Schools

Utilization of school facilities varies widely across the District. Many communities are experiencing enrolment decline, while some school catchments have seen growth in the number of school aged children that creates enrolment pressure at neighbourhood schools. There are several elementary schools identified as being 'full' meaning that they are unable to enroll all of their catchment Kindergarten students who wish to attend.

Many of the full schools form a contiguous zone in the city that includes the West End, Downtown, the SW shore of English Bay, the SW Shore of False Creek, Olympic Village, and the Cambie corridor. The presence of a large zone within the VSB that will continue to experience enrolment pressure indicates the need to move towards a long-term solution that locates operational capacity and safe seats where they are required now and in the future. To resolve the issue of enrolment pressure at full schools, the District will need to evaluate options that include the following:

- Re-location of District programs
- Adjusting school catchment areas
- Constructing new schools

As described above, at this time the construction of new schools may rely on the availability of a funding contribution from the school District to advance.

Effectively Manage our Capital Assets

- The Capital Asset Management Plan provides information on VSB assets as it relates to the provision of educational programs in the long term. This plan will consider the use of school sites for educational purposes first and may explore the feasibility of select assets for additional uses, if those uses sufficiently support the overall goals of the District.

- In addition, one of the objectives of the Capital Asset management Plan is the identification of opportunities to generate capital fund revenue that can be used to enhance approved projects in the SMP to create replacement schools where the lowest cost option is not a replacement school or to support the establishment of workforce housing on District properties. The ability to generate capital fund revenue will enable the District to also enhance schools with additional facilities and support the District's contribution to new schools in the future. The construction of new schools will also significantly reduce the District's deferred maintenance problem.

- Generation of capital fund revenue is accomplished through capital leases and the disposition of property. The disposition of property is permitted in Policy 20 (Disposal of Land or Improvements) of the Board Policy Handbook, with the following provision:

- *That the VBE commit to not sell school lands but maintain or increase our current number of school sites to preserve neighbourhood sites for current and future educational and community use. This would not preclude land swaps or the sale of portion of school sites provided that educational programs could still be offered*.

Although these four priorities are presented separately, they are deeply intertwined. Moving forward successfully will require addressing the issue of surplus school capacity in areas of enrolment decline, creating opportunities to modernize the inventory of schools, and reducing deferred maintenance.

1.6 Project Considerations

When considering decisions that enable the District to move forward with the priorities set out in the LRFP, these factors will need to be taken into consideration in a balanced way:

- Enrolment Forecasts – based on established methodology, historical trends, and detailed analysis
- Monitoring class size and capacity utilization in the context of restored language in the teachers collective agreement and upcoming bargaining.
- Neighbourhood Schools – the capacity to enrol students at their catchment school.
- Seismic Mitigation Program and Requirements for Temporary Accommodations
- Cost per Student – the cost per student at VSB school varies widely from the basic student funding allocation in the District Operating Grant provided by the ministry of education
- Preferred School Size – school size has an impact on availability of student services and effective use of resources.
- Environmental Sustainability Plan which enumerates several actions connected with Facilities Planning.
- Geographical and Cultural Context - The VSB serves the city of Vancouver and the University Endowment Lands as well as the traditional territories of the Coast Salish peoples and particularly the sḵwx̱wú7mesh (Squamish), sel̓íl̓witulh (Tsleil-Waututh), and xʷməθkʷəy̓əm (Musqueam).

1.7 2018-19 Long Range Facilities Plan Process

As stated above, this 2018-2019 LRFP document is the first revision of the District's 2016 LRFP. A LRFP is mandated by the Ministry of Education to illustrate a school District is managing its capital assets in an effective manner in support of the District's educational programming. The Ministry identifies the following significant changes in a District that require formal revision to a District's LRFP:

- any significant changes in educational programs, either initiated by the District or by government
- enrolment projections that exceed 10% (either increase or decrease) over the 10-year window of the LRFP
- proposed reconfiguration of schools
- a change in the availability status of any facility used for K-12 education
- other events that potentially affect investment decisions in the District's facilities.

Due to the ongoing seismic mitigation program, Vancouver is required, under the MOU with the Ministry to annually update its LRFP. While that has not happened, this revision will serve as a guiding document for future annual revisions. Revisions should be finalized or be in production by the time the Ministry's Five-year Capital Plan instructions are published each year.

Any revision of a District's LRFP must be discussed with the appropriate Ministry Planning Officer (PO) for concurrence before being approved by the Board. In developing the LRFP, at a minimum, the PO must be consulted as the following are identified:

- Capacities of individual schools
- Establishment of l study areas
- 10 year enrolment forecasts
- Final draft of the LRFP prior to submission to the Board for approval

The following timeline for completion of the 2018/19 LRFP has been determined:

- February 13, 2019 - Workshop for the Facilities Planning Committee (first time all Committee members will see the draft LRFP)
- February 22, 2019 – Draft LRFP posted on line (in advance of the February 27th meeting). Draft LRFP also sent to the Ministry.
- February 27, 2019 - Facilities Planning Committee (for Stakeholder Feedback)
- Potential DPAC Meeting – To be Confirmed with DPAC
- March 13, 2019 - Facilities Planning Committee (for Stakeholder Feedback)
- April 29, 2019 - LRFP to Public Board Meeting for approval. Board approval will be necessary prior to the development of the 2020-2021 Five Year Capital Plan.

1.8 Public Engagement

The timeline above will give all stakeholders and, in particular DPAC, opportunities to review the draft plan, provide feedback and suggest revisions. Once the draft is posted online on February 22, 2019, a live link on the District website will be activated to receive feedback.

The Ministry does not require that public consultation take pace to inform the development of a LRFP. The District did undertake an extensive public consultation process in preparing the 2016 LRFP. The report of that consultation is attached as Appendix A. Once the 2018-2019 LRFP is finalized and approved by the Board of Education, the District will provide opportunities to inform the general public

and school communities of the contents of the 2018-19 update to the LRFP and the recommendations in the plan.

2 District Programs and Partnerships

2.1 Educational Programs

The VSB has an established history of designing and implementing a wide array of district programs to provide innovative learning opportunities as well as high levels of support to students across the district.
District programs fall into the following broad categories:

- Elementary Choice
- Elementary Specialty Programs
- Elementary Student Support Programs
- Secondary Choice
- Secondary Specialty Programs
- Junior and Senior Secondary Alternative Programs
- Secondary Alternate Programs

2.2 Program Reviews

The School District's Strategic Plan for 2016-2021, identified the need for a comprehensive review of the following programs:

- Alternate Education Programs
- Choice and Specialty Programs
- Special Education Programs

During the 2017/18 school year the reports from the completed reviews of Alternate Programs, Special Education Programs, and French Programs were presented to the Board.

Each report contained a comprehensive set of recommendations. The recommendations that potentially impact facilities planning are identified below.

French Programs

The report presented to the stakeholders through committee 3 included the recommendation below, which was forwarded to the Board as a motion for consideration. The following motion was approved by the Board on June 25, 2018.

The VSB endeavor to enroll two Kindergarten French Immersion divisions in each of the Early French Immersion sites which could involve a combination of consolidating, relocating or adding programs.

Alternate Programs

The Key Consideration for Long Range Facilities Planning identified in the program review is as follows:

One school site to house the majority of the programs (similar to North Van's Mountainside Secondary or Coquitlam's CABE) with facilities to support a comprehensive educational program (gym and workout space, applied design and technology labs, science labs, etc.) and co-location and centralization of essential services

2.3 Special Education Programs

The following recommendation was made with respect to Special Education Program Delivery

There is a need for to plan for every school to have adequate space to meet the needs of diverse learners.

Implementation of these recommendations will have an impact on facilities planning. In particular, implementation of the recommendation related to location and structure of Early French Immersion programs will be a necessary consideration in working towards the priority of reducing enrolment pressure at full schools.

2.4 Community Partnerships

The VSB has an established history of collaborating with the COV, UEL and community partners to facilitate the delivery of community-based childcare to families.

There are three categories of childcare initiatives in which the VSB has significant involvement through the provision of space in VSB schools or on VSB properties.

- Zero to Four Year Old Childcare
- Out of School care for 5-12 year old children
- Strong Start Centres – for pre-school children supervised by their caregivers

Provision of space for community based childcare providers is the largest and most significant non-school use of space in the VSB.

3 Existing Facilities and Properties and Asset Planning

3.1 Overview

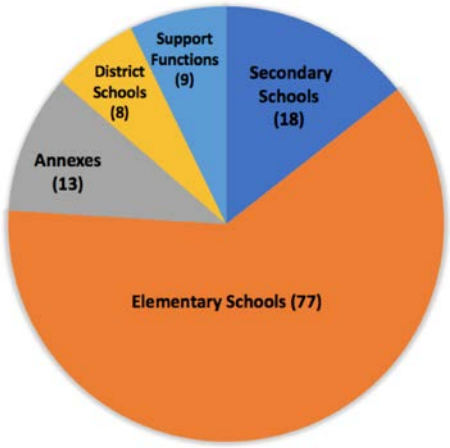
In 2018, the District engaged consultants to begin the work to develop a Capital Asset Management Plan for the District.

The objectives for developing the plan were:

- To position the school district to understand the current state of its capital assets;
- To identify the processes necessary for creating a sustainable education service delivery plan;
- To capitalize on opportunities to leverage current asset value to meet future capital needs.

Completion of the first objective has resulted in identification of the current state of the District's existing facilities and properties and serves as the base case for the Long Range Facilities Plan. The following pie chart illustrates the current inventory of physical building properties owned by the District

Figure 3.1-1: Current inventory of physical building properties owned by the District



This extensive portfolio of 125 physical building assets situated on approximately 600 acres of land owned by the District in the City of Vancouver. The portfolio of buildings and land has a value of approximately $7.6 billion in 2018 as per BC Assessment. Of the 125 physical buildings, 108 are schools in which the District is currently providing K-12 educational services to students. The District provides elementary programming in 90 elementary schools (13 annexes and 77 regular schools) and secondary programming in 18 secondary schools. The grade configuration for the 13 annexes is either K-3 or K-4 and for the 77 elementary schools, it is K-7, with one currently at K-8. The secondary schools are all grades 8-12.

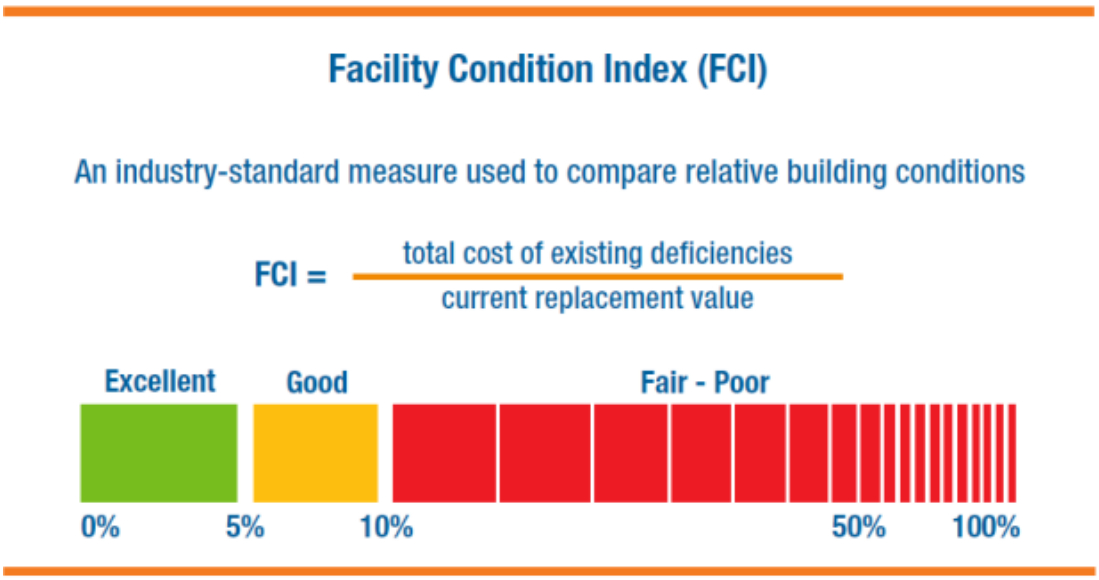
Of the eight district schools, four house alternate school or continuing education programs. The District leases the other four to other organizations. Of the nine support function properties, two are the Education Centre and the accompanying park, two are land properties on which the Triton Strata

Apartment building and the Bentall Commercial building sit, four are operated by the Facilities Department, and the other is the property that Kingsgate Mall occupies.

3.2 Facility Age and Condition

The average age of VSB schools is 73 years, with 50% of the schools being more than 70 years old. Only 12 schools (nine elementary and three secondary) have been built new or built as replacement schools in the Seismic Mitigation Program (SMP) since 2000. As such, many of the schools are beyond their originally intended useful life. Consequently, the operating systems (electrical, structural, mechanical, life safety, plumbing etc.) in many schools are also beyond their useful lives and are in poor or very poor condition. This has led to a serious deferred maintenance situation as measured by an index called the Facility Condition Index (FCI). The FCI of a building is the ratio of deferred maintenance dollars (existing deficiencies) to replacement dollars, as illustrated below:

FIGURE 3.2-1: **Facility Condition Index**



The lower the FCI is, the lower the need for remedial or renewal funding relative to the facility's value. For example, an FCI of 0.1 signifies a 10 percent deficiency, which is generally considered low, and an FCI of 0.7 means that a building needs extensive repairs or replacement. The FCI is a relative indicator of condition and tracking the FCI over time maximizes the Districts understanding of the condition of facilities in relation to each other. It is advantageous to define condition ratings based on ranges of the FCI. A common set of ratings has been used: Excellent (under 0.05); Good (0.05 to 0.10), Fair (0.10 to 0.30), Poor (0.30 to 0.60); and Very Poor (over 0.60). These ratings are explained in more detail below:

FIGURE 3.2-2: **Facility Condition Index Ranges**

Rating Range	Rating Title	Definition
0.00 to 0.05	Excellent	Near new condition. Meets present and foreseeable future requirements.
0.05 to 0.10	Good	Good condition. Meets all present requirements.
0.10 to 0.30	Fair	Has significant deficiencies, but meets minimum requirements.

		Some significant building system components nearing the end of their normal life-cycle.
0.30 to 0.60	Poor	Does not meet requirements. Immediate attention required to some significant building systems. Some significant building systems at end of their life-cycle. Parts no longer in stock, or very difficult to obtain. High risk of failure of some systems.
0.60 and higher	Very Poor	Does not meet requirements. Immediate attention required to most significant building systems. Most significant building systems at end of their life-cycle. Parts no longer in stock, or very difficult to obtain. High risk of failure of most systems.

A total of 64 schools or facilities in the District have an FCI rating of Poor or Very Poor, with 33 in the Very Poor category. When the last FCI ratings were updated in 2018, the estimated FCI Requirement for the District was approximately $751 million. The FCI rating for all schools and facilities is attached as Appendix D.

This level of FCI requirements represent a significant deferred maintenance problem for the District. With an Annual Facilities Grant from the Ministry of approximately $10.8 million, District staff is challenged to make improvements in the condition of the systems in the buildings that are in operation in the District. As per the District's 2017-2018 financial statements, 12.5% of the total expenses in the operating fund incurred on the Operations and Maintenance function. This percentage is higher than the approximately 11% average of total expenses being incurred on that function in Metro school districts and represents a higher annual cost of approximately $8.0 million. The higher cost is indicative of the extra maintenance work required to keep aging systems functional. It also illustrates that the deferred maintenance problem is diverting funding away from the District's student learning responsibility.

The current focus on District buildings has been on the SMP. Unless the lowest cost option in a seismic upgrade is a replacement school or a partial replacement, there is no significant improvement in the FCI of a building when only a seismic upgrade is completed. Seismic upgrading focusses on the structural elements of the building. Since most projects funded through the SMP are upgrades, and given the age of schools, the issue of deferred maintenance is expected to continue to worsen. Consequently, the cost to maintain an inventory of aging schools will also continue to increase.

In order to mitigate these increasing costs, the District should direct its attention to generating capital funding, and use that funding to supplement projects in the seismic program. Supplementing a seismic upgrade to a replacement school is a strategy that would greatly reduce the deferred maintenance problem, as well as provide modern learning environments for students now and in the future.

3.3 Capital Fund Revenue Generation

Currently, the District has $65 Million earning interest generated from the sale of underground rights at Lord Roberts Annex to BC Hydro. A Board motion restricts that capital fund for the construction of an elementary school at Coal Harbour and the eventual replacement of an elementary school at the Lord Roberts Annex site. Other than that fund the District has little capital funding and therefore has limited ability to contribute funding to seismic projects or the construction of new schools or to undertake initiatives related to the creation of workforce housing, which has been referred to the LRFP process. The Board Motion that calls for the development of workforce housing is as follows:

> *That the VBE request staff to identify, in collaboration with stakeholders and VBE partners at the City of Vancouver, ways of utilizing VBE-owned land for the development of workforce housing.*
>
> The work would include:
>
> - Developing guiding principles for which VBE land would be suitable for the development and construction of workforce and possibly other types of housing;
> - Consult and work with VBE employee groups regarding workforce housing solutions to determine the kind of housing needed;
> - Identify and consider the capital and operating costs associated with developing workforce housing and present possible scenarios, and
> - Meet with stakeholder groups and the public to solicit feedback on the idea
>
> And that:
>
> - *The VBE work with the City to identify City requirements regarding zoning, permits, etc.*
> - *The VBE develop a plan that includes specific goals and targets with timelines and deliverables, and*
> - *The VBE work with the three levels of government, federal, provincial and municipal, to determine funding options to accomplish these goals.*

In order to address this motion, development opportunities need to be identified and capital funds need to be generated to contribute to projects, either as partners or as stand-alone initiatives. Capital funds are also needed to enhance seismic projects (moving from seismic upgrade to replacement where possible) and to contribute to the construction of new schools in the future. Capital fund revenue can only be generated from the proceeds of property disposition. Board of Education policy prohibits the disposition of entire sites but does permit the disposition of portions of sites as per the Board motion below that is embedded in Board Policy 20 (Disposal of Land or Improvements):

> *That the VBE commit to not sell school lands but maintain or increase our current number of school sites to preserve neighbourhood sites for current and future educational and community use. This would not preclude land swaps or the sale of portion of school sites provided that educational programs could still be offered*.

Over the past few years, the District has explored several development opportunities with the City of Vancouver as well as others. In addition, work on the development of a Capital Asset Management Plan over the past year has identified portions of school sites that could be subdivided and either sold or be developed. In order to take advantage of the potential of these sites, detailed negotiations with the City and various developers will need to take place. The District lacks the staff expertise to conduct such detailed negotiations. In order to generate capital revenue from these opportunities the Board of

Education should set aside an annual budget allocation for the next three years to hire consultants with the necessary expertise to accomplish that objective.

The District has in the past has had discussion on the following opportunities:

Kingsgate Mall – this District property is currently leased to the owners of the mall. Work on renegotiating the current lease is underway and the possibility exists for re-development of the site.

Carleton Elementary – despite the pending seismic upgrade project, the District has investigated in the past a partial disposition of the side of the site that fronts onto Kingsway for condominium development

John Oliver Secondary – there have been previous discussion of the District investigating a partial disposition of the side of the site that fronts onto Fraser Street for condominium development

3.4 Update on New or Expansion Requests in the 2019-2020 Five Year Capital Plan

The Capital Plan Response Letter for the 2019-2020 Five Year Capital Plan has not been received. The following commentary is provided on the requests included in the submission for new schools or expansion projects in the 2018-2019 Five Year Capital Plan submission:

- New elementary school at Coal Harbour – the Ministry approved this project moving ahead in the Capital Plan Response Letter with the District contributing all the funding, using the proceeds from the sale of the underground airspace at Lord Roberts Annex to BC Hydro.

- New elementary school at Olympic Village – this project was not approved in the Capital Plan Response Letter. Land has been designated by the City for the school site and the District should confirm through legal counsel whether the District would have to pay for that land.

- Expansion of King George Secondary - this request was for an increase in capacity from 375 to 1,500. This project was not approved in the Capital Plan Response Letter. The school has a high participation rate, but the enrolment projections for the next ten years do not support a school of 1,500 students. The District is currently in conversation with the City of Vancouver on the re-development of the West End Community Center.

- New elementary school at UBC – this request is for a school with a nominal capacity of 410. This project was not approved in the Capital Plan Response Letter. At the present time, the District is monitoring enrolment in the surrounding area.

- New elementary school at East Fraser Lands – this request is for a school with a nominal capacity of 60/450. This project was not approved in the Capital Plan Response Letter. At the present time, the District is monitoring enrolment in the surrounding area.

The following commentary is provided with respect to some of the expansion projects submitted in the 2019-2020 Five Year Capital Plan

- Expansion of Edith Cavell Elementary – this request was for an increase in capacity from 40/250 to 60/450. The request was not approved in the Capital Plan Response Letter. The seismic upgrade of the existing school was approved in that letter and is in the planning stage. Requests by the District to have the Ministry consider approving the expansion project at the same time as the seismic upgrade have been answered that to combine the two projects would require a submission to Treasury Board as the funding for the expansion would have to come from a different Ministry capital fund than the funding for the seismic upgrade project. The District is moving ahead with the seismic upgrade project and will reconsider when to request the expansion project.

- Expansion of False Creek Elementary – this request was for an increase in capacity from 40/200 to 60/350. The request was not approved in the Capital Plan Response Letter. The school has H1 and H2 seismic rated blocks and is currently being advanced in the SMP.

3.5 Heritage Status

The City of Vancouver maintains a heritage classification for buildings in the City. The classification system has three categories:

A. Primary Significance - Represents the best examples of a style or type of building; may be associated with a person or event of significance.
B. Significant - Represents good examples of a particular style or type, either individually or collectively; may have some documented historical or cultural significance in a neighbourhood.
C. Contextual or Character - Represents those buildings that contribute to the historic character of an area or streetscape, usually found in groupings of more than one building but may also be of individual importance.

Using these categories, the City maintains a Heritage Registry. Thirty-eight District school sites are on the Vancouver Heritage Registry, with 7 of the 18 secondary schools and 31 of the 90 elementary schools being listed. In some cases, it might not be every building on the site that is on the Registry.

As illustrated below the only secondary school with a Category A - Primary Significance rating is Point Grey Secondary. Point Grey is also on the list of approved seismic projects, having had a PDR accepted by the Ministry. The seismic upgrade of that school will be challenging, given the Heritage A rating. John Oliver Secondary had a PDR completed in the past but is not recognized by the Ministry as an approved project at this time. Kitsilano Secondary and Vancouver Technical Secondary are completed seismic projects and the seismic upgrade of Lord Byng Secondary is currently in the planning stage. Templeton Secondary and Britannia Secondary are both on the District's 5-Year CP as future requests for upgrade.

FIGURE 3.5-1: **Secondary School Rating**

SCHOOL	RATING
TEMPLETON SECONDARY	B
BRITANNIA SECONDARY	B
JOHN OLIVER SECONDARY	B
POINT GREY SECONDARY	A
KITSILANO SECONDARY	B
VANCOUVER TECHNICAL SCHOOL	B
LORD BYNG SECONDARY	B

With respect to the elementary schools listed below, fifteen of have had complete or partial seismic upgrades and eight, including Sir Guy Carleton, are currently in various stages of planning for upgrades. Of the remaining eight, Admiral Seymour, General Brock and Sir Alexander Mackenzie are all rated in the A category.

FIGURE 3.5-2: **Secondary School Rating**

SCHOOL	RATING	SCHOOL	RATING
SIR GUY CARLETON ELEMENTARY	A	TECUMSEH ELEMENTARY	B
ADMIRAL SEYMOUR	A	TRAFALGAR ELEMENTARY	B
GENERAL BROCK ELEMENTARY	A	MAPLE GROVE ELEMENTARY	B
QUEEN ALEXANDRA ELEMENTARY	B	LORD KITCHENER ELEMENTARY	A
FLORENCE NIGHTINGALE ELEMENTARY	B	SHAUGHNESSY ELEMENTARY	B
SIR JOHN FRANKLIN ELEMENTARY	B	LORD SELKIRK ELEMENTARY	A/B
SIR ALEXANDER MACKENZIE ELEMENTARY	A	LORD STRATHCONA ELEMENTARY	A/B
QUEEN MARY ELEMENTARY	B	L'ECOLE BILINGUE	B
BAYVIEW COMMUNITY SCHOOL	B	LORD ROBERTS ELEMENTARY	A
QUEEN ELIZABETH ELEMENTARY	B	GENERAL GORDON ELEMENTARY	B
JOHN NORQUAY ELEMENTARY	B	LAURA SECORD ELEMENTARY	B
SIR RICHARD MCBRIDE ELEMENTARY	B	KERRISDALE ELEMENTARY	A
SIR WM VAN HORNE ELEMENTARY	B	GENERAL WOLFE ELEMENTARY	B
DAVID LLOYD GEORGE ELEMENTARY	A	EMILY CARR ELEMENTARY	B
HASTINGS COMMUNITY ELEMENTARY	B	EDITH CAVELL ELEMENTARY	B
LORD TENNYSON ELEMENTARY	B		

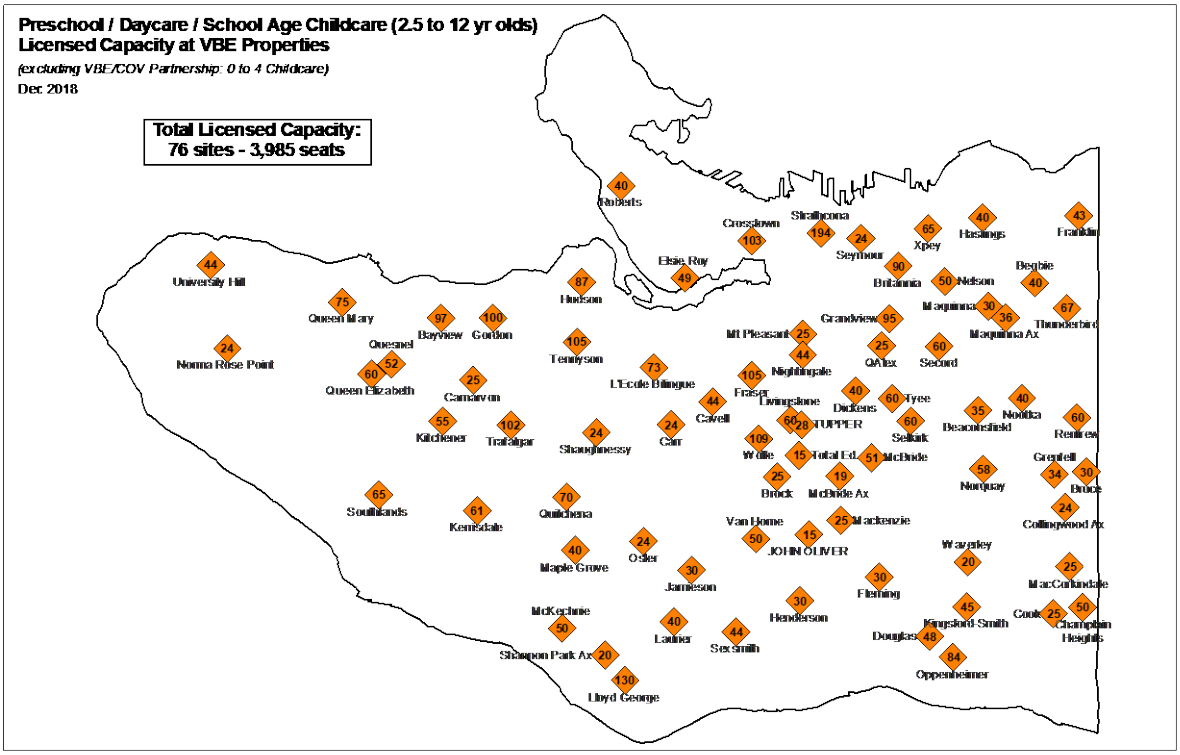
3.6 Alternate Use of Schools

The District has had a history of providing unused school space for community and rental income purposes. The District recorded $4.2 million in rental and lease income in the operating fund in the 2017-2018 fiscal year and a further $1.0 million in the capital fund.

As mentioned above the District leases four district schools to other organizations. Three closed annexes, (Laurier, Maquinna and Henderson) are leased to the Conseil scolaire francophone (CSF) and Shannon Park is leased to the Vancouver Hebrew Society. Also, the property on which the Kingsgate Mall is located is leased to the mall owner.

Childcare – the District provides a total of 3,985 childcare spaces through VSB rental and license agreements. The map below illustrates this commitment.

FIGURE 3.6-1 – Licensed Preschool, Daycare, Out of School Care on VSB Property



Childcare provided by the City of Vancouver – Through agreements with the City an additional 207 childcare spaces at three schools that are replacement schools in the SMP. These schools are Sir Stanford Fleming, Lord Nelson Elementary and Lord Tennyson Elementary. In addition, another 138 childcare spaces are planned for David Lloyd George and Eric Hamber Secondary.

Strong Start Centers - The District also operates 19 early learning Strong Starts as per the attached brochure.

3.7 Capital Asset Management Planning

Capital Asset Management Planning is intended as an ongoing process for the effective management of physical assets to systematically reduce operating costs and liabilities, preserve value, and generate revenue for reinvestment to support the organization's mandate and achievement of its long-term strategic goals and objectives.

Capital Asset Management Planning serves as a support to the Long Range Facilities Plan, aligning with its guiding principles. Effective Asset Management Planning provides the school district with the opportunity to advance the objectives of the Long Range Facilities Plan, including the priorities identified within the Five-Year capital plan. As Capital Asset Management Planning is self-initiated and directed towards increased levels of local control, there are additional opportunities available to address VSB priorities beyond the funding levels provided by the Ministry of Education.

VSB has the richest physical asset base of any school district in British Columbia. However, it is challenged by the unique circumstances related to costs associated with aging infrastructure, the seismic condition of facilities, and significant excess capacity within its schools. More effective and strategic management of these assets will provide the VSB with the opportunity to improve its financial position and to advance and enhance capital projects in the future.

During the 2018-2019 school year the District engaged consultants to create a complete inventory of Vancouver School District properties and to begin the process of identifying opportunities to generate capital fund revenue so that funding contributions can be made to seismic projects and to new schools.

3.7.1 Required funding contributions for major capital projects

The Ministry of Education, through its Project Contribution Policy, requires Boards of Education to contribute to the cost of major projects including new schools, replacement schools, additions and expansions. Of particular relevance for the VSB, Boards are also required to contribute funding for Seismic Mitigation Projects where a school district chooses to advance a difference project scope that is not the least cost option.

The funding contribution expected of the Board is not a replacement, or substitute, for the capital funding responsibilities of the Ministry of Education. Rather, this funding is considered a 'premium,' or supplement, necessary to achieve an enhanced level of project; a new, replacement school (partial, or full), instead of a seismic upgrade project. It should be noted that a new, replacement school is the lowest cost option for a good number of SMP projects, with full funding provided by the Ministry of Education.

Where a funding 'gap' exists between a seismic upgrade project and a new, replacement school, the Board may provide the 'premium' to fund its preference for a new, replacement school. This contribution will be confirmed within the Project Agreement between the Board and the Ministry. The financial contribution can be from a number of sources such as Ministry of Education restricted capital, local capital, and/or operating surplus.

While the opportunity to convert projects from seismic upgrades to new, replacement schools has been available to the VSB, a lack of financial reserves has prevented the Board from achieving this more desirable outcome. Boards of Education have contributed funding through the negotiation of the Project Agreement to convert seismic upgrade projects to the preferred option of new, replacement schools due to the significant benefits identified for the district.

3.7.2 Converting Seismic Upgrade Projects to Replacement School Projects

Seismic upgrade projects are focussed on improving the safety for building occupants during a seismic event. With a focus on the structural integrity of the building for life-safety, funds are not available within these projects to address existing liabilities related to operational inefficiencies, deferred maintenance, and poor building design. Improvements in classroom and school design to support the delivery of modern instructional practices and effective learning environments, and many partnership agreements are simply not possible within the scope of these projects.

The construction processes required for seismic upgrade projects are highly intrusive, often requiring the use of temporary accommodation for students and staff who are displaced from their school for an extended period of time. On occasions where a seismic upgrade project is able to proceed on a 'phased approach', students and staff are often 'shifted' from one section or block of the building to another as construction proceeds through its multiple phases. While this method may enable the continued accommodation of students and staff within the school, the potential for ongoing disruption is considerable. The time required for the upgrade project to be completed in a phased approach will extend well beyond the time required where temporary accommodation is used.

There are significant benefits that can be achieved through the conversion of seismic upgrade projects to new, replacement school projects, whether these include full, or partial replacement. The

investment of locally generated capital funds to support the 'premium' for a new replacement school, rather than a seismic upgrade, has far-reaching benefits for the VSB.

Replacement projects (full and partial) will achieve the following benefits for VSB

- Reduced future operating and maintenance costs, preserving more operating funds for instructional purposes – the delivery of programs and services to students within modern teaching and learning environments,
- Elimination of deferred maintenance costs; the majority of these costs remain as liabilities upon the completion of a seismic upgrade project,
- Strong potential to expedite the SMP program by securing a higher proportion of new, replacement schools, rather than seismic upgrade projects,
- Potential to build new, replacement schools 'on site', avoiding the disruption and displacement of students and staff through temporary accommodation,
- Reduced energy consumption and green-house gas emissions, supporting VSB environmental sustainability goals, while reducing operating costs,
- Increased opportunities for partnership agreements for the construction of dedicated space for child-care, daycare and other priorities identified within the community, and
- Built to current seismic standards, new, replacement schools will achieve a superior level of seismic safety compared to a seismic upgrade project.

The investment in the 'premium' to convert a seismic upgrade project to a new, replacement school results in a short 'payback' period, with significant long-term financial and educational benefits to the school district.

3.7.3 Revenue Generation to enhance capital projects

With a comprehensive portfolio of physical assets, the Board has significant potential to generate revenue, while preserving these assets and their value for longer-term needs.

As the majority of properties were acquired by the VSB, without a financial contribution from the Ministry, the Board has greater discretion and flexibility in the use of revenues generated through these properties to address local priorities. Funds generated through long-term lease and/or sale of land parcels would be available to the Board to fund the 'premium' required to convert a seismic upgrade project to a new, replacement school. Additionally, the Board would also be able to consider the enhancement of major capital projects through the investment of local capital funds to achieve specific, local priorities.

Enhancements to major capital projects across British Columbia have occurred on a regular basis through Board contributions ranging from 100s of thousands of dollars to more than $20 million for multiple projects. Through these funding contributions, and with Ministry agreement, Boards have achieved enhanced outcomes for projects, including; gymnasia, performing arts theatres, increased

capacity to sustain international student enrolment, modern learning environments, and expanded building capacity.

Major capital projects have also been enhanced through partnership agreements resulting in the construction of dedicated day care and child care facilities, shared use gymnasium, artificial turf fields, and community meeting space. These partnership agreements are often facilitated through a new, or replacement school project, enabling joint planning and shared use. There is excellent potential to identify opportunities for enhanced partnerships with the City of Vancouver and other community partners.

3.7.4 Development and Implementation of a Capital Asset Management Plan

The development and implementation of a comprehensive Capital Asset Management Plan will serve to support the guiding principles of the Long Range Facilities Plan, while advancing the priorities identified within the Five-Year Capital Plan. The Capital Asset Management Plan will serve to identify a full range of revenue generation opportunities, as well as cost-saving measures, to provide the Board with the capacity to contribute funds, as required by the Ministry, to achieve the benefits associated with new, replacement schools and enhanced capital projects.

Acknowledging the richness of the physical asset base of the VSB, there is strong potential to support additional goals and objectives of the Board beyond those of the LRFP and Capital Plan.

4 Enrolment Forecasts

4.1 Approach to Enrolment Forecasts

The majority of school districts in BC and all metro school districts, including the VSB, rely on population data and enrolment projections provided by Baragar Infosystems combined with local knowledge to forecast enrolment. Baragar provides enrolment projections using an established methodology that has been independently validated by Stats Can. The methodology used by Baragar to forecast enrolment is a five-step process:

1. Birth Projections – using historical data from Vital Statistics, Baragar estimates the number of babies that will be born in Vancouver and UEL in the coming years.
2. Baragar uses Canada Child Benefit (CCB) payment data provided by the CRA to estimate the base population of each age cohort for children aged 1-17 in the school district and each catchment. The CCB data contains residential address information which facilitates catchment level population estimates.
3. By comparing the number of children in successive age cohorts to the previous year's age cohorts – eg compare 4 year-olds in 2017 to 5 year-olds in 2018 an estimate of the *net* migration rate for each age cohort is determined. Net *in*-migration occurs when an age cohort grows from one year to the next - eg more 5 year-olds in 2018 than 4 year-olds in 2017. Similarly, net *out*-migration occurs when age cohorts become smaller from one year to the next. When demographic changes or residential development leads to an increase in the number of school aged children in a catchment this effect is captured in the net *in*-migration rate for that catchment. Similarly, when the population of school aged children declines in a catchment due to demographic change or development that does not attract families, this effect is captured in the net *out*-migration rate. Baragar uses a rolling 5-year weighted average with heavier weighting of the two most recent years to forecast net migration rates.
4. Participation rate is the number of students attending VSB schools compared with the available population of school-aged children. Using historical district enrolment data a participation rate is determined and used to forecast Kindergarten enrolment.
5. By comparing the size of the current year's grade cohort to the previous year's - eg. Grade 1 students in 2018 to Kindergarten students in 2017 a cohort retention rate is determined. When successive cohorts become larger the cohort retention rates is > 1, similarly when successive cohorts become smaller the cohort retention rate is <1. The cohort retention rate is used to refine grade projections.

The methodology used to forecast enrolment in the district has the following attributes:

- Recognizes the correlation between population of 5-17 year old children and enrolment
- Uses reliable data sources including, VSB enrolment reports, the birth registry from Vital Statistics BC, and Universal Child Care Benefit recipient data from CRA.
- Captures the impact of ongoing residential development or re-development in net migration rates.

Historical and forecast enrolment is for students attending the K-12 program in the VSB. The following groups of students are not included in enrolment data:

- International students
- Students enrolled at the Vancouver Learning Network
- Students enrolled in Adult Education Programs

Correlation Between Population and Enrolment

The strong relationship between the population of school aged children living within the VSB and enrolment at VSB schools is well established. Figure 4.1-1 compares the estimated population of school-aged children to the actual and forecast enrolment.

FIGURE 4.1-1 - **Correlation between population of 5-17 year-old children and enrolment**

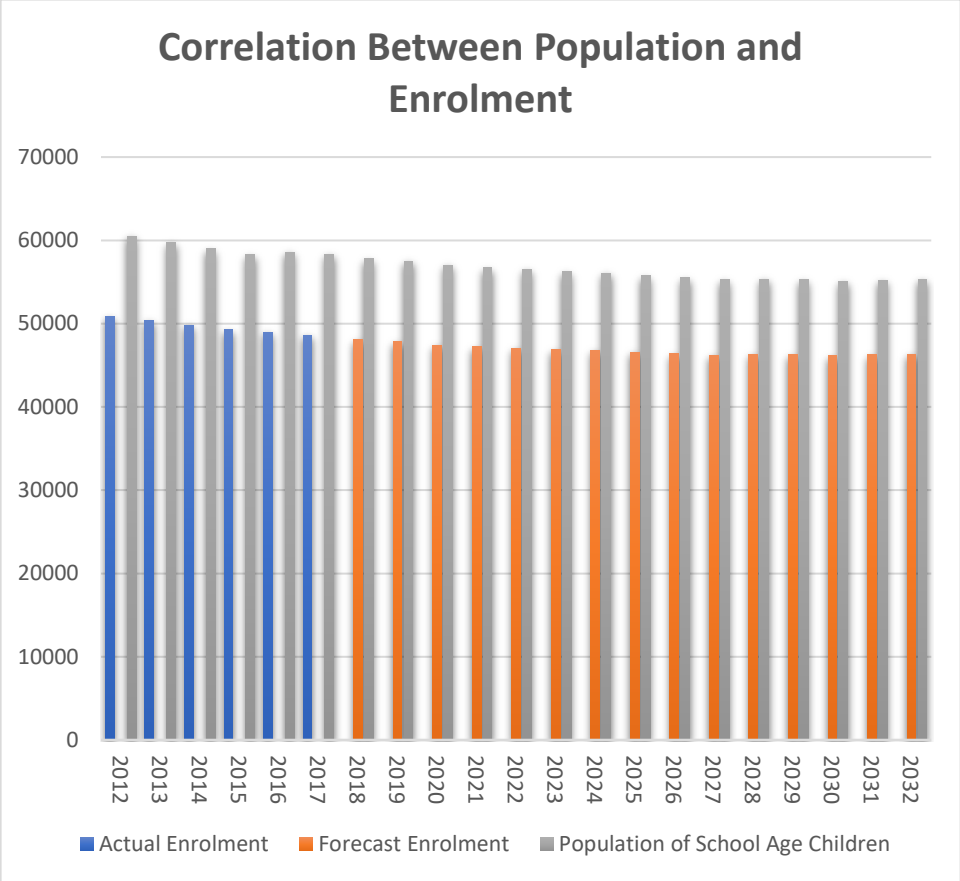


FIGURE 4.1-2: **Enrollment and population of school aged children**

Year	Actual Enrolment	Forecast Enrolment	Population of School Age Children
2012	50882		60475
2013	50433		59700
2014	49791		58965
2015	49261		58255
2016	48958		58550
2017	48634		58355
2018	n/a	48059	57796
2019	n/a	47805	57475
2020	n/a	47397	57011
2021	n/a	47205	56736

2022	n/a	47044	56544
2023	n/a	46871	56252
2024	n/a	46784	56058
2025	n/a	46570	55764
2026	n/a	46358	55507
2027	n/a	46231	55295
2028	n/a	46315	55326
2029	n/a	46265	55258
2030	n/a	46164	55109
2031	n/a	46239	55232
2032	n/a	46317	55349

Reliable Data Sources

Baragar updates population estimates and enrolment estimates annually using data it acquires from three reliable administrative data sources:

- Vital Statistics BC provides the number of births in the City of Vancouver (CoV) and University Endowment Lands (UEL)
- Canadian Revenue Agency provides information age and address information for children in the VSB from data collected for the purpose of distributing the Canada Child Benefit (CCB).
- VSB Enrolment Data based on the annual 1701 enrolment funding submission to the ministry of education.

Impact of Residential Development on Enrolment

Development in Vancouver has resulted in an overall increase in population in the city due to increased residential housing density. Since 1997, enrolment in the VSB has declined alongside the development and re-development of the city and the UEL. Changing demographics have accounted for much of the enrolment decline. It is noteworthy that overall student yields (the ratio of the number of students enrolled divided by the number of residential units in an area) - for multi-family residences in Vancouver are lower than single family homes in the VSB. Measuring net-migration rate has proven to be an effective tool for forecasting enrolment even in areas of substantial residential development. Net-migration rate effectively captures the impact of ongoing development in combination with any other demographic changes that may be influencing the number of school aged children in a catchment area. The exclusive use of net-migration rates has limitations. It is important to monitor and apply 'local knowledge' to areas with the following attributes:

- New residential developments on previously undeveloped land.
- New multi-residential developments in existing neighbourhoods in areas that have had limited redevelopment in the past.
- New affordable and social housing initiatives

4.2 Historical Accuracy of Enrolment Forecasts

The VSB has an established history of accurate short-term enrolment projections. (Figure 4.2-1)

(FIGURE 4.2-1: **short-term enrolment projections**

Year	VSB Projection (HC)	VSB Actual K-12	HC Variance	% Variance
2012	50983	50882	-101	-0.20
2013	50353	50433	80	0.16
2014	49673	49791	118	0.24
2015	49126	49261	135	0.27
2016	49083	48958	-125	-0.25
2017	48714	48634	80	-0.16

Medium term district enrolment projections have also been accurate and reliable in the context of a dynamic economic and demographic environment. Figure 4.2-2 compares District enrolment projections from 2011 with actual enrolment headcounts for the next six years.

FIGURE 4.2-2: **Accuracy of medium term enrolment projections**

Year	Headcount Projection from 2011	Actual Headcount Enrolment by Year	Difference	Percent Difference
2012	51019	50882	-137	0.27
2013	50375	50433	58	0.12
2014	49851	49791	-60	0.12
2015	49480	49261	-219	0.44
2016	49357	48958	-399	0.82
2017	49249	48634	-615	1.3

4.3 Historical Enrolment Trends

There are a number of established demographic and enrolment trends in the District including the following:

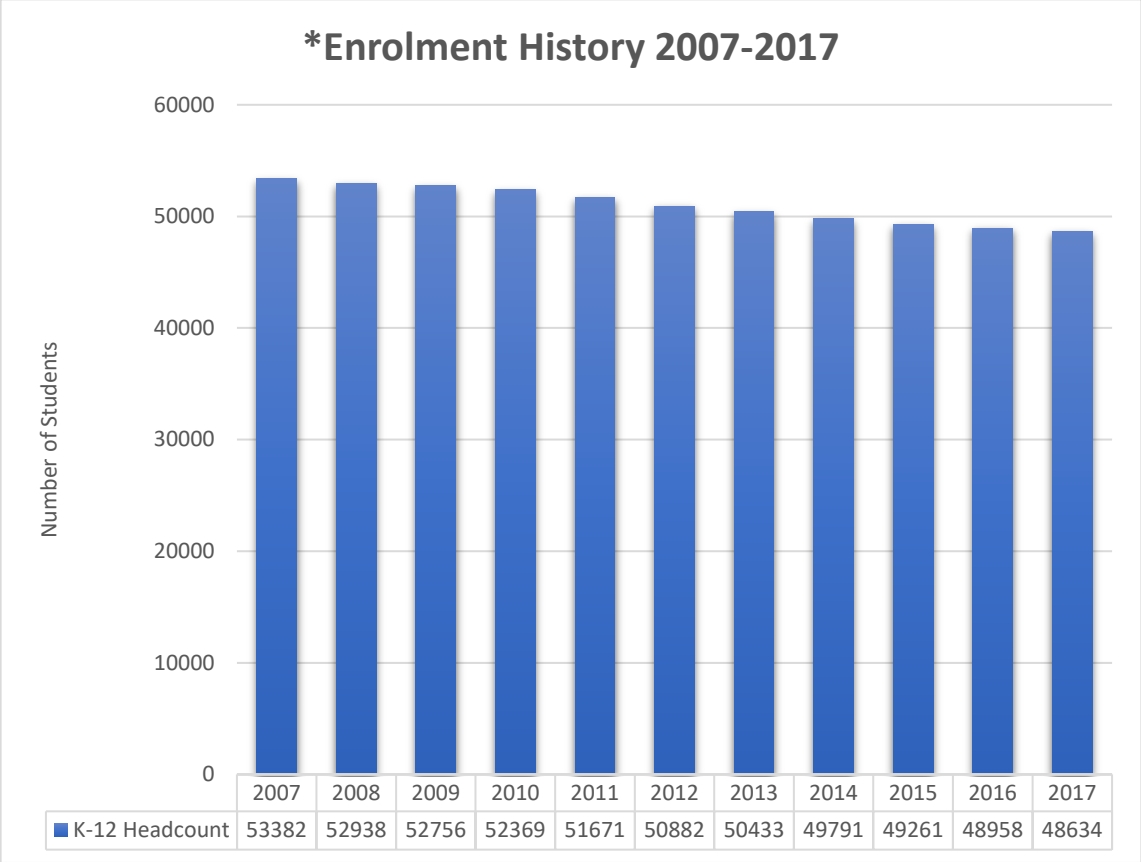
- Declining enrolment
- Number of babies born in the CoV and the UEL is stable
- A strong relationship between the number of births in CoV and UEL and the number of Kindergarten students enrolling in the VSB five years later.
- Cohort size remains stable in elementary grades, and cohort size in secondary grades increase in each successive year.
- Decline in number of students registering through the District Reception and Placement Centre
- Stable Market Share

Declining Enrolment

Since peaking in 1997, VSB school enrolment has declined steadily despite significant and ongoing residential development and overall population growth in the City of Vancouver and the UEL. In 2017 there were 4700 fewer students attending District schools than in 2007 which represents a 9% enrolment decline. Further enrolment decline is forecast with approximately 2,400 fewer students

expected to be enrolled in 2027 than in 2017. Enrolment decline was first felt disproportionately at elementary schools as the number of children being born in Vancouver declined prior to 2007 and smaller grade cohorts moved through the system. Secondary schools experienced the majority of enrolment decline between 2011 and 2017. In the future, enrolment decline will be relatively balanced across all grades.

FIGURE 4.3-1: **Enrolment History of the VSB 2007 to 2017.**

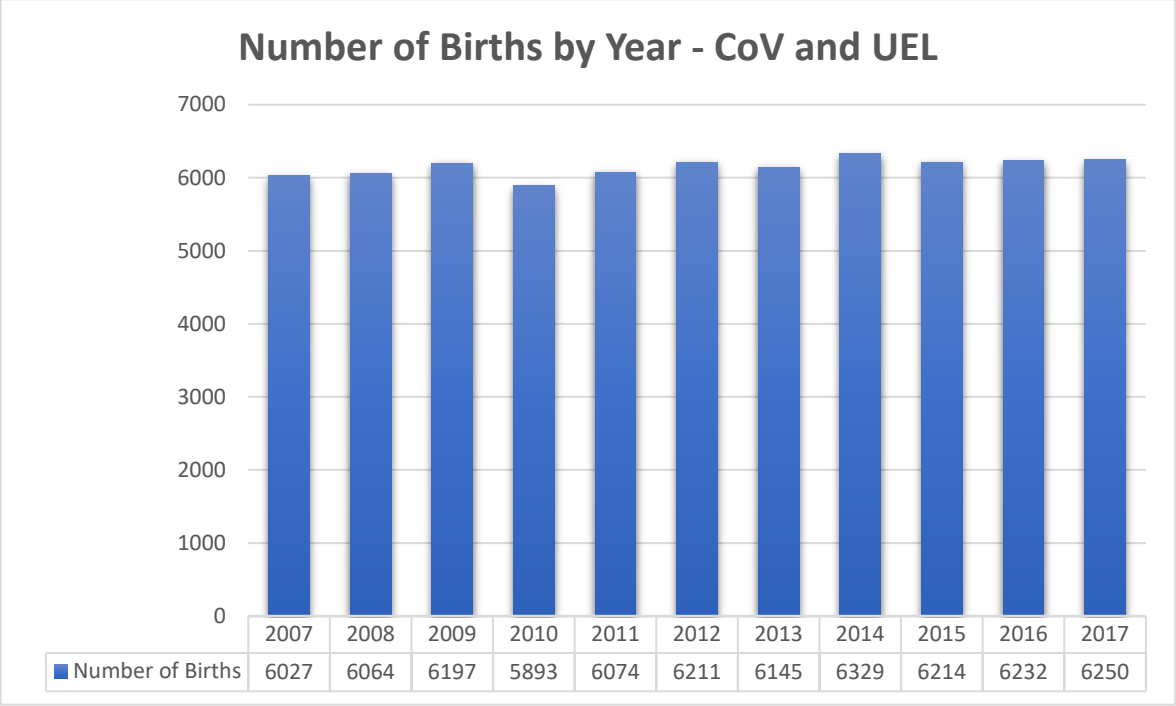


**Excludes International Students*

Stable number of births in the City of Vancouver

The number of births for Vancouver residents as reported by Vital Statistics BC has been stable for some time with small annual variations. There is no significant forecast growth in the number of births in Vancouver.

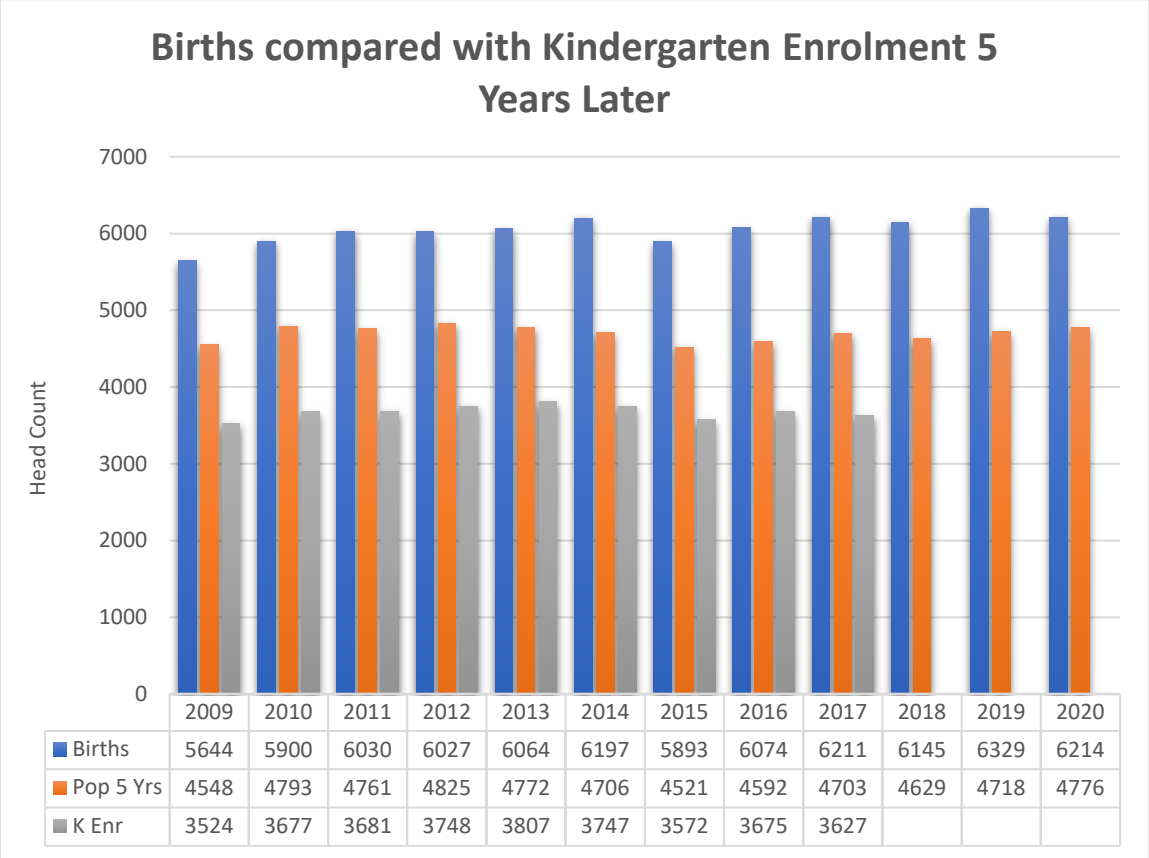
FIGURE 4.3-2: **Annual number of births in Vancouver and Vancouver since 2007.**



Correlation between births and Kindergarten Enrolment

Historically, the number of births in the city of Vancouver is a strong predictor of the population of 5 year-olds. Variations in the number of births in a particular year, for example 2009, are detectable in the population 5 years later – 2014. The population of 5 year-olds is also a very strong predictor for Kindergarten enrolment. This pattern is significant as it illustrates that birth rate provides a good means of forecasting K enrolment 5 years into the future. As noted in Figure 4.3-3, the size of the Kindergarten cohort is a strong predictor of future cohort size.

FIGURE 4.3-3: **Number of births compared to Kindergarten enrolment 5 years later**



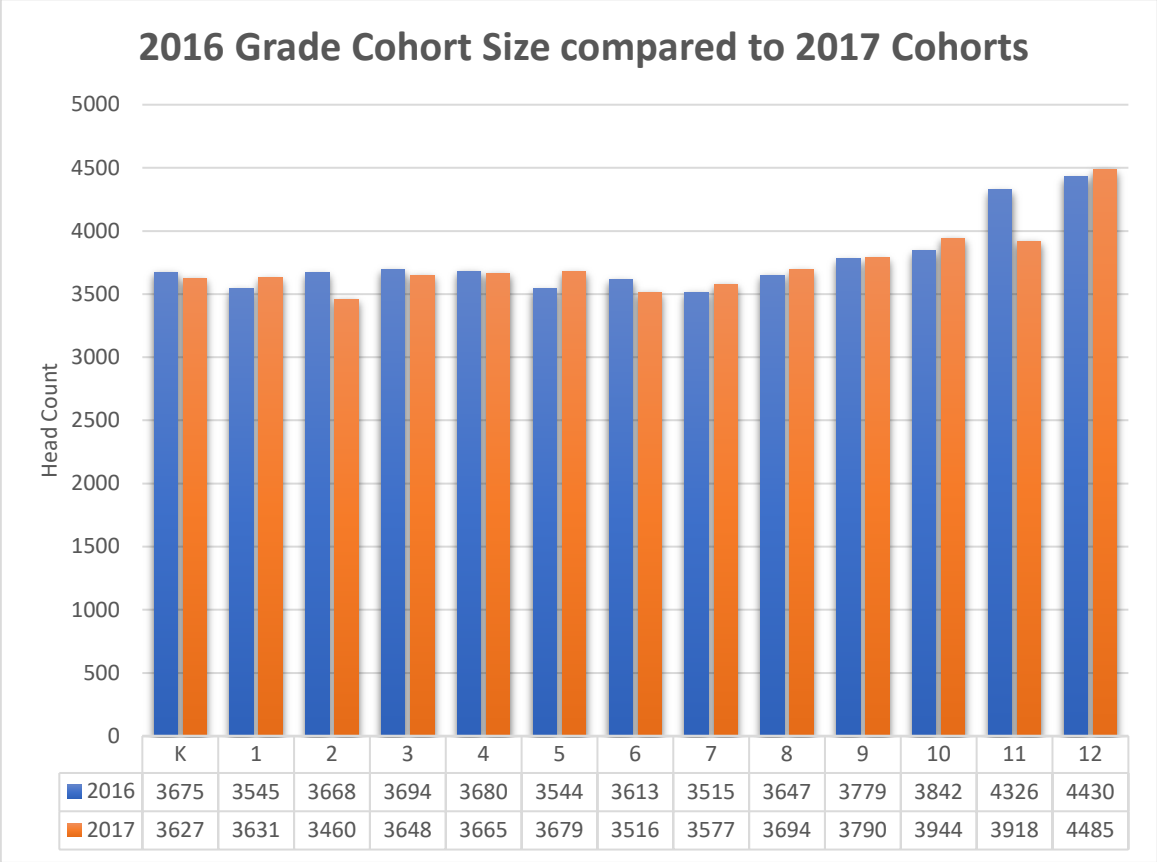
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Births	5644	5900	6030	6027	6064	6197	5893	6074	6211	6145	6329	6214
Pop 5 Yrs	4548	4793	4761	4825	4772	4706	4521	4592	4703	4629	4718	4776
K Enr	3524	3677	3681	3748	3807	3747	3572	3675	3627			

**Year shown is Kindergarten entry year. Annual births numbers are five years earlier than the years shown on the chart.*

Grade Cohort Size and Growth

Regardless of overall enrollment, the relative size of the grade cohorts in the VSB has a formed a predictable pattern for several years (Figure 4.3-4). The size of elementary cohorts is similar year over year, and the size of secondary school cohorts increases as student's progress towards graduation. The increase in grade cohort size at secondary school is a consequence of an overall return to VSB schools from independent schools for secondary schooling.

FIGURE 4.3-4: **2017 – Baragar Demographic Dynamics. Note: births for 2017 are projected**

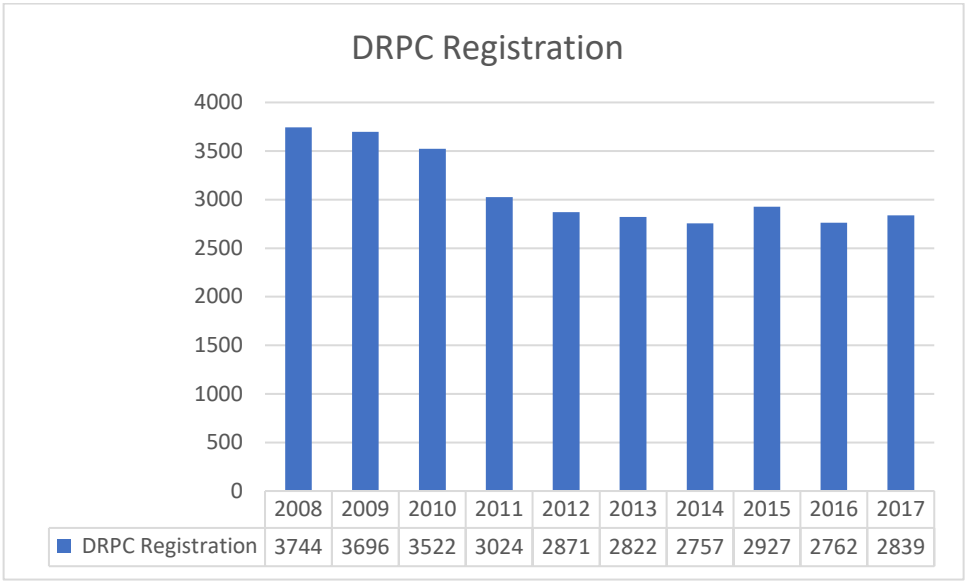


	K	1	2	3	4	5	6	7	8	9	10	11	12
2016	3675	3545	3668	3694	3680	3544	3613	3515	3647	3779	3842	4326	4430
2017	3627	3631	3460	3648	3665	3679	3516	3577	3694	3790	3944	3918	4485

Registration at the District Reception and Placement Centre(DRPC)

All K-12 students born outside Canada and grade 1-12 students who do not speak English as their home language begin the registration process at the DRPC. The number of students registering annually at the DRPC is tracked.

FIGURE 4.3-5: **Number of Students Registering Annually at the DRPC**



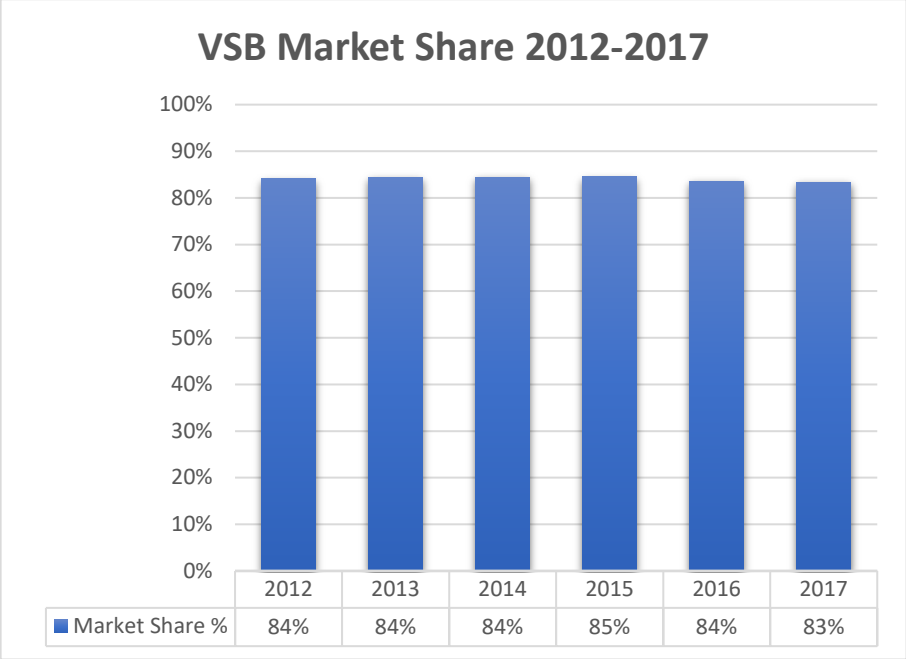
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
DRPC Registration	3744	3696	3522	3024	2871	2822	2757	2927	2762	2839

Registration at DRPC declined between 2008 and 2012. From 2012 onward has been about 850 fewer students per year than in in 2008.

Participation Rate/Market Share

Market share, also termed participation rate, is the ratio of enrolment divided by population of 5-17 year-old children. VSB market share is stable, none of the enrolment decline since 2012 is attributable to a decline in market share. The participation rate in VSB schools is stable (Figure 4.3-6) indicating that the VSB has attracted and continues to attract the same percentage of available 5-17 children its schools and programs as it has in the past.

FIGURE 4.3-6



Impact of enrolment at independent schools on VSB enrolment

There are many reports and statistics that describe increasing enrolment at Independent schools in BC. It is natural to conflate reports of increased enrolment at independent schools with enrolment decline in the VSB.

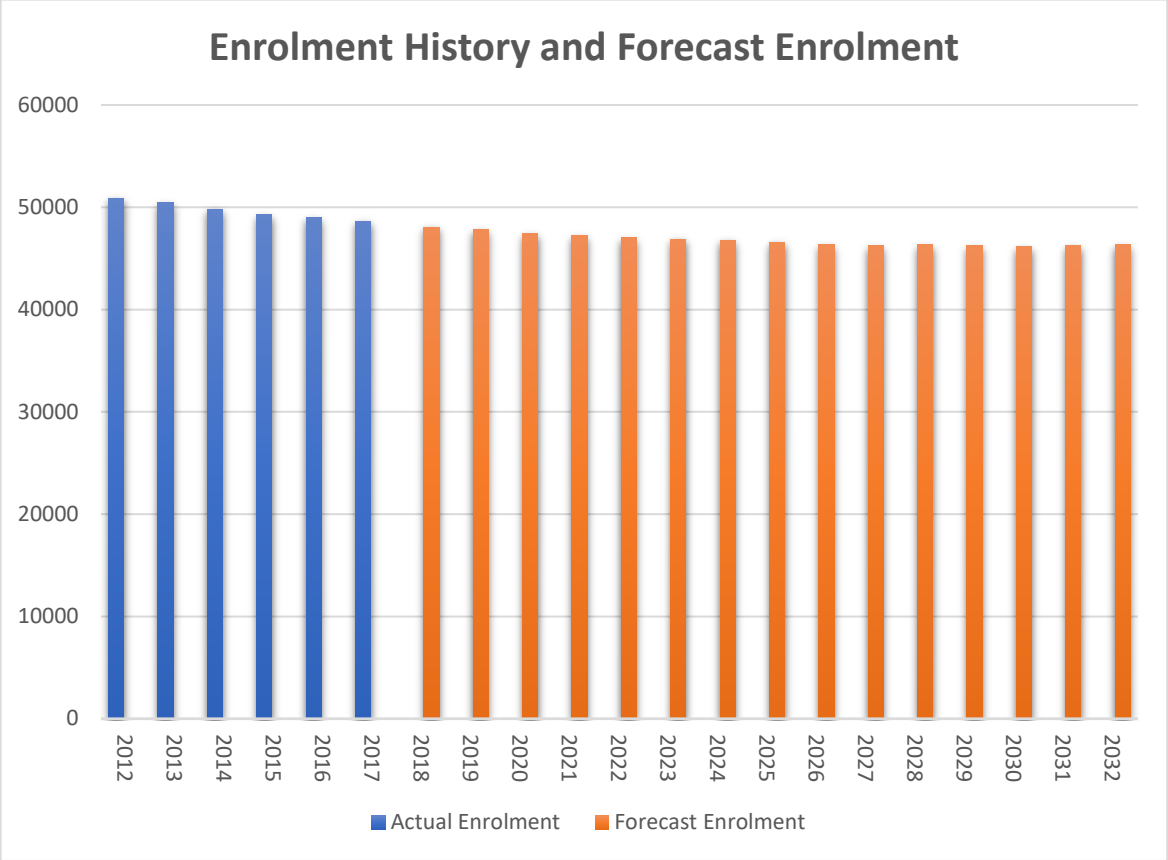
Without full access to independent school enrolment data it is not possible to fully analyze the sources of increased enrolment that have been reported. However, there are some factors to consider that may help explain increasing enrolment at Independent schools concurrently with stable VSB market share:

- Independent schools may be enrolling an increasing number and percentage of International students. This is a verified trend at local post-secondary institutions.
- Many new independent schools are online schools that provide an additional educational option for students whose homeschool is public to complete specific course credits.

4.4 Results of Enrolment Forecasts

Enrolment is forecast to decline by about 250 students per year or 0.50% per year until 2026 Enrolment is forecast to stabilize in subsequent years.

FIGURE 4.4-1: **Enrolment history for the past 5 years and the enrolment forecast to 2032.**



Enrolment forecasts for each VSB school are in Appendix G

5 Operating Capacity and Capacity Utilization

5.1 District Operating Capacity

Operating capacity for schools is defined by the Ministry of Education. Operating capacity is based on the number of enrolling classrooms in the original design of the school. Rooms that have been re-purposed as non-enrolling classrooms in subsequent years are still counted as enrolling space for the purpose of determining operating capacity for each school.

FIGURE 5.1-1: **Classroom capacity averages used to calculate operating capacity**

Classroom Type	Classroom Capacity
Kindergarten	19
Grade 1-7	23.29
Grade 8-12	25

FIGURE 5.1-2: **shows the operating capacities for the types of school facilities operating in the district.**

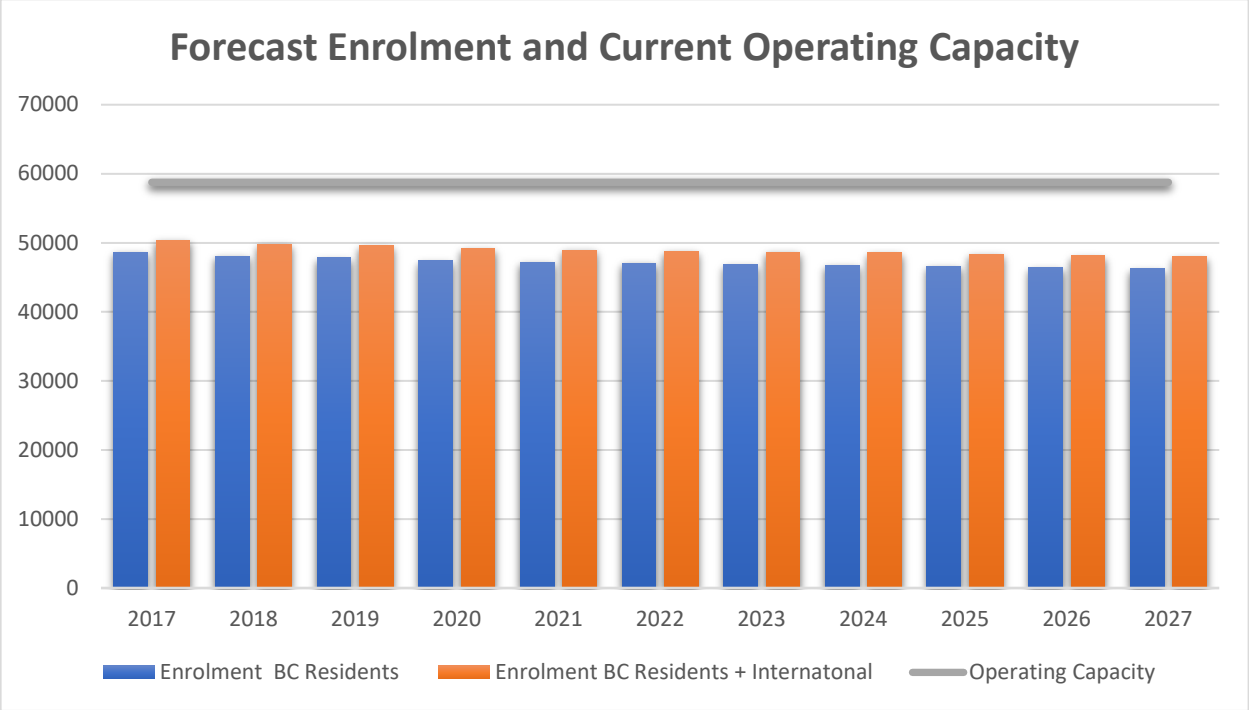
School Type	Total Operating Capacity
Annex	1779
Elementary	31887
Secondary	25100
District Total	58766

In addition to BC resident students, who are funded by the Ministry of Education the Vancouver School District also enrols International Students who are not residents of BC. International students fund their education directly through tuition payments to the District. The District has jurisdiction over the school placement of International Students.

FIGURE 5.1-3: **Current Enrolment and Operating Capacity**

School Type	Current Operating Capacity	2017 BC Resident Enrolment	2017 International Enrolment
Elementary including Annexes	31887	28968	219
Secondary	25100	19666	1522
Total	**58766**	**48634**	**1741**

FIGURE 5.1-4: **Current Operating capacity and forecast student enrolment including International students**



5.2 Enrolling Capacity and Scheduling Capacity

Operating Capacity is a useful metric to make an initial assessment of the surplus or shortage of space in a school

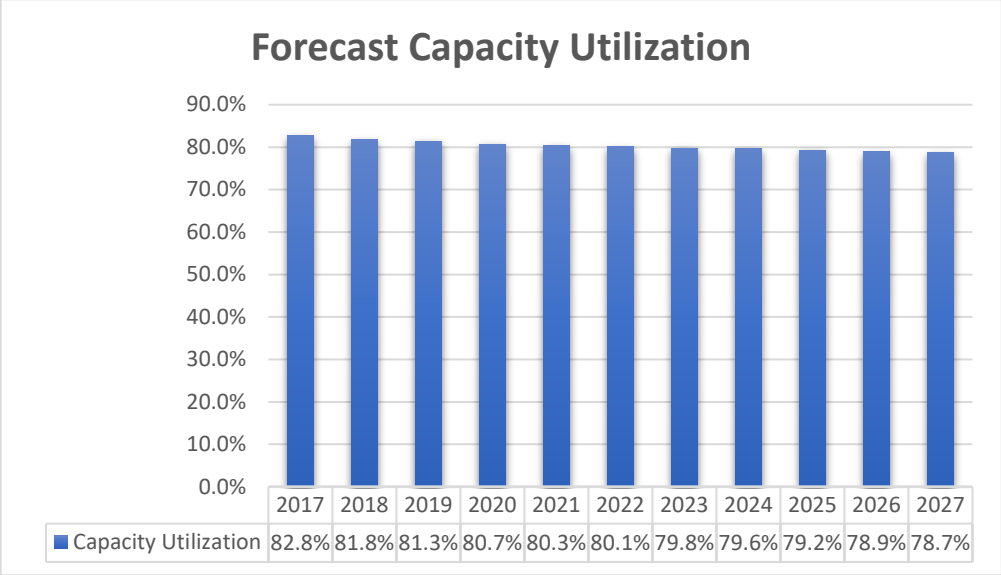
To develop a full picture of the number of students that can be safely and practically enrolled at a particular school, the District considers additional factors. For elementary schools the number of enrolling classrooms, class size limits, and the grade distribution of the school organization determine the total **enrolling capacity** for the school. These factors are variables used to determine the number of students that can be accommodated in an elementary school.

Secondary schools have more complexity and flexibility within their organization with respect to how space is used. In most cases, the **scheduling capacity** of a secondary school is approximately 10% greater than its operating capacity.

5.3 Current and Forecast Capacity Utilization

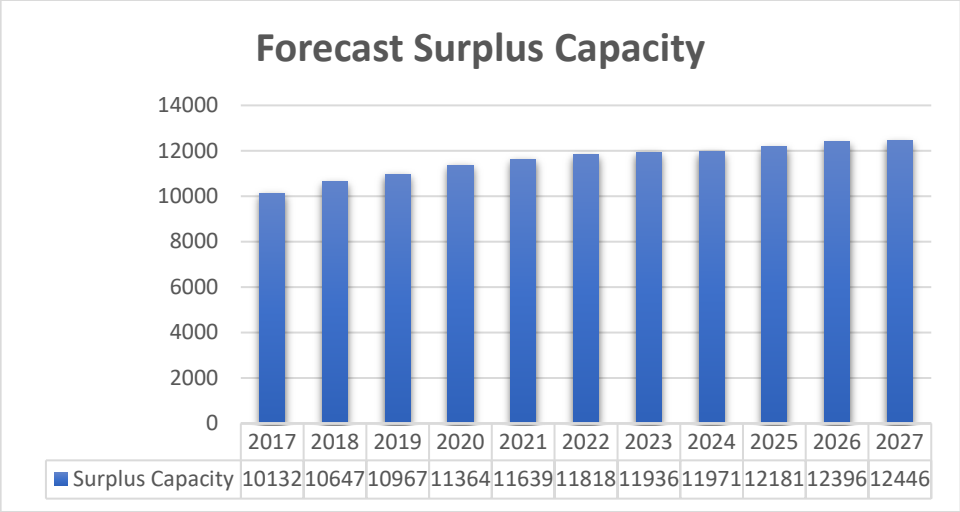
Capacity utilization is a ratio and is expressed as a percentage. The District is responsible for the intake of International students. The Ministry does not provide capital funding for enrolling space to accommodate International students.

FIGURE 5.3-1: **Forecast capacity utilization excluding International Students**



Capacity utilization is forecast to decline as BC resident student enrolment declines and surplus space increases while the operating capacity remains at its current level.

FIGURE 5.3-2: **Forecast surplus capacity excluding International Students**



The current total operating capacity for the district is 58766 student spaces. Figure 5.1-3 and Figure 5.1-4 illustrate the effect of declining enrolment on capacity utilization and surplus capacity respectively. In years 1-5 of its 2019-2020 Capital Plan the district has requested new capital funding for 4765 additional enrolling spaces. At present, the Ministry has not committed funding for any of the proposed new facilities or expansions to existing facilities. If the District retained its current capacity and added the enrolling space requested in the 2019-20 Capital Plan, the forecast capacity utilization 2027 would be 73% with 17000 surplus seats.

Current and Forecast Capacity Utilization for Elementary and Secondary Schools

Capacity Utilization is lower at secondary schools than elementary schools.

FIGURE 5.3-3: **Capacity Utilization and Surplus Capacity by school type**

School Type	Current Operating Capacity	2017 BC Resident Enrolment	Capacity Utilization	Surplus Capacity
Elementary including Annexes	33666	28968	86.0%	4698
Secondary	25100	19666	78.4%	5434
District	**58766**	**48634**	**82.4%**	**10132**

FIGURE 5.3-4: **Forecast Capacity Utilization and Surplus Capacity by school type**

School Type	Current Operating Capacity	2027 BC Resident Enrolment	Capacity Utilization	Surplus Capacity
Elementary including Annexes	33666	27500	81.7%	6166
Secondary	25100	18820	75.0%	6280
District	**58766**	**46320**	**78.8%**	**12446**

Due to the impact of ongoing enrolment decline, surplus capacity is forecast to increase from over 10000 in 2017 to over 12000 in 2027. Surplus capacity will increase at both elementary and secondary schools. Secondary schools will continue to have an overall capacity utilization that is lower than elementary schools.

6 Approaches to Balancing Enrolment with Capacity

6.1 Current Capacity Utilization

Capacity utilization of schools varies widely across the District. At present, most schools in the District have low capacity utilization due to low and declining enrolment. However, there are also areas of the district experiencing enrolment growth. Schools in these areas have higher capacity utilization rates – often above 100%. The 'heat maps' below illustrate the wide variance in capacity utilization across the District in elementary and secondary schools.

FIGURE 6.1-1: **current capacity utilization at elementary schools, and their associated annexes.**

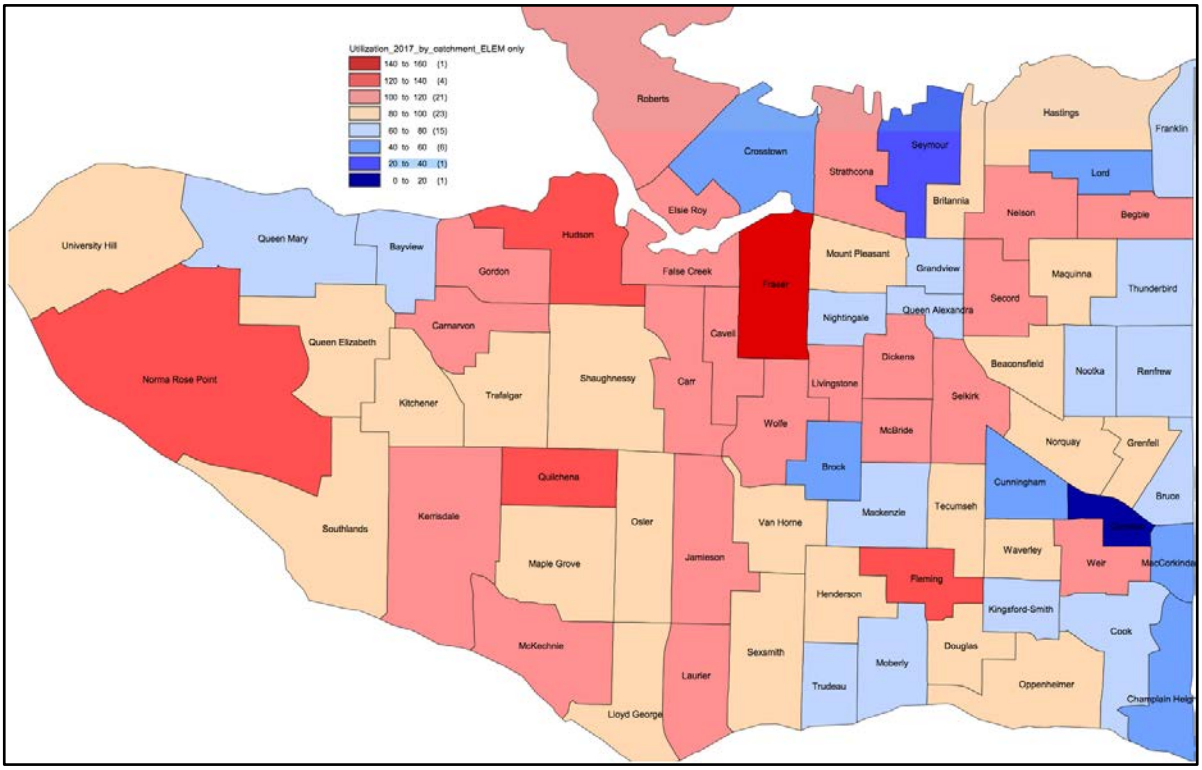
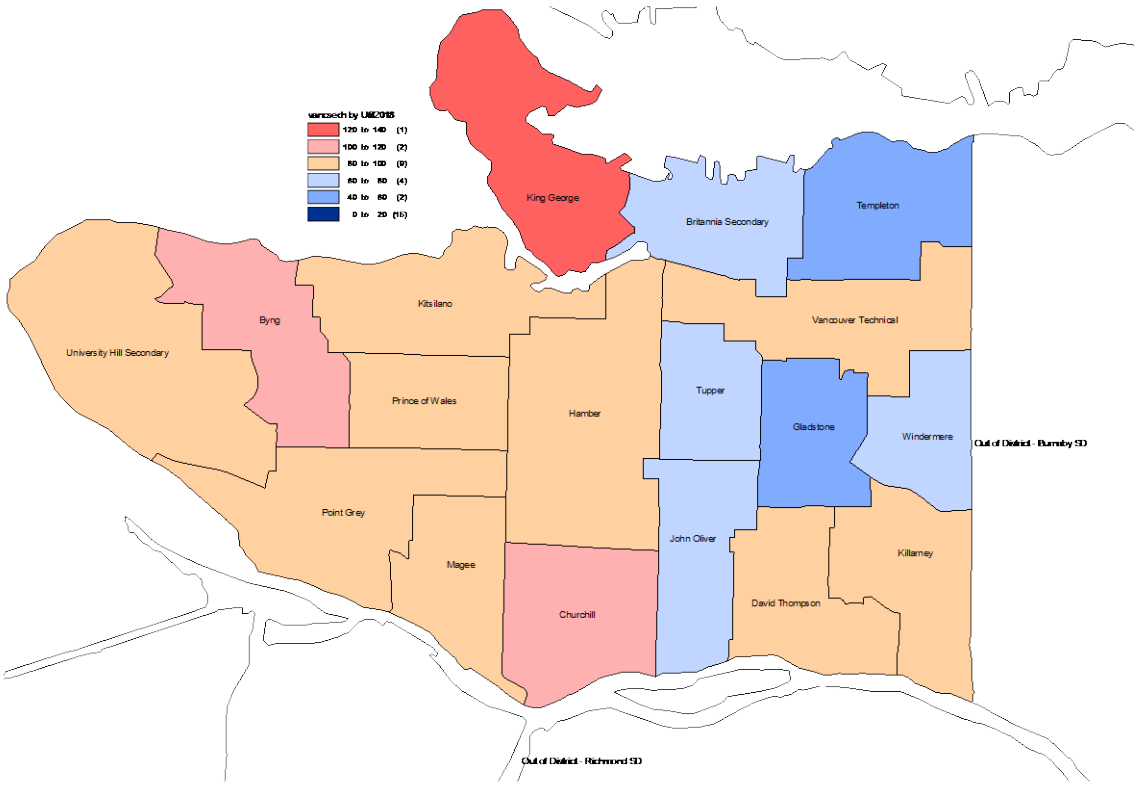


FIGURE 6.1-2: **current capacity utilization at secondary schools.**



The District has several strategies to use that enable the balancing of enrolment with available capacity. The District most frequently uses these strategies at full schools where the number of catchment Kindergarten students that wish to attend the school exceeds the available space in the school.

6.2 Enrolment Management Strategies

The main goal of enrolment management is to ensure that students who wish to can attend their catchment school. Active enrolment management also contributes the efficient use of available school capacity and human resources. The table below lists enrolment management strategies that have been and are currently being used by the district to manage enrolment at full schools

FIGURE 6.2-1: **Enrolment Management Strategies used for full schools**

Strategy	Purpose
Restrict out-of-catchment enrolment	By actively managing the number of students accepted through the cross-boundary application process, school enrolments can be reduced to help ensure that space is available for students who reside in the catchment.

Place students from full schools at nearby schools with available capacity	When there is insufficient capacity to accommodate catchment students, the district places students at nearby schools.
Maintain ordered catchment waitlists	If capacity becomes available, schools offer placements to catchment students who could not be accommodated when they applied to enrol.
Align the timeline for placement offers for Kindergarten Choice programs with catchment enrolment offers	Parents are provided with information about their enrolment status at their catchment school and their status with respect to their Kindergarten Choice program applications to simplify decision making.

The district has developed webservices for parents to facilitate the registration and enrolment application process. These webservices are aligned with digital enrolment management tools to ensure enrolment is an efficient, reliable and transparent process.

FIGURE 6.2-2: **Enrolment management tools**

Strategy	Purpose
Online enrolment service for parents	Provides parents with a convenient method for initiating the registration process. Provides the district with direct access to the number of enrolment applications at each VSB school.
Online cross-boundary application service for parents	Provides parents with a convenient method to making cross boundary applications. Provides the District with direct access to the number of cross-boundary applications at each VSB school.
Online Kindergarten Choice Application service for parents	Provides parents with a convenient method for applying to Kindergarten Choice Programs. Allows parents to rank preferences. Provides the District with direct access to the number of applications to each Kindergarten Choice Program.

The district has additional options to balance enrolment with available capacity that require significant planning and consultation. These strategies require one to three years to plan and implement and may take several additional years to take full effect on enrolment.

FIGURE 6.2-3: **Strategies to adjust the number of students eligible to attend a school**

Strategy	Purpose
Grade Range Adjustment	The District uses Grade Range Adjustment to balance enrolment between nearby schools and between annexes and their main school.
Locate, re-locate, and consolidate district programs	The District can locate and re-locate district programs to other VSB facilities to manage enrolment. District programs are intended to support the entire district and, as such, the catchment area for these programs is the entire district.
Catchment Area Boundary Adjustments	The district has the ability, under the School Act (75.1[2]), to amend the catchment boundaries for its schools. Amending catchment boundaries could be done for several reasons, including as a way of redistributing enrolments, consolidating schools, and opening new schools.

6.3 Maximizing Enrolling Space

As well as managing the number of students who enrol at schools experiencing enrolment pressure, the district also endeavours to maximize the available capacity at full schools.

FIGURE 6.3-1: **Strategies to maximize enrolling space.**

Strategy	Purpose
Use all available enrolling space	At schools with enrolment pressure, the district ensures that all rooms designed as enrolling classrooms are used as enrolling classrooms. This could include renovating existing space.
Portables on site	Where feasible, the district may install a portable on the school site to create additional enrolling capacity. As portables are a relatively expensive, and viewed as a short term solution, portable installation is often not the preferred strategy.

6.4 Major Capital Projects to Increase Capacity

Any project that requires capital funding from the Ministry of Education requires Ministry approval to proceed.

FIGURE 6.4-1: **Major capital projects to increase capacity.**

Strategy	Purpose
Expansion/Addition	Where feasible, the district may renovate a school to create additional enrolling capacity. The District prioritizes requests for new schools in the annual Capital Plan submission to the Ministry.
Building new schools	In areas with ongoing enrolment pressure, a new school may be required to provide additional operating capacity. The District prioritizes requests for new schools in the annual Capital Plan submission to the Ministry.

7 Areas of Enrolment Growth – Capacity Utilization Scan

The District is currently faced with the challenge of wide variation in the capacity utilization rates between catchments. This section of the report identifies four areas of the district with that have experienced enrolment growth and have schools with high capacity utilizations.

- King George Study Area
- Kitsilano Study Area
- North Hamber Study Area
- South Hamber Study Area

FIGURE 7.1: **Elementary schools and annexes in each study area.**

Study Area	Schools in Study Area
King George	Crosstown, Elsie Roy, Roberts Elementary, Roberts Annex
Kitsilano	Carnarvon, Gordon, Hudson, Shaugnessy
North Hamber	False Creek, Fraser, Mount Pleasant, Nightingale
South Hamber	Brock, Carr, Cavell, Livingstone, Wolfe

The four study areas share the following characteristics:

- Elementary schools identified by the district as being 'full' meaning that they may be unable to accommodate all the catchment Kindergarten students who wish to attend.
- Overall capacity utilizations close to or in excess of 100%

FIGURE 7.2: **Current and forecast Capacity Utilization and Surplus or Shortage of space in four study areas.**

Study Area	2017 Capacity Utilization	2017 Surplus or Shortage	2027 Capacity Utilization	2027 Surplus or *Shortage
King George	89%	166	110%	-161
Kitsilano	107%	-100	113%	-200
North Hamber	96%	42	114%	-156
South Hamber	96%	75	96%	55

**Shortage of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

In addition to overall high capacity utilization, the study areas have been defined to represent current elementary enrolment patterns including district placement of Kindergarten students. Secondary school catchments are quite large and some secondary catchments encompass elementary schools with both higher and lower capacity utilizations. Elementary schools catchments are often transected by secondary school catchments. The King George study area encompasses elementary schools that are in the King George Secondary school catchment. The other three study areas encompass elementary schools in more than one secondary school catchment.

Managing Enrolment Challenges

In some cases Kindergarten enrolment is a long standing challenge. In other schools the situation is more variable from year to year. Although the district has successfully implemented enrolment management strategies and maximized enrolling space to mitigate the impact of enrolment growth, enrollment challenges have not yet been fully resolved in any of the four study areas.

Beginning in 2016 two additional factors have contributed to the challenges with Kindergarten enrolment at full schools:

- The implementation of restored contract provisions regarding class size and composition has increased demands on classroom space at elementary schools.
- The restriction on school organizations that include split Kindergarten/Grade 1 classes. This is an organizational constraint that is unique to Vancouver in the metro region.

By using the enrolment management strategies detailed in Section 6 of this report, the district has been successful in managing persistent enrollment challenges presented by full schools in a fair and transparent way; but has not yet implemented sustainable changes designed to address the underlying issues of insufficient capacity in the four contiguous areas of the city identified above.

To resolve the issue of enrolment pressure at full schools the district will need to evaluate options that include the following:

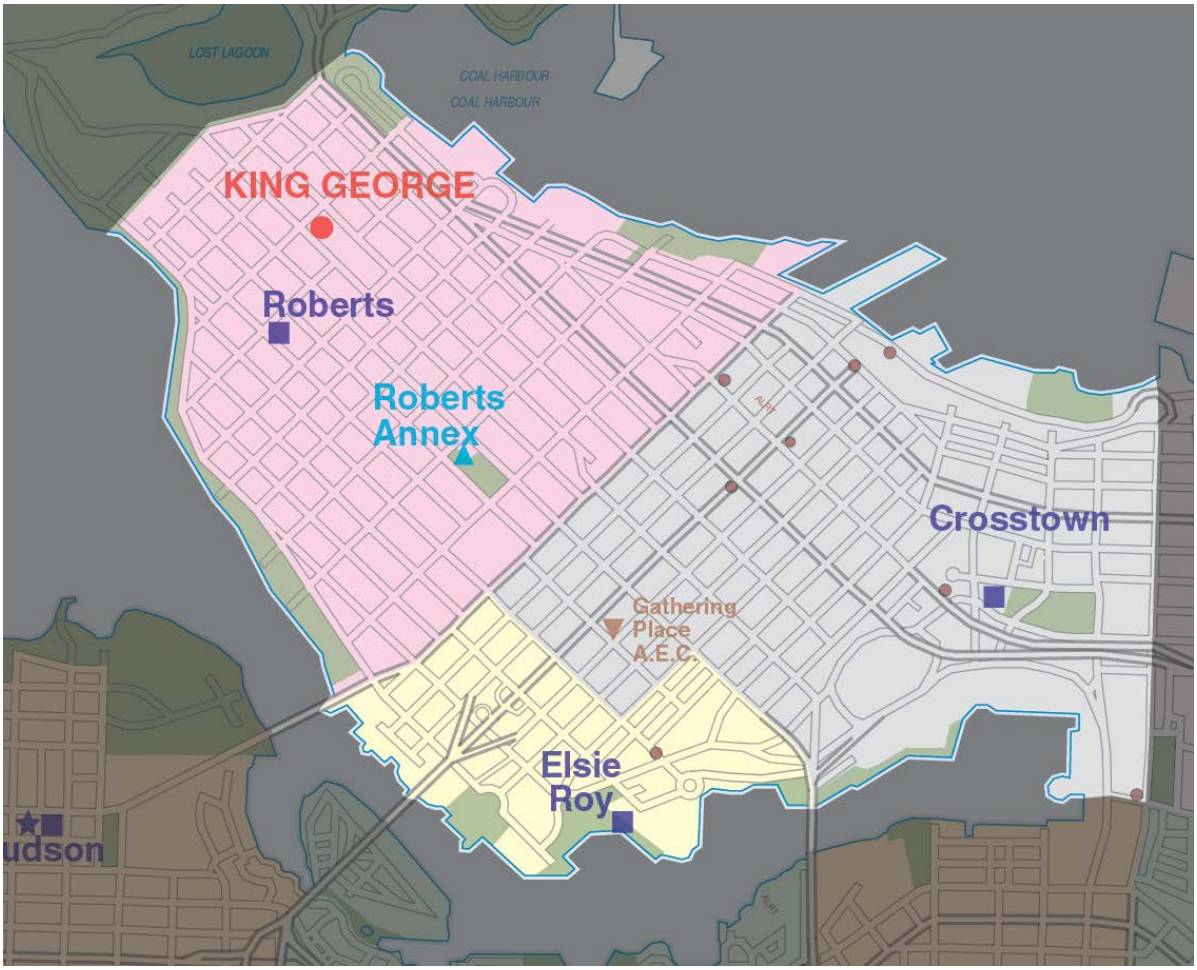
- Re-location of district programs
- Boundary Adjustments
- Expansion of capacity in existing facilities
- Construction of New Schools

Planning and implementation of program re-locations or boundary adjustments may take place over a period of one to three years. Whereas the process to build a new school is a multi-year undertaking that requires ministry funding approval.

7.1 Elementary Schools in the King George Study Area

The King George study area is comprised of three elementary schools and one annex in the King George Secondary catchment. Three of the four sites in the King George study area currently have capacity utilizations above 100%. For many years, the number of catchment students wishing to attend Elsie Roy has exceeded the available space in the school. Crosstown has a lower capacity utilization because the school, which was opened in 2016, is still filling as primary cohorts move through to increase enrolment in the intermediate grades. For several years there has demand for enrolling space at Elsie Roy has exceeded the available space.

Figure 7.1-1: King George study area



The current overall capacity utilization in the King George study area is 89% and is forecast to increase to 110% in 2027.

Enrolment Analysis

FIGURE 7.1-2: **current capacity utilization and shortage of enrolling capacity at Elementary schools in the King George study area.**

School	Operating Capacity	2017 Enrolment	Capacity Utilization	Surplus or *Shortage
Crosstown	476	242	51%	234
Elsie Roy	387	415	107%	-28
Roberts	573	606	106%	-33
Roberts Annex	124	131	106%	-7
Total	**1560**	**1394**	**89%**	**166**

**Shortage of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

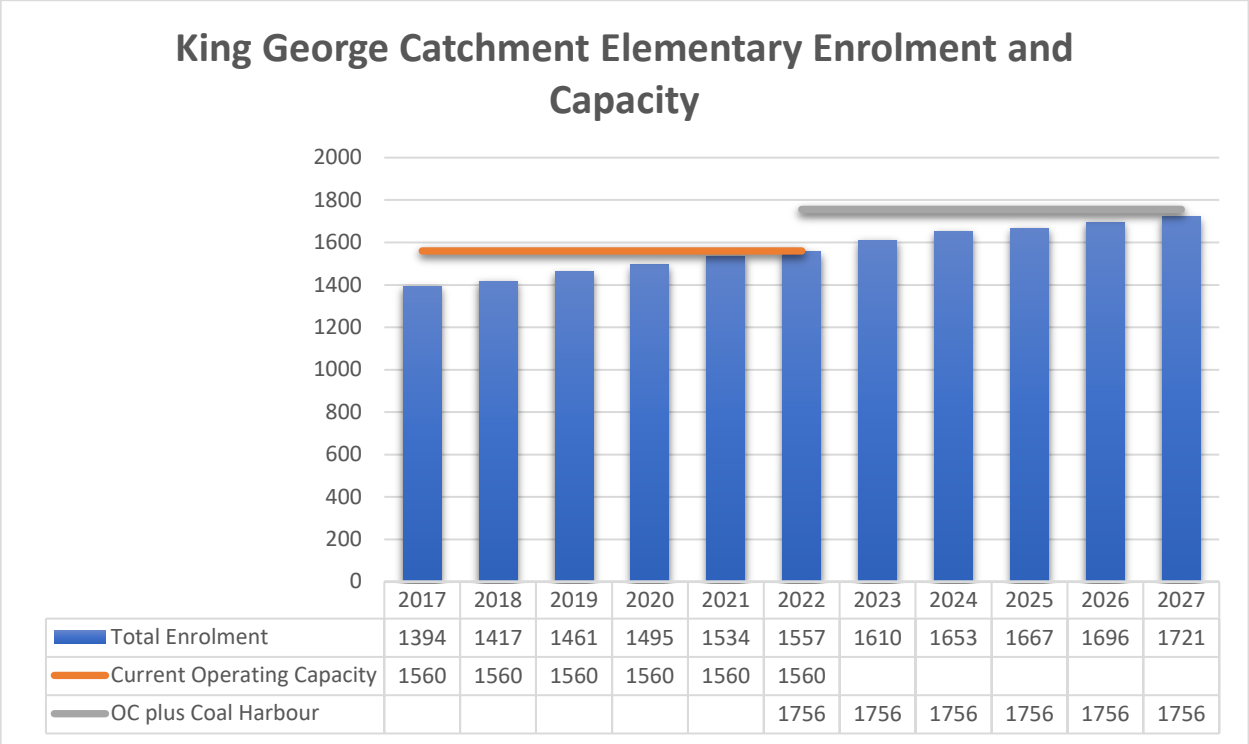
FIGURE 7.1-3: **shows the forecast capacity utilization and shortage of enrolling capacity at Elementary schools in the King George study area.**

School	Operating Capacity	2027 Enrolment	Capacity Utilization	Surplus or Shortage
Crosstown	476	514	108%	-38
Elsie Roy	387	379	98%	8
Roberts	573	673	117%	-100
Roberts Annex	124	155	125%	-31
Total	**1560**	**1721**	**110%**	**-161**

**Shortage* of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

Enrolment is forecast to increase in the King George catchment area over the next 10 years.

FIGURE 7.1-4: **Forecast enrolment and operating capacity for elementary schools in King George study area**



The addition of Coal Harbour with an operating capacity of 320 and the temporary closure of the Roberts Annex site will result in a net increase in operating capacity of 196 for the elementary schools in the King George catchment.

District Actions to Date

The district has used active enrolment management strategies in the downtown area for several years. An agreement has been reached with BC Hydro for the sale of underground air parcel located at Lord Roberts Annex for the construction of a new substation. Construction of the substation will begin in 2023 when a new elementary school opens in Coal Harbour for the 2023-2024 school year. The first phase of the

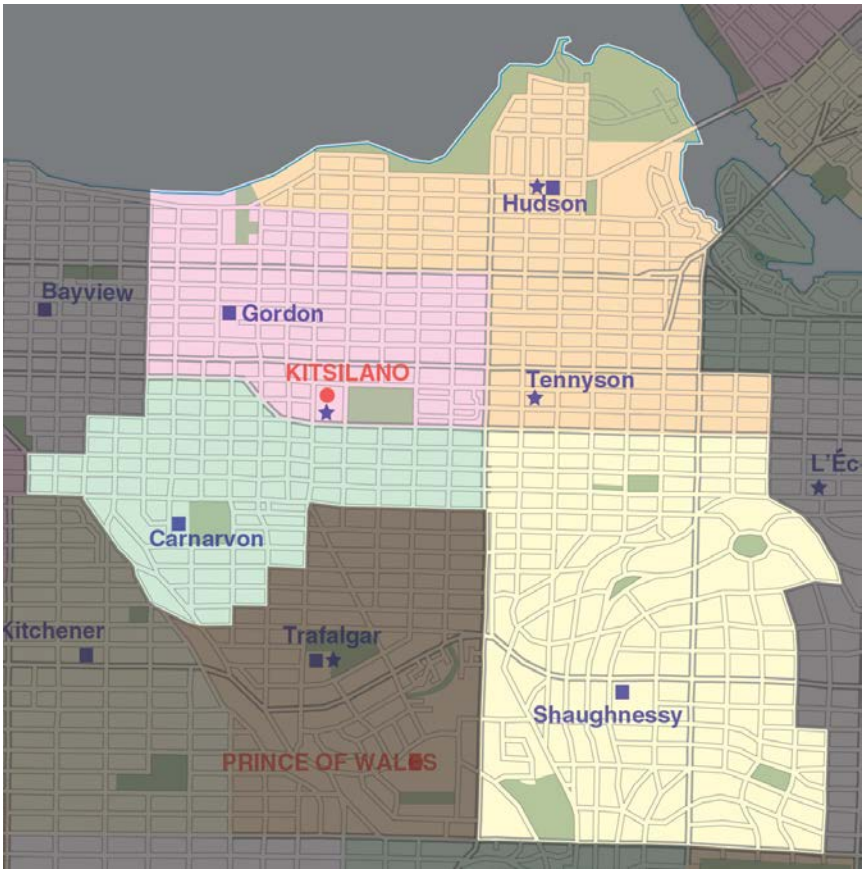
construction will be the demolition of the current Lord Roberts Annex building. The Roberts Annex students will attend school at Coal Harbour Elementary until the substation is built, expected to be in 2028. The capital secured by the district in this transaction will be used to build Coal Harbour Elementary, which will have space for 320 students, and a new K-7 elementary school on the current site of Roberts Annex.

The District will continue to monitor capacity requirements in the King George study area. The planning process for the new school on the Roberts Annex site could include evaluating opportunities to reduce capacity at the current Lord Roberts Elementary site. Two school buildings and are currently located on the Roberts site. The construction of a K-7 school on the Roberts Annex site will provide an opportunity to balance enrolment between two sites currently in the Roberts catchment area.

7.2 Elementary Schools in Kitsilano Study Area

This Kitsilano study area is comprised of four elementary schools in the Kitsilano and Prince of Wales secondary catchments. Three of the four elementary schools in the Kitsilano study area have capacity utilizations above 100%. The overall current capacity utilization for the study area is 107% and is forecast to increase to 113% in 2027. Henry Hudson elementary, the school that is experiencing the most enrolment pressure, is located roughly at the center of a larger area experiencing enrolment pressure.

FIGURE 7.2-1: **Kitsilano study area**



Enrolment Analysis

FIGURE 7.2-2: **current capacity utilization and surplus or shortage of enrolling capacity in the Kitsilano/South False Creek area**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	Surplus or *Shortage
Carnarvon	364	109%	395	-31
Gordon	410	101%	416	-6
Hudson	317	123%	391	-74
Shaughnessy	433	97%	422	11
Totals	**1524**	**107%**	**1624**	**-100**

**Shortage* of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

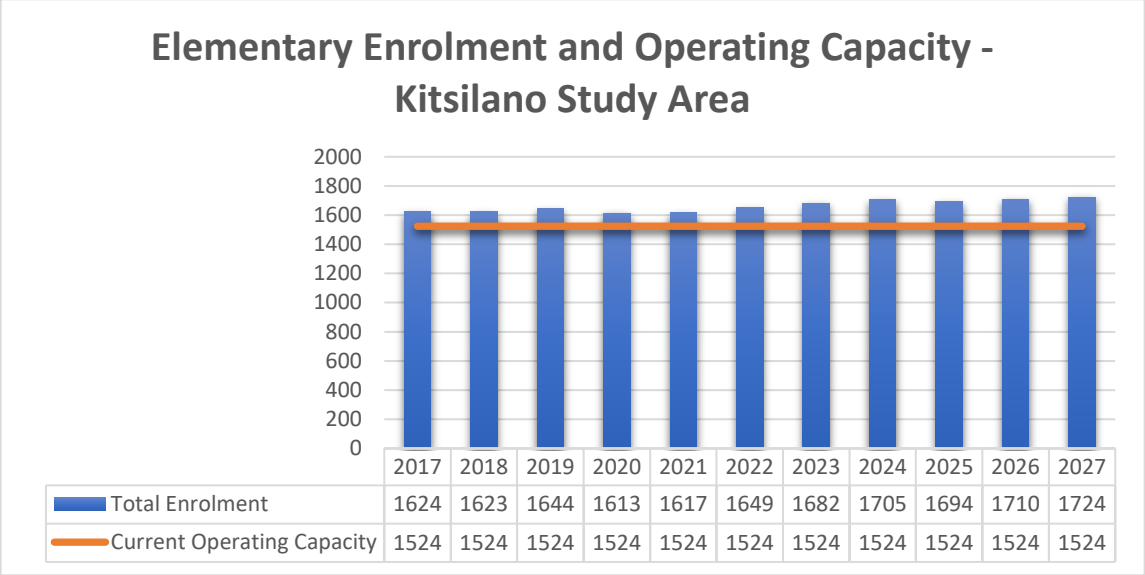
FIGURE 7.2-3: **forecast enrolment and capacity utilization for 2027.**

School	Operating Capacity	Capacity Utilization	2027 Enrolment	Surplus or *Shortage
Carnarvon	364	87%	318	46
Gordon	410	122%	500	-90
Hudson	317	140%	444	-127
Shaughnessy	433	107%	462	-29
Totals	**1524**	**113%**	**1724**	**-200**

**Shortage* of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

Enrolment is forecast to increase and enrolment pressure at full schools will continue to intensify in these elementary schools in the Kitsilano and Prince of Wales catchments. Enrolment pressure will become more localized and intensify at Hudson, Gordon and Shaughnessy. Shaughnessy has been used as a receiving school to place Kindergarten catchment students from Cavell, Carr, and Elsie Roy. Some of the forecast enrolment growth at Shaughnessy may not materialize if enrolment pressure is relieved at other full schools that cannot accommodate all of their catchment Kindergarten students. Enrolment at Carnarvon is forecast to decline.

FIGURE 7.2-4: **Forecast enrolment and operating capacity for elementary schools in Kitsilano study area.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enrolment	1624	1623	1644	1613	1617	1649	1682	1705	1694	1710	1724
Current Operating Capacity	1524	1524	1524	1524	1524	1524	1524	1524	1524	1524	1524

District Choice Programs

A district Early French Immersion program is currently located at Hudson with an enrolment of 153 students. The enrolment growth forecast for Hudson is for the regular English program only.
A district Late French Immersion program is currently located at Gordon with an enrolment of 116 students. The enrolment growth forecast for Gordon is for the regular English program only.

District Actions to Date

The district actively managing enrolment to reduce enrolment pressure at Hudson. Interior renovations to maximize enrolling space in the school have been completed and a portable classroom has been situated on the Hudson site.

In the 2017-18 school year the district proposed boundary adjustments that would decrease the size of the Hudson catchment. The final boundary adjustment report recommended investigating relocating the early French Immersion program and further studying sibling priority provisions prior to moving forward.

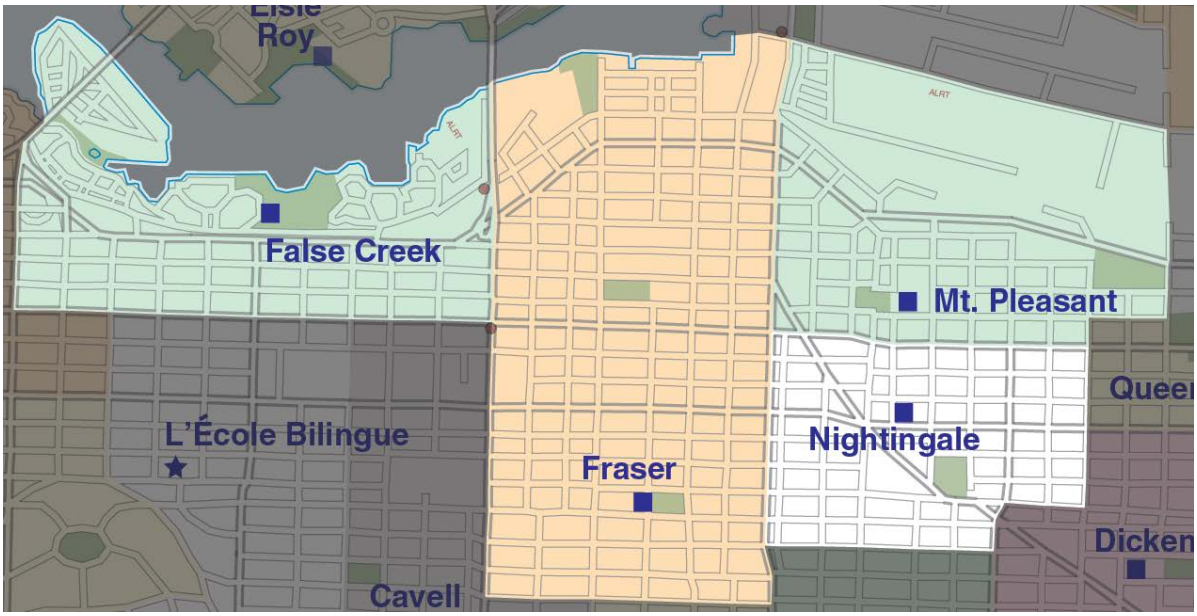
The district is proposing to relocate the Early French Immersion program at Hudson to create a larger consolidated Early French Immersion Program at Strathcona elementary school. French Immersion Program Review - Henry Hudson Focus

7.3 Elementary Schools in the North Hamber Study Area

The North Hamber study area is comprised of a group of four elementary schools in the Hamber, Tupper, Vancouver Tech, and Kitsilano secondary school catchments. Two of the four elementary schools in this study area have capacity utilizations above 100%. The overall capacity utilization for the study area is 96% and is forecast to increase to 113% by 2027. For several years, Fraser Elementary has experienced increasing enrolment pressure. The number of catchment Kindergarten that can not be

accommodated at Fraser has grown, and there are catchment waitlists at some grades. Enrolment forecasts indicate that the enrolment pressure will continue to intensify particularly at Fraser Elementary. The enrolment at Mount Pleasant elementary, located to the northeast of Fraser is forecast to grow raising its capacity utilization to 117% in 2027. False Creek Elementary located to the northwest of Fraser is currently full and is forecast to experience modest enrolment decline in the next 10 years. Development plans, particularly in the False Creek area will need to be monitored closely for their potential impact on forecast enrolment. Enrolment is unevenly distributed between the schools in the North Hamber study area with Nightingale having a current capacity utilization of 65% forecast to increase incrementally to 69% in 2027.

Figure 7.3-1: North Hamber study area



Enrolment Analysis

FIGURE 7.3-2: **current capacity utilization and surplus or shortage of enrolling capacity in the North Hamber study area.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	Surplus or *Shortage
False Creek	224	112%	251	-27
Fraser	201	159%	319	-118
Mount Pleasant	294	80%	235	59
Nightingale	364	65%	236	128
Total	**1083**	**96%**	**1041**	**42**

**Shortage of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

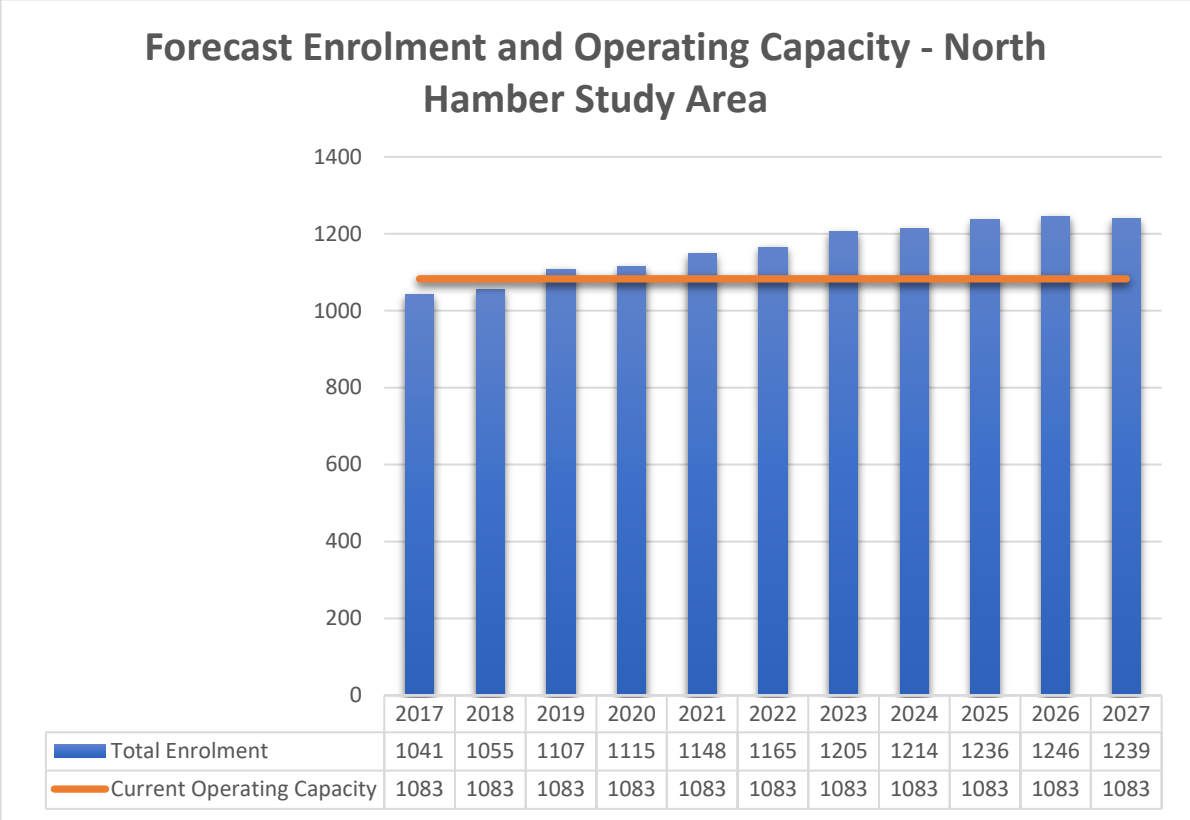
FIGURE 7.3-3: **forecast enrolment and capacity utilization for 2027.**

School	Operating Capacity	Capacity Utilization	2027 Enrolment	Surplus or *Shortage
False Creek	224	88%	198	26
Fraser	201	216%	435	-234
Mount Pleasant	294	117%	343	-49
Nightingale	364	72%	263	101
Total	**1083**	**114%**	**1239**	**-156**

**Shortage of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

Enrolment pressure will continue to intensify in the North Hamber study area over the next 10 years. Enrolment pressure will become more localized and intensify at Fraser elementary and Mount Pleasant elementary schools.

FIGURE 7.3-4: **Forecast enrolment and operating capacity for elementary schools in the North Hamber study area.**



District Choice Programs

There are no district choice programs located at any of the elementary schools in the North Hamber study area.

Actions to Date

The district actively used enrolment management to reduce enrolment pressure at Fraser but long wait lists persist. Interior renovations to maximize enrolling space in the school have been completed and 4 portable classrooms have been situated on the Fraser site.

In the 2017/18 school year the district proposed boundary adjustments that would decrease the size of the Fraser by increasing the size of the Mount Pleasant catchment. The final boundary adjustment report recommended investigating requesting Ministry funding for portable classrooms on the Mount Pleasant school grounds to accommodate enrolment arising from the enlarged catchment as Fraser cannot accommodate any additional portables on its site.

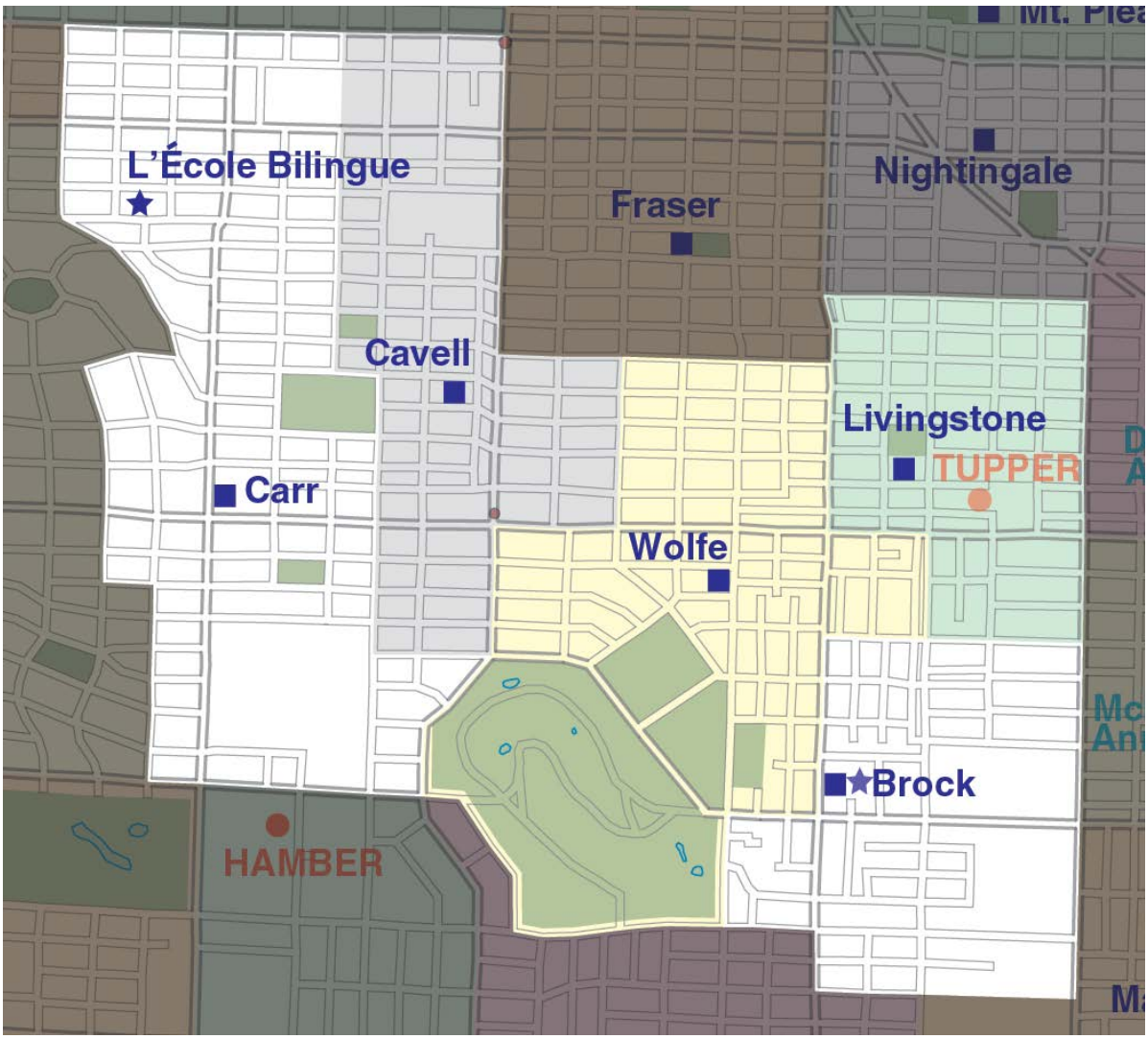
The current capital plan proposes to build new school with a capacity of 510 students on a site as identified in the official development plan. The proposal is for a new school in Olympic Village to be located at Hinge Park at the North end of Columbia Street. The school site is identified in the South East False Creek Official Development Plan.

7.4 South Hamber Study Area

The South Hamber study area is comprised of five elementary schools in the Hamber, Tupper, and John Oliver secondary school catchments. Four of the five elementary schools in this study area have capacity utilizations above 100% and the overall capacity utilization for the study area is 97%. The overall capacity utilization in the study area is forecast at 95% in 2027. Enrolment is unevenly distributed between the elementary schools in the South Hamber study area. Brock elementary has a current capacity utilization of 57% which is forecast to decline to 48% in 2027.

Because some schools in the South Hamber study area are experiencing enrolment pressure there is limited capacity in this area to reduce the more intense enrolment pressure being experienced by schools, particularly Fraser elementary, in the North Hamber study area. Both Wolfe and Cavell are scheduled for seismic upgrades, with construction beginning in September 2019. The students at both schools will be attending offsite temporary accommodation during the construction phase. Development plans in the South Hamber study area will need to be monitored closely for their potential impact on forecast enrolment.

FIGURE 7.4-1: **South Hamber study area**



Enrolment Analysis

FIGURE 7.4-2: **current capacity utilization and surplus or shortage of enrolling capacity in the South Hamber study area.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	Surplus
Brock	364	57%	208	156
Carr	270	109%	295	-25
Cavell	270	119%	321	-51
Livingstone	340	101%	344	-4
Wolfe	364	106%	385	-21
Total	**1608**	**97%**	**1553**	**55**

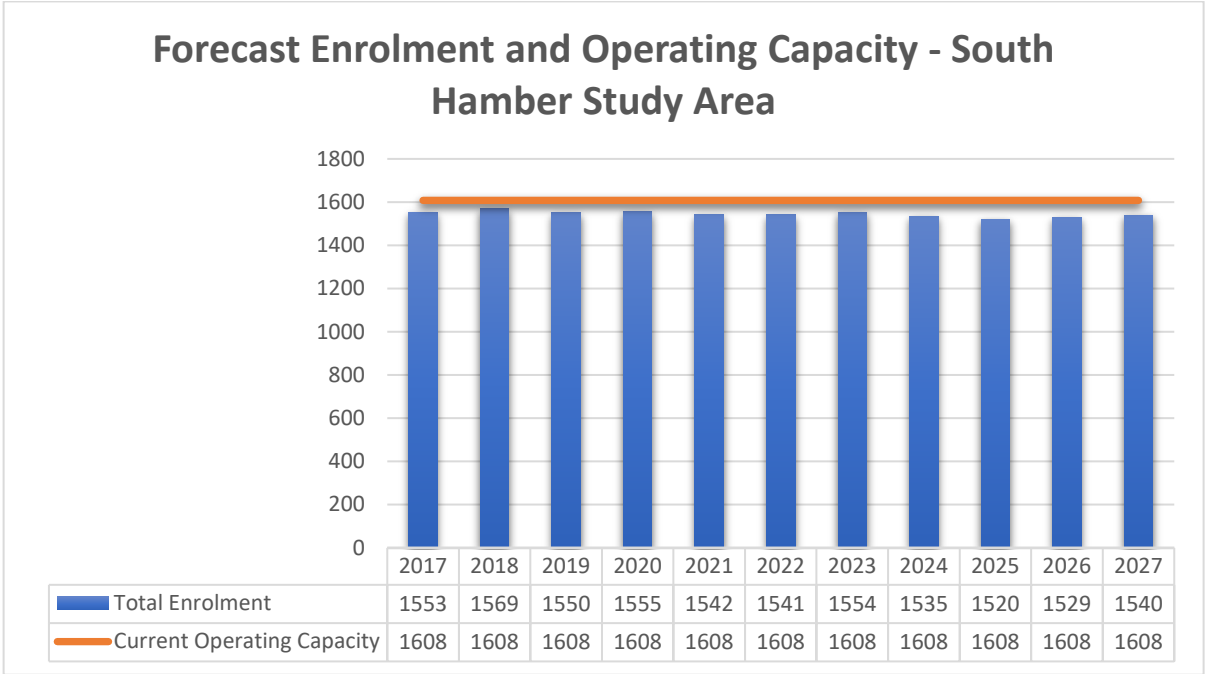
**Shortage of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

FIGURE 7.4-3: **forecast enrolment and capacity utilization for 2027.**

School	Operating Capacity	Capacity Utilization	2027 Enrolment	Surplus
Brock	364	52%	191	173
Carr	270	126%	340	-70
Cavell	270	112%	303	-33
Livingstone	340	87%	297	43
Wolfe	364	112%	409	-45
Total	**1608**	**96%**	**1540**	**68**

**Shortage of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

FIGURE 7.4-4: **Forecast enrolment and operating capacity for elementary schools in the South Hamber study area.**



The overall enrolment trend for the South Hamber study area is stable. There is sufficient space to accommodate current and forecast enrolment. Capacity utilization is unevenly distributed.

District Choice Programs

Brock elementary offers an Intensive French program which enrols 52 students. Brock also accommodates the District Challenge program.

District Actions to date

The District actively used enrolment management to reduce enrolment pressure at Cavell and Wolfe elementary schools. In the past, Wolfe has been the preferred site for placement of catchment overflow from Fraser. The district has proposed an addition to Cavell that would increase its capacity; however the ministry has not approved funding for this proposal through the SMP or as a capital project.

In the 201718 school year the district proposed boundary adjustments that would relieve enrolment pressure and balance capacity utilization at schools in this study area.

7.5 King George Secondary School

King George Secondary is the only secondary school in the West End/Downtown neighbourhood. The school has operated at more than 110% capacity utilization for many years. The current capacity utilization of King George secondary is 129%, and this is forecast to increase to 146% in 2027

FIGURE 7.5-1: **current capacity utilization and shortage of enrolling capacity at King George.**

School	Operating Capacity	2017 Enrolment	Capacity Utilization	*Shortage
King George	375	485	129%	-110

**Shortage of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

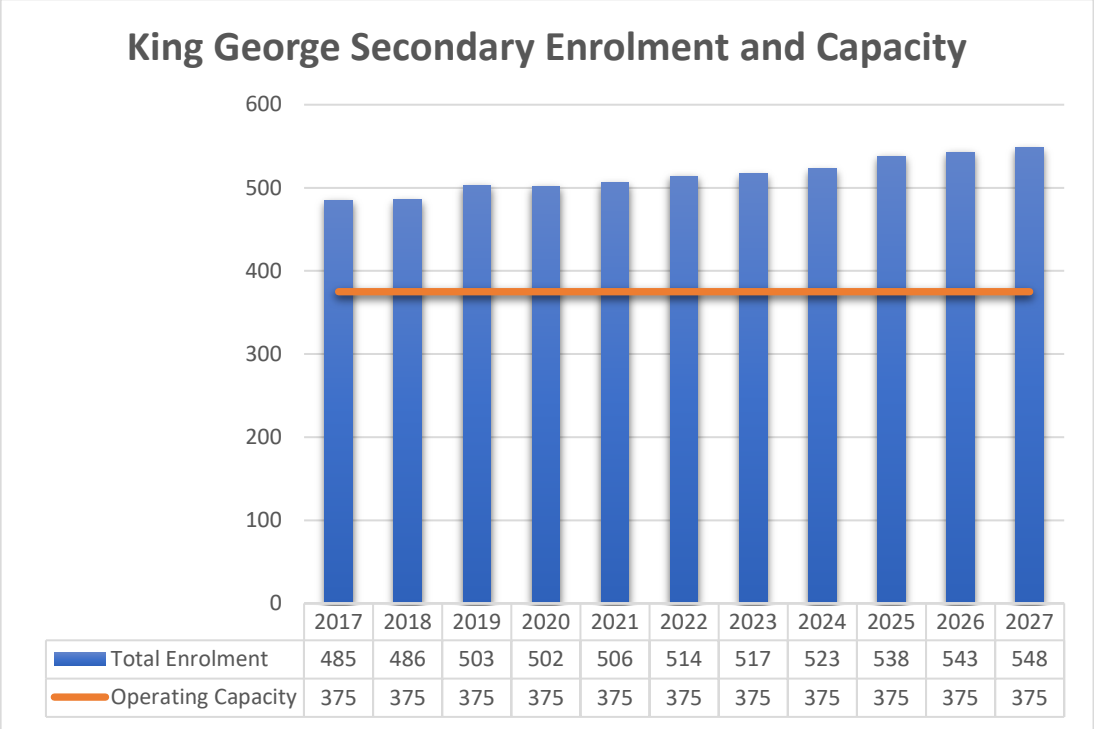
Although the enrollment is high, the participation rate, which measures the ratio of in-catchment students choose to attend King George, is relatively low, compared to the district average. There is a net out-migration of 253 secondary students from the King George catchment. King George has been able accommodate all the catchment students that wish to attend there is currently no waitlist of catchment students wishing to attend King George Secondary.

FIGURE 7.5-2: **forecast enrolment and capacity utilization for 2027.**

School	Operating Capacity	2027 Enrolment	Capacity Utilization	Surplus or *Shortage
King George	375	548	146%	-173

**Shortage of space is the number of students enrolled in excess of the operating capacity for the school. Shortage does not include the number of students that on catchment waitlists.*

FIGURE 7.5-3: **Forecast enrolment and operating capacity for King George Secondary School**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enrolment	485	486	503	502	506	514	517	523	538	543	548
Operating Capacity	375	375	375	375	375	375	375	375	375	375	375

Actions to Date

Acceptance of out of catchment applications has been restricted. The current capital plan proposes to build new school on the current site with a capacity of 1500 students in the future.

7.6 Areas with New Residential Development – Capacity Utilization Scan

This section of the report identifies two areas of the district with that with new residential development.

Killarney Study Area

The Killarney Study Area comprises of two elementary schools and an annex that will be most impacted by an increase in the number of school aged children living in the East Fraser Lands (River District) development. The current overall capacity utilization in the Killarney study area is 68% which is forecast to decrease marginally to 66% in 2027.

The East Fraser Lands is a tract of previously industrialized land that has been rezoned for residential development. The area is located south of SE Marine Dr and is bounded by Kerr St to the west, the Fraser river to the south, and Boundary road to the east. The East Fraser Lands lie mostly within the Champlain Heights elementary catchment with a small area at the west end within the Cook catchment.. The entire area is contained within the Killarney secondary school catchment

FIGURE 7.6-1: **East Fraser Lands (River District)**

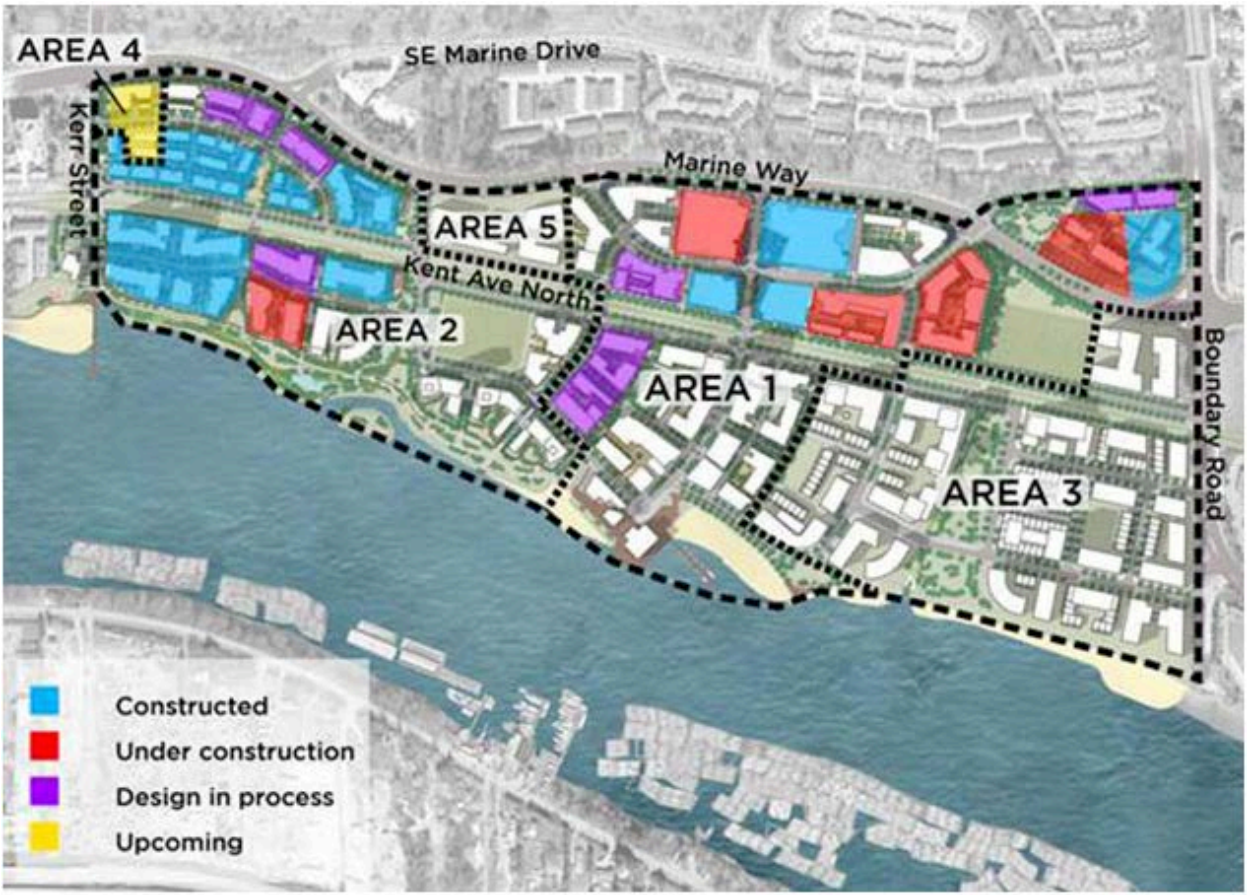
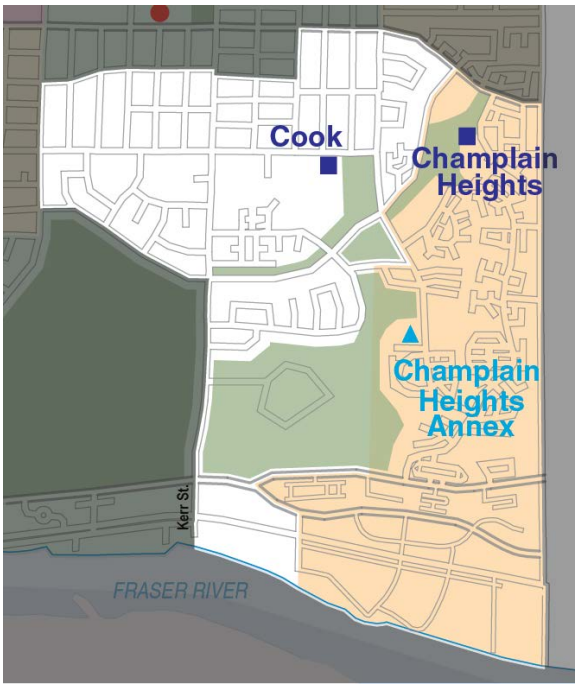


FIGURE 7.6-2: **Killarney study area**



Enrolment Analysis

Figure 7.6-3: current capacity utilization and surplus or shortage of enrolling capacity in the elementary schools serving the East Fraser Lands.

School	Operating Capacity	2017 Enrolment	Capacity Utilization	Surplus or Shortage
Champlain Heights	461	255	55%	206
Champlain Heights Annex	103	113	110%	-10
Cook	457	329	72%	128
Total	**1021**	**697**	**68%**	**324**

At present Killarney secondary school has an excess capacity of 305 student spaces. Continued decline in Grade 8-12 enrolment is forecast in the Killarney catchment.

Impact of Development

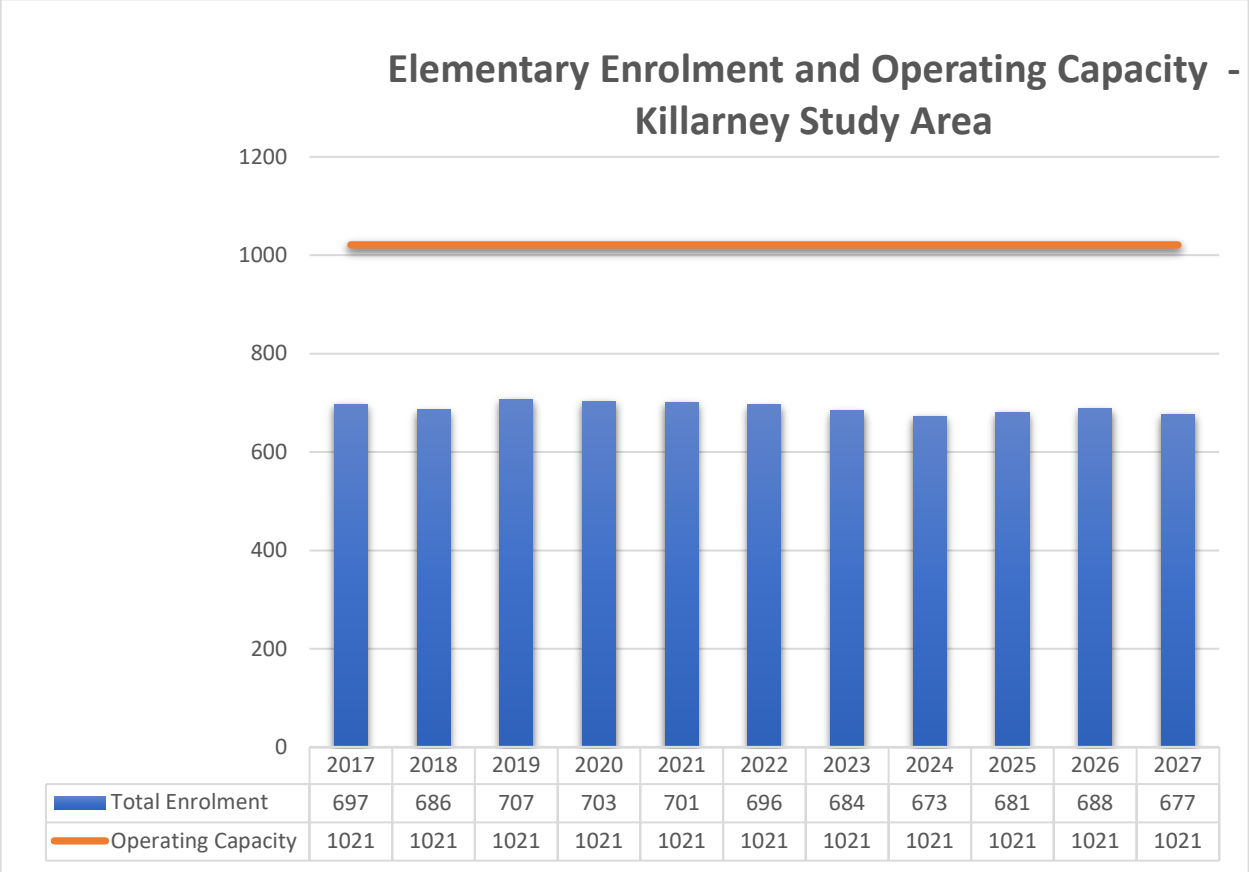
To date, the impact of development of the East Fraser Lands on local enrolment trends has been minimal. The enrolment in the Killarney study area has been stable and the area still has low capacity utilization. In 2017 there are 23 elementary students and 7 secondary students residing in the East Fraser Lands attending VSB schools. In collaboration with the City of Vancouver the District will continue to monitor and forecast the impact of development on enrolment.

Figure 7.6-4: shows forecast enrolment and capacity utilization for 2027.

School	Operating Capacity	2027 Enrolment	Capacity Utilization	Surplus or Shortage
Champlain Heights	461	273	59%	188
Champlain Heights Annex	103	117	114%	-14
Cook	457	287	63%	170
Total	**1021**	**677**	**66%**	**344**

Actions to Date

Figure 7.6-5: Forecast enrolment and operating capacity for elementary schools in the Killarney study area.



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enrolment	697	686	707	703	701	696	684	673	681	688	677
Operating Capacity	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021

The enrolment forecast does not include an analysis of the impact of future development of the East Fraser Lands. The forecast enrolment indicates that there is sufficient surplus capacity in the catchment schools for the East Fraser Lands to accommodate any additional enrolment generated by new development for the foreseeable future.

University Hill Study Area

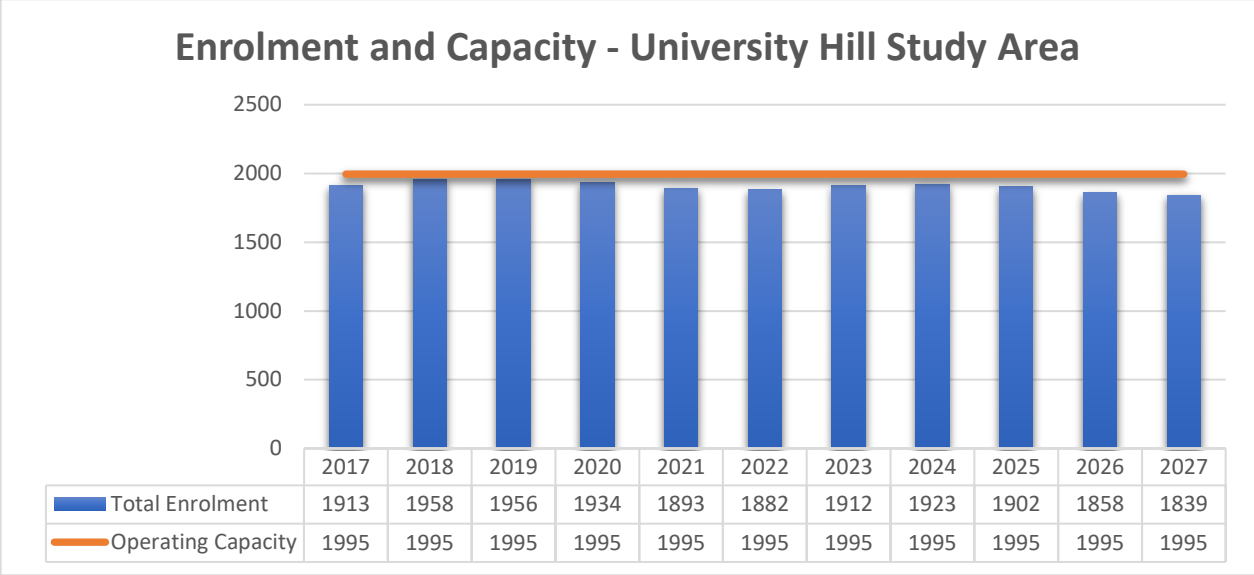
The University Hill study area is comprised of University Hill Secondary School, Norma Rose Point Elementary/Middle School and University Hill Elementary School. Norma Rose Point is a full school that cannot accommodate all of its catchment students. University Hill Elementary and University Hill Secondary School both have surplus capacity. In order to better balance enrolment between the three schools the district is implementing grade configuration changes at the three schools.

FIGURE 7.6-6: **University Hill study area**

FIGURE 7.6-7: **shows the phased implementation timeline for the grade configuration changes.**

Year	UHE	NRP	UHS
2018-19	K-5	K-8	9-12
2019-20	K-6	K-7	8-12
2020-21	K-7	K-7	8-12

Figure 7.6-8: Forecast enrolment and operating capacity for the University Hill study area



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enrolment	1913	1958	1956	1934	1893	1882	1912	1923	1902	1858	1839
Operating Capacity	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995

Impact of Development

Further development is planned in the University Endowment Lands (UEL) where the three schools in the study area are located. At present, 'Block F', a 22-acre parcel of land immediately north of Norma Rose Point that lies within the University Hill Elementary catchment has been approved for development.
Forecast enrolment captures the current rate of development within the UBC/UEL community. More detailed enrolment forecasts for the three schools in the University Hill study area and further analysis of the potential impact of Block F development on projected school enrolment was presented in the Committee 2 -June 13, 2018 report.

In collaboration with the UBC and UEL planners, the District will continue to monitor and forecast the impact of development on enrolment.

Actions to date

The District actively manages enrolment to reduce enrolment pressure at Norma Rose Point. University Hill Elementary has been the site identified for placement of catchment overflow students from Norma Rose Point. In June 2018, the Board of Education passed a motion that approved implementing grade configuration changes for the UBC family of schools – Table (above).

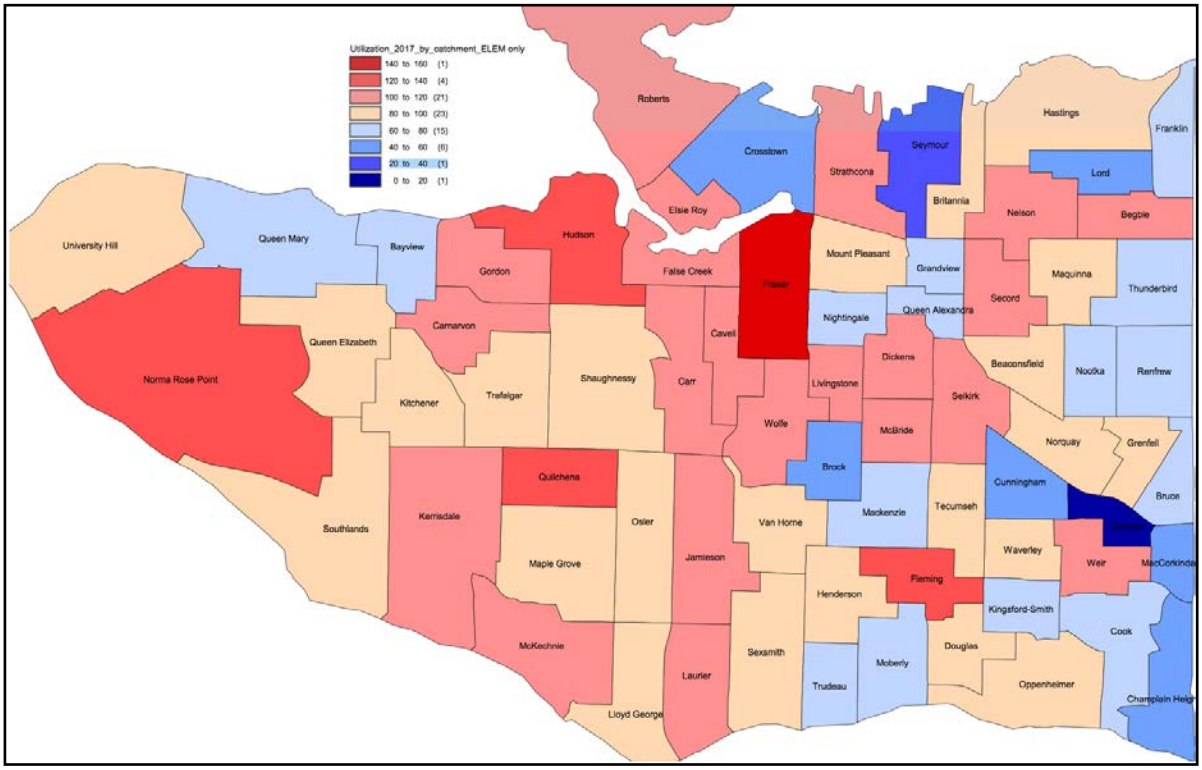
The Westbrook school site, adjacent to University Hill Secondary, provides the option of building a third K-7 school if future development in the UBC/UEL community leads to an increase in student enrollment that cannot be accommodated at University Hill Elementary and Norma Rose Point. Capital funding for this project from the Ministry of Education would be contingent on demonstrating that existing schools within UBC/UEL community are at or near their full capacity utilization.

8 Areas with Low Capacity Utilization- Capacity Utilization Scan

8.1 Overview

Capacity utilization of facilities varies widely across the District. The 'heat map' below illustrates the wide variance in capacity utilization at elementary schools and their associated annexes. The catchment for schools that exclusively house District programs is the entire district. These schools are not represented on Figure 8.1-1

FIGURE 8.1-1: **Current capacity utilization at elementary schools, and their associated annexes.**



This section of the report identifies seven areas of the district where elementary schools have overall low capacity utilization. Much of the surplus capacity in elementary schools in the district is found at schools in these study areas.

FIGURE 8.1-2: **Elementary schools and annexes by study area.**

Secondary School Name	Elementary Schools and Annexes in Study Area
Byng	Bayview, Queen Elizabeth, Queen Mary
Britannia	Britannia Elementary, Grandview, Queen Alexandra, Seymour
Gladstone	Cunningham, Tecumseh, Tecumseh Annex, Waverley
John Oliver	Henderson, MacKenzie, Moberley, Trudeau

Killarney	Carleton, Champlain Heights, Champlain Heights Annex, Cook, MacCorkindale
Templeton	Franklin, Hastings, Lord
Windermere	Bruce, Collingwood Annex, Grenfell, Nootka, Renfrew, Thunderbird

The seven study areas are characterized by having low overall capacity utilizations or capacity utilizations that are forecast to decline. In addition to overall low utilization, the study areas have been defined to represent current elementary enrolment patterns including cross boundary enrolment patterns. Elementary schools catchments are often transected by secondary school catchments. Secondary school catchments are quite large and some secondary catchments encompass elementary schools with both higher and lower capacity utilizations. International student enrolment is included in all enrolments and capacity utilizations.

8.2 South Hamber Elementary Schools and Annexes in Areas with Low Capacity Utilization

Byng Study Area

The Byng study area is comprised of three elementary schools in the Byng and Kitsilano secondary school catchments. Bayview is located in the Kitsilano secondary school catchment. The capacity utilizations of the three schools range between 77% and 89%. The current overall capacity utilization in the study area is 81% and is forecast to decline to 66% in 2027.

FIGURE 8.2-1: **Byng study area**

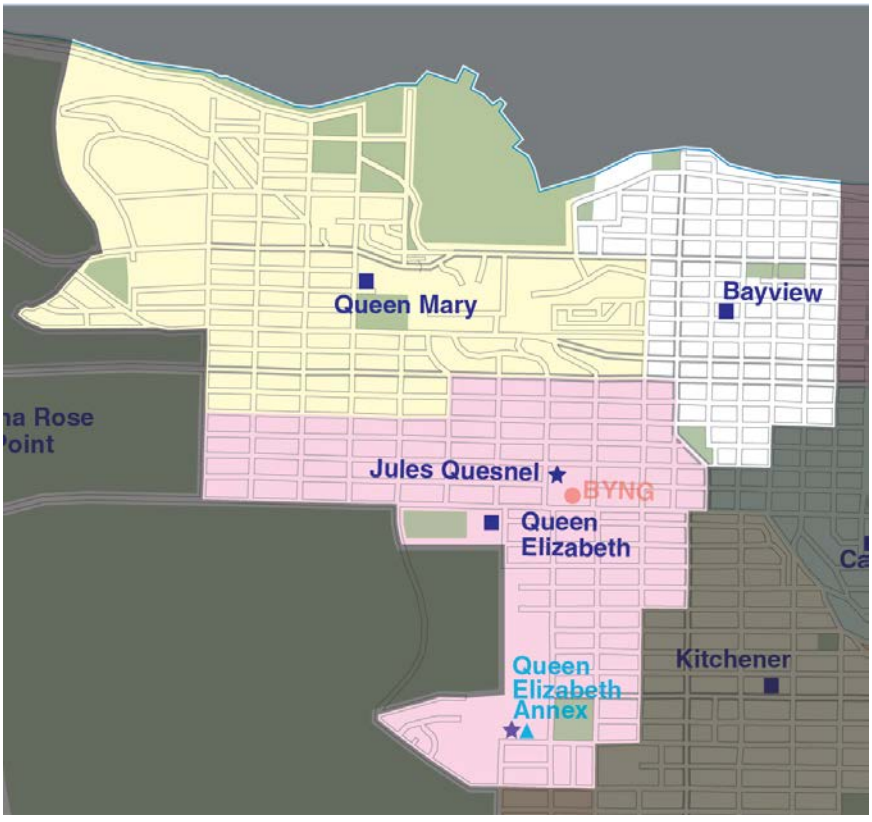


FIGURE 8.2-2: **current capacity utilization and surplus of enrolling capacity in the Byng study area.**

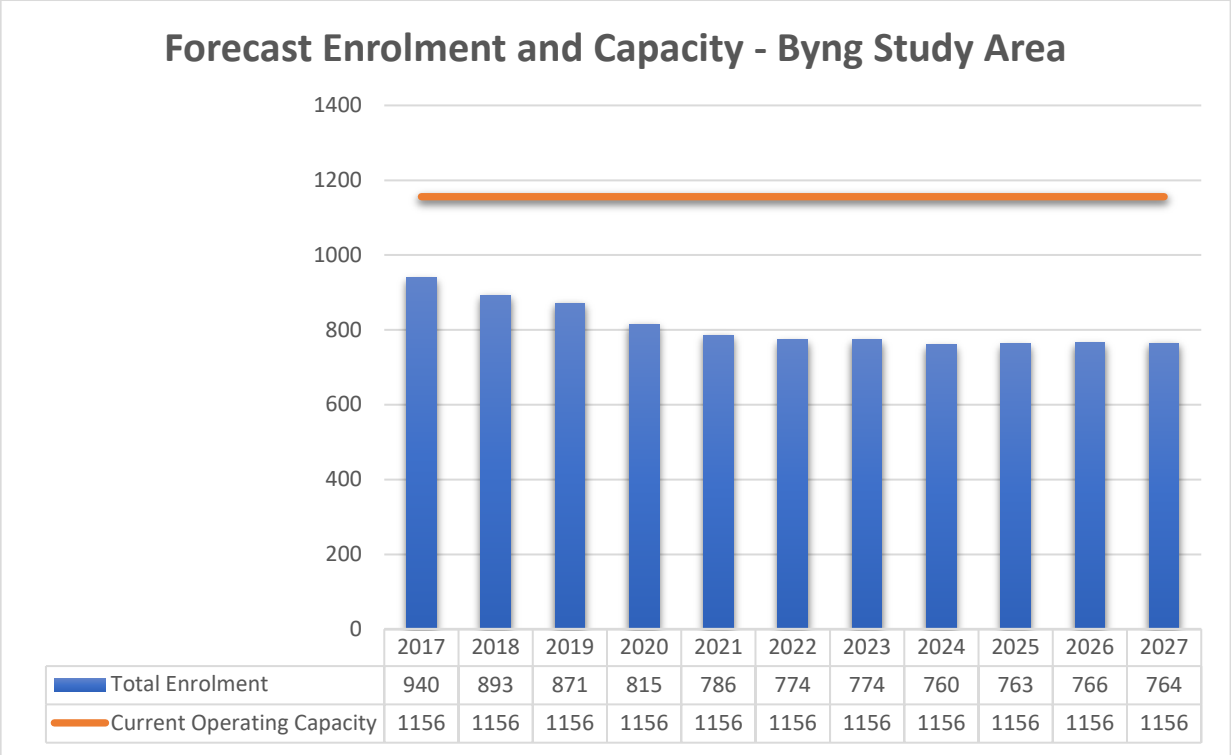
School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	Surplus
Bayview	340	77%	262	78
Queen Elizabeth	410	89%	365	45
Queen Mary	406	77%	313	93
Total	**1156**	**81%**	**940**	**216**

FIGURE 8.2-3: **forecast capacity utilization and surplus of enrolling capacity in the Byng study area.**

School	Operating Capacity	Capacity Utilization	2027 Enrolment	Surplus
Bayview	340	74%	251	89
Queen Elizabeth	410	56%	230	180
Queen Mary	406	70%	283	123
Total	**1156**	**66%**	**764**	**392**

Surplus capacity is forecast to increase from 216 seats in 2017 to 392 seats by 2027.

FIGURE 8.2-4: **Enrolment forecast and capacity analysis for the elementary schools in Byng study area.**



By 2027, enrolment is forecast to decline 200 students at the schools in the Byng study area.

Britannia Study Area

The Britannia study area is comprised of four elementary schools in the Britannia and Vancouver Technical secondary school catchments. Britannia Elementary and Seymour are located in the Britannia

Secondary catchment. Grandview and Queen Alexandra are located in the Vancouver Technical secondary catchment. The capacity utilizations of the four schools range between 32% and 82%. The current overall capacity utilization in the study area is 56% and is forecast to remain stable at 58% in 2027.

FIGURE 8.2-5: **Britannia Study Area**

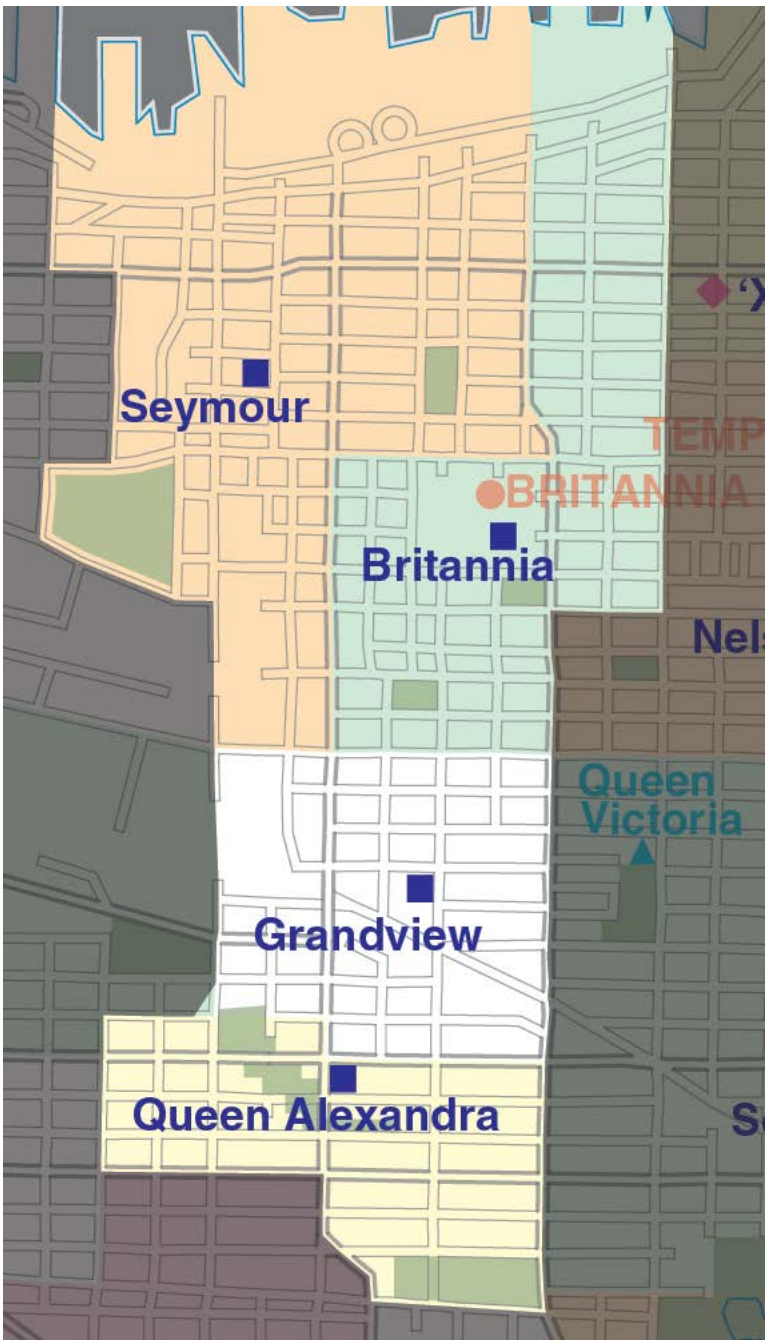


FIGURE 8.2-6: **Current capacity utilization and surplus of enrolling capacity in the Britannia study area.**

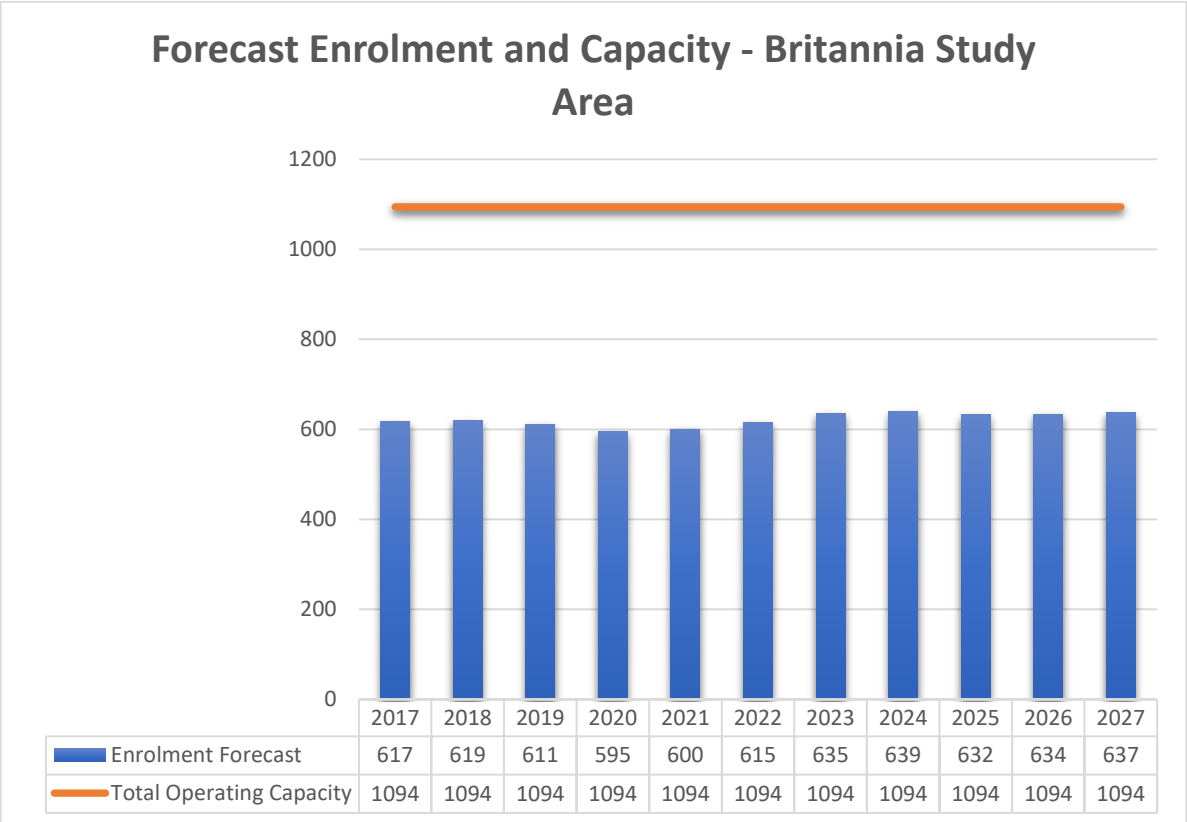
School	Operating Capacity	2017 Enrolment	Capacity Utilization	Surplus
Britannia Elem	228	186	82%	42
Grandview	205	136	66%	69
Queen Alexandra	270	168	62%	102
Seymour	391	127	32%	264
Total	**1094**	**617**	**56%**	**477**

FIGURE 8.2-7: **forecast capacity utilization and surplus of enrolling capacity in the Britannia study area**

School	Operating Capacity	2027 Enrolment	Capacity Utilization	Surplus
Britannia Elem	228	215	94%	13
Grandview	205	135	66%	70
Queen Alexandra	270	109	40%	161
Seymour	391	178	46%	213
Total	**1094**	**637**	**58%**	**457**

Surplus capacity is forecast to remain stable. In 2017, there were 477 surplus seats and 457 surplus seats are forecast in 2027 at the schools in this study area.

Figure 8.2-8: Enrolment and capacity analysis for the elementary schools in Britannia Study Area



Enrolment is forecast to remain stable in the Britannia study area.

Gladstone Study Area

The Gladstone study area is comprised of three elementary schools and one annex in the Gladstone, David Thompson and Killarney secondary school catchments. The Cunningham catchment lies entirely within the Gladstone catchment. The Tecumseh catchment is shared between the Gladstone and David Thompson secondary catchments. The Waverley catchment is shared between the Gladstone and Killarney secondary catchments. The capacity utilization of the five facilities range between 57% and 94%. The current overall capacity utilization in the study area is 77% and is forecast to decline to 73% in 2027.

FIGURE 8.2-9: **Gladstone Study Area**

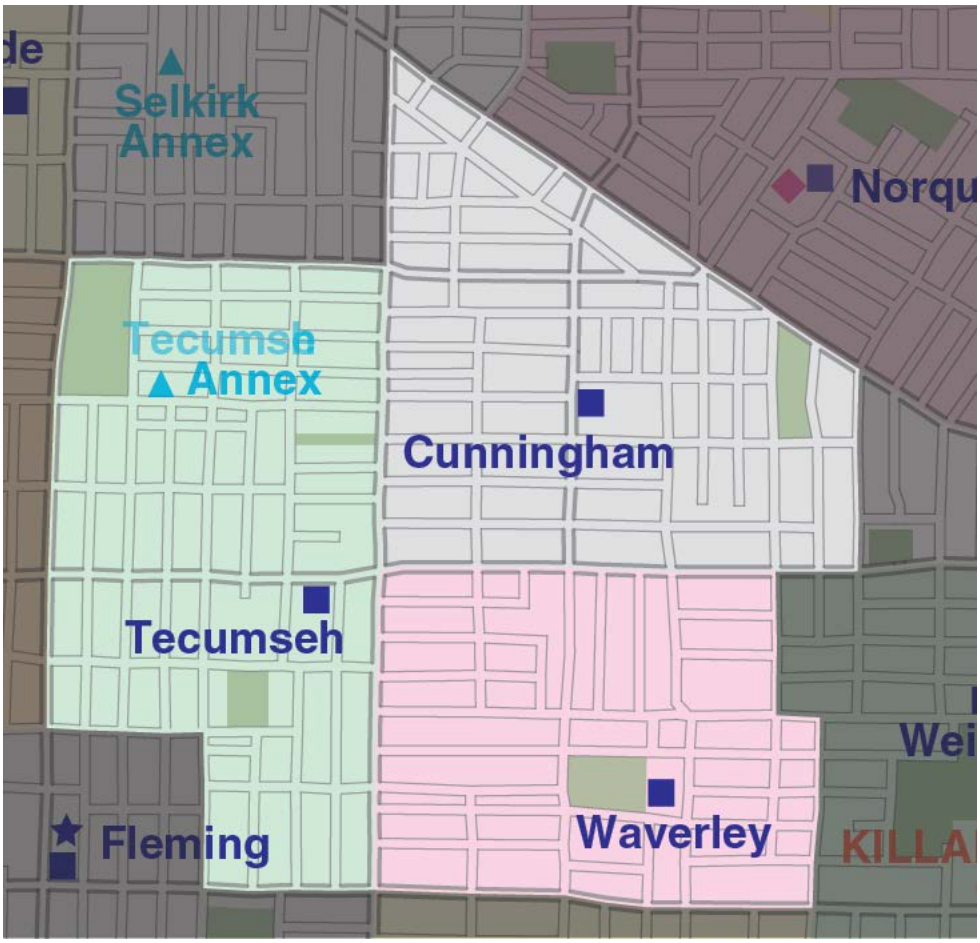


FIGURE 8.2-10: **Current capacity utilization and surplus of enrolling capacity in the Gladstone study area.**

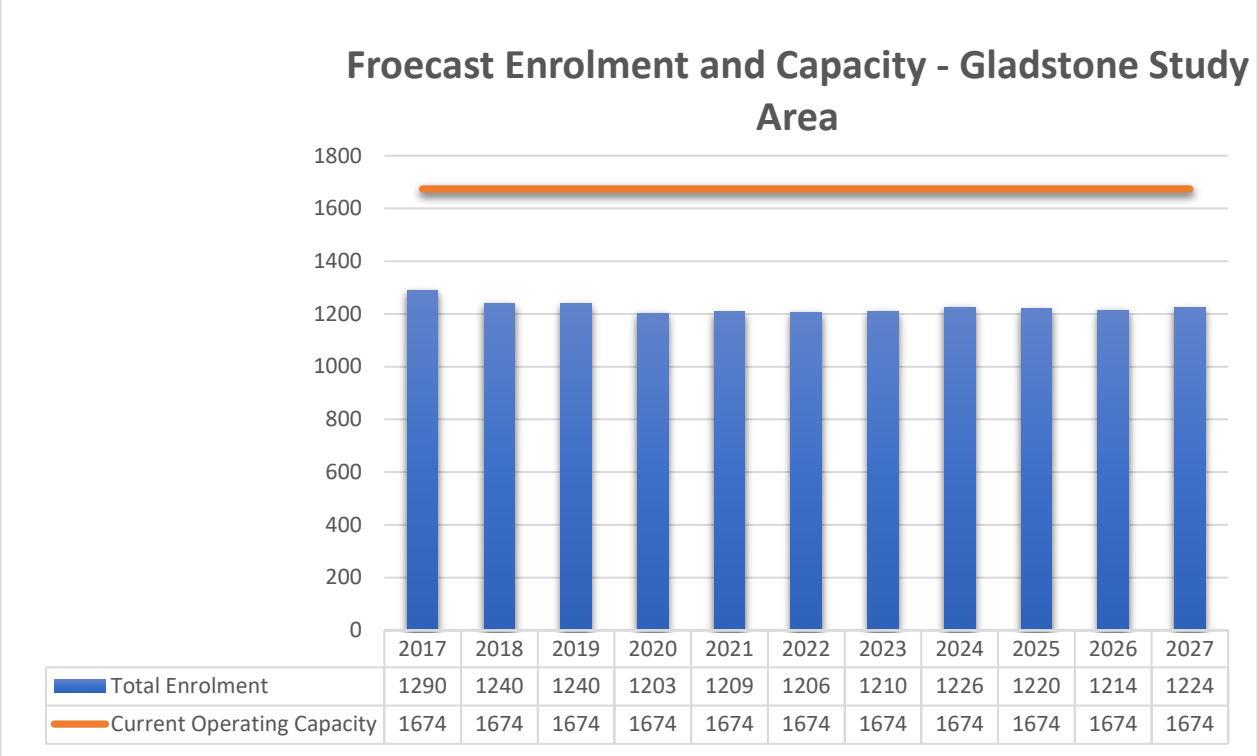
School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	Surplus
Cunningham	615	57%	351	264
Tecumseh	480	94%	449	31
Tecumseh Annex	103	70%	72	31
Waverley	476	88%	418	58
Total	**1674**	**77%**	**1290**	**384**

FIGURE 8.2-11: **forecast capacity utilization and surplus of enrolling capacity in the Gladstone study area**

School	Operating Capacity	Capacity Utilization	2027 Enrolment	Surplus
Cunningham	615	54%	332	300
Tecumseh	480	84%	403	77
Tecumseh Annex	103	67%	69	34
Waverley	476	88%	420	64
Total	**1674**	**73%**	**1224**	**450**

Surplus capacity is forecast to increase from 384 seats in 2017 to 450 seats in 2027 at the schools in the Gladstone study area.

FIGURE 8.2-12: **Forecast enrolment and capacity analysis for the elementary schools in the Gladstone Study Area**



Enrolment is forecast to decline until 2020 and then remain stable until 2027 in the Gladstone study area.

John Oliver Study Area

The John Oliver study area is comprised of five elementary schools in the John Oliver school catchment. The Fleming catchment is shared between the John Oliver and David Thompson secondary catchments. The capacity utilizations of the five schools range between 64% and 120%. The current overall capacity utilization in the study area is 80% and is forecast to decline to 70% in 2027.

Figure 8.2-13: John Oliver study area

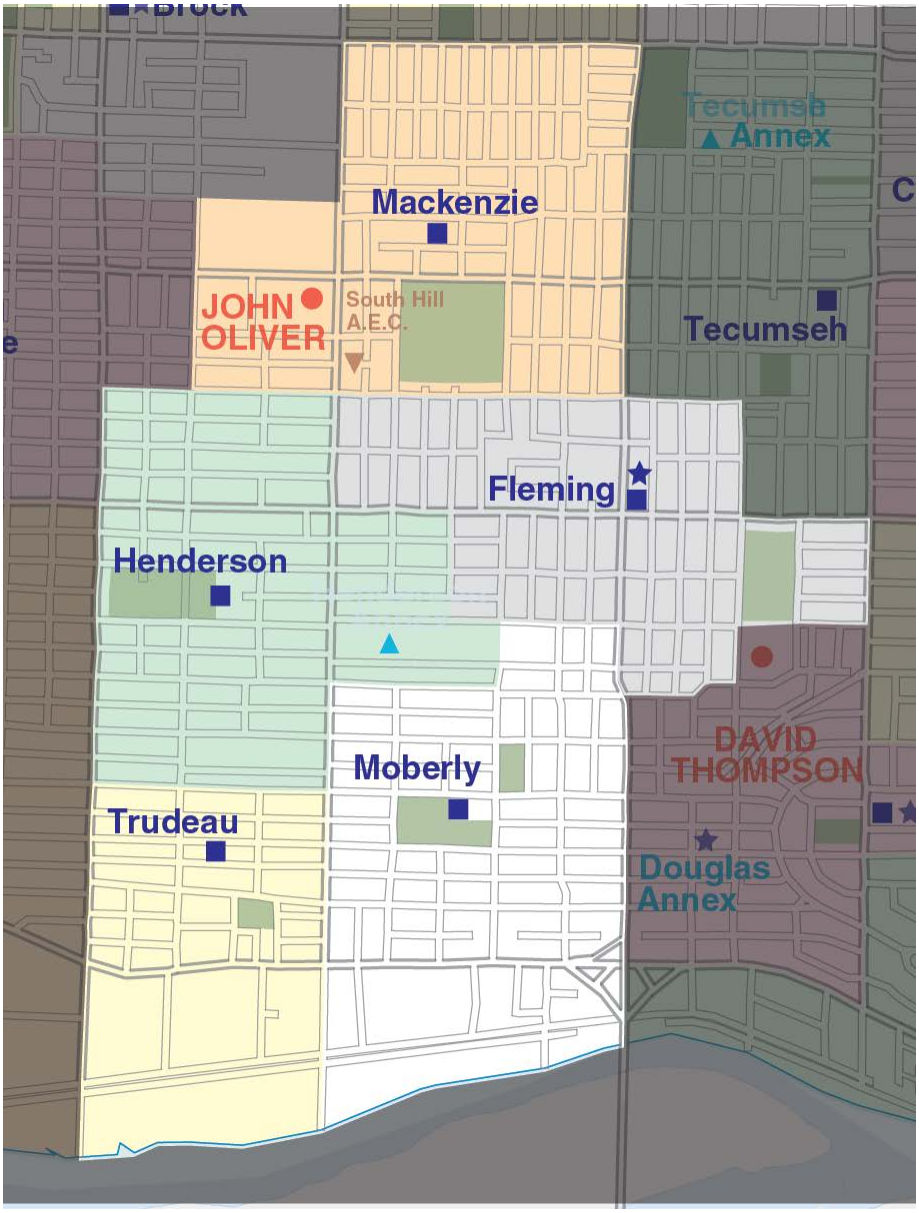


FIGURE 8.2-14: **current capacity utilization and surplus or shortage of enrolling capacity in the John Oliver study area.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	Surplus Shortage
*Fleming	410	120%	493	-83
Henderson	569	84%	479	90
Mackenzie	592	69%	409	183
Moberly	677	69%	465	212
Trudeau	364	64%	232	132
Total	**2612**	**80%**	**2078**	**534**

**Capacity of replacement school scheduled for occupancy in September 2019*

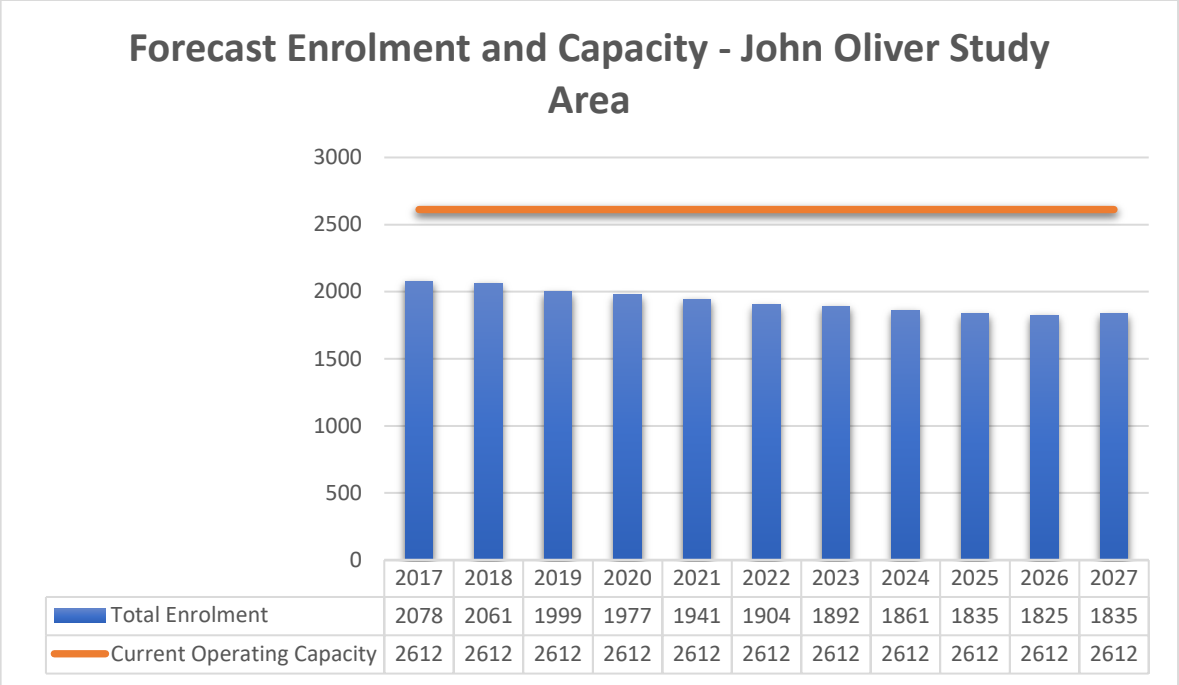
FIGURE 8.2-15: **Forecast capacity utilization and surplus of enrolling capacity in the John Oliver study area**

School	Operating Capacity	Capacity Utilization	2027 Enrolment	Surplus
*Fleming	410	96%	394	16
Henderson	569	72%	409	160
Mackenzie	592	71%	418	174
Moberly	677	69%	466	211
Trudeau	364	41%	148	216
Total	**2612**	**70%**	**1835**	**777**

**Capacity of replacement school scheduled for occupancy in September 2019*

Surplus capacity is forecast to increase 777seats in 2027

FIGURE 8.2-16: **Enrolment and capacity analysis for the elementary schools in the John Oliver study area**



By 2027, enrolment is forecast to decline by 243S students at the schools in the John Oliver study area.

Killarney Study Area

The Killarney study area is comprised of five elementary schools and one annex in the Killarney school catchment. The capacity utilizations of the four schools range between 18% and 109%. The current overall capacity utilization in the study area is 61% and is forecast to decline to 56% in 2027.

FIGURE 8.2-17: **Killarney Study area**

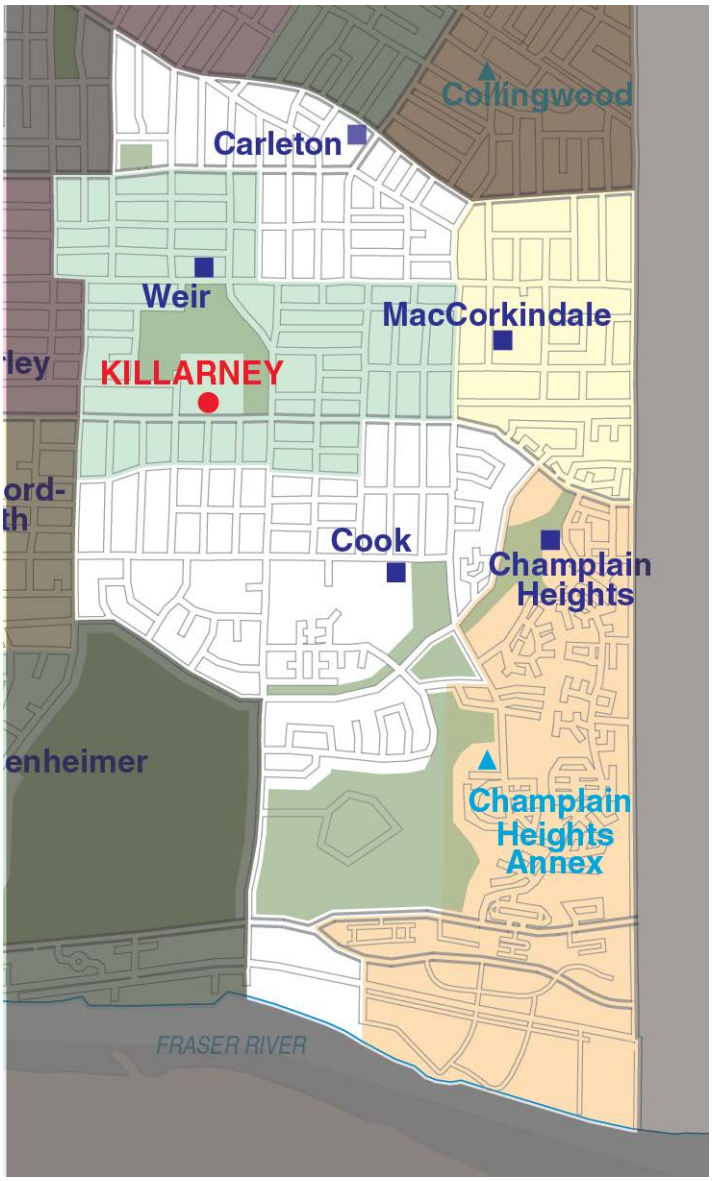


FIGURE 8.2-18: **Current capacity utilization and surplus or shortage of enrolling capacity in the Killarney study area.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	Surplus or Shortage
Carleton	573	18%	101	472
Champlain Heights	461	55%	255	206
Champlain Heights Annex	103	110%	113	-10
Cook	457	72%	329	128

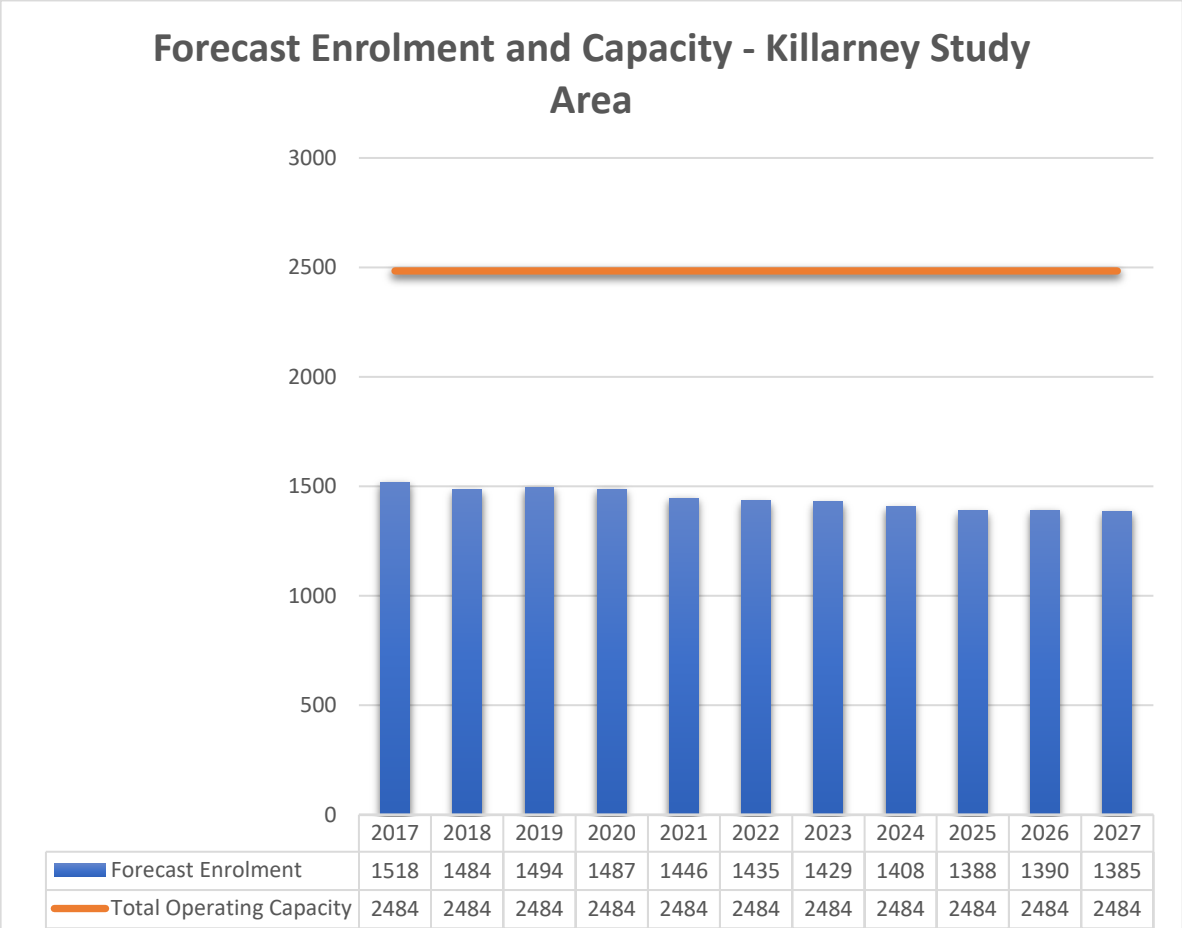
MacCorkindale	457	55%	250	207
Weir	433	109%	470	-37
Total	2484	61%	1518	966

FIGURE 8.2-19: **Forecast capacity utilization and surplus or shortage of enrolling capacity in the Killarney study area.**

School	Operating Capacity	Capacity Utilization	2027 Enrolment	Surplus or Shortage
Carleton	573	14%	83	490
Champlain Heights	461	59%	273	188
Champlain Heights Annex	103	114%	117	-14
Cook	457	63%	287	170
MacCorkindale	457	64%	294	163
Weir	433	76%	331	102
Total	**2484**	**56%**	**1385**	**1099**

Surplus capacity is forecast to increase from 966 seats in 2017 to 1099 seats in 2027 at the schools in the Killarney study area.

FIGURE 8.2-20: **Enrolment and capacity analysis for the elementary schools in the Killarney study area**



By 2027, enrolment is forecast to decline by 133 students at schools in the Killarney study area.

Templeton Study Area

The Templeton study area is comprised of three elementary schools and one annex in the Templeton secondary school catchment. The capacity utilization of the five schools range between 46% and 91%. The current overall capacity utilization in the study area is 74% and is forecast to decline to 62% in 2027.

FIGURE 8.2-21: **Templeton study area**

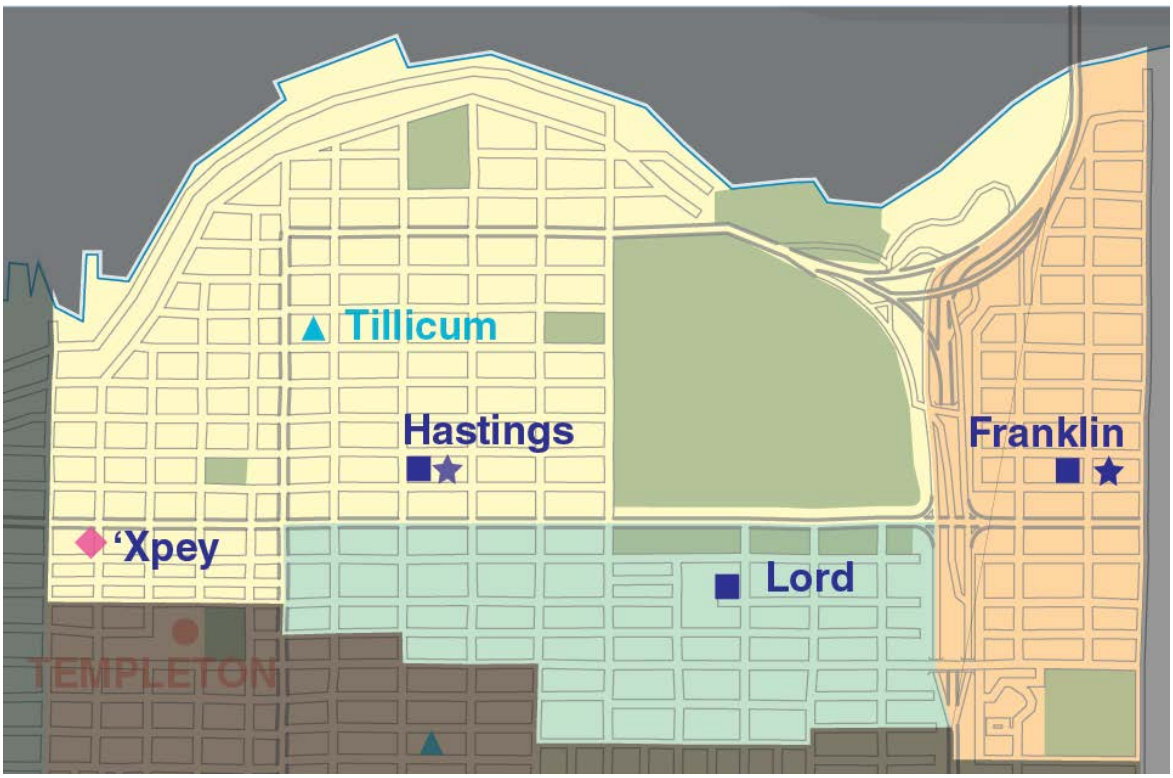


FIGURE 8.2-22: **Current capacity utilization and surplus of enrolling capacity in the Templeton study area**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2017 Surplus
Franklin	275	72%	198	77
Hastings	658	91%	601	57
Lord	340	46%	157	183
Tillicum Annex	148	67%	99	49
Total	**1421**	**74%**	**1055**	**366**

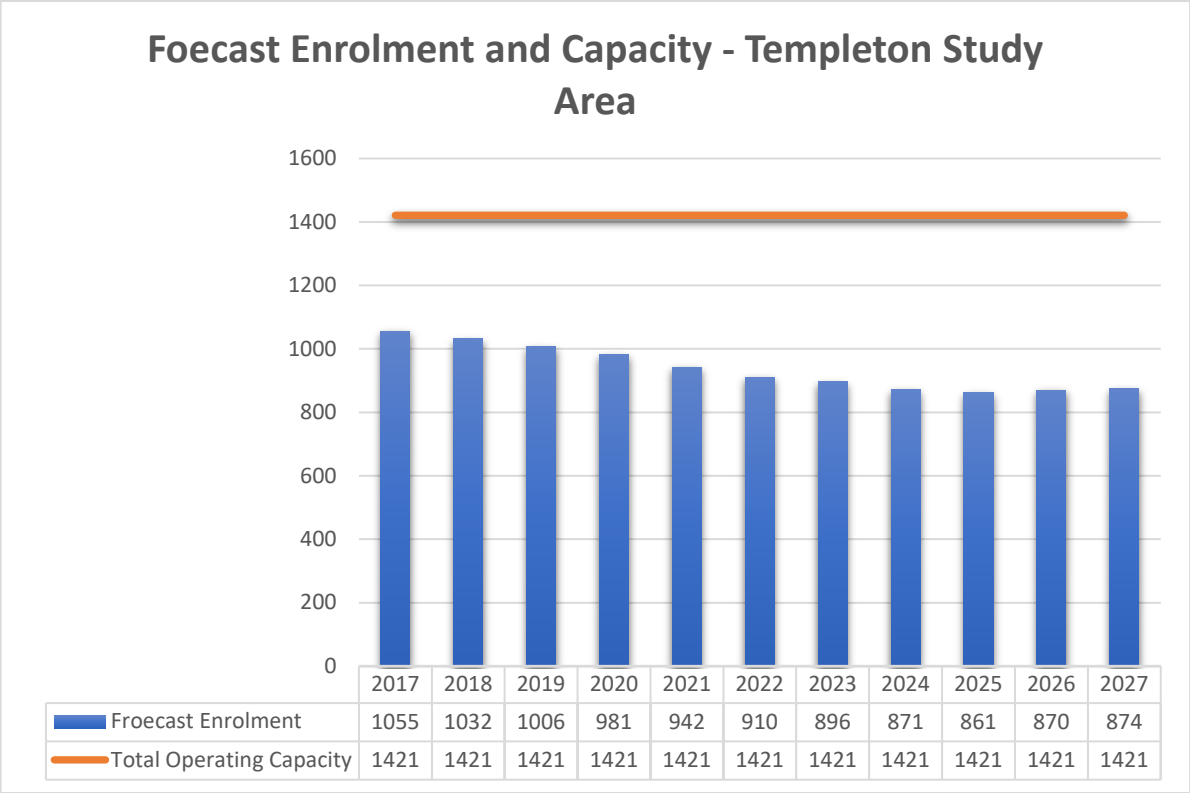
FIGURE 8.2-23: **forecast capacity utilization and surplus or shortage of enrolling capacity in the Templeton study area**

School	Operating Capacity	2027 Capacity Utilization	2027 Enrolment	2027 Surplus
Franklin	275	68%	187	88
Hastings	658	65%	430	228
Lord	340	44%	150	190

Tillicum Annex	148	72%	107	41
Total	**1421**	**62%**	**874**	**547**

Surplus capacity is forecast to increase from 356 seats in 2017 to 547 seats in 2027 at schools in the Templeton study area.

FIGURE 8.2-24: **Enrolment and capacity analysis for the elementary schools in the John Oliver study area.**



By 2027, enrolment is forecast to decrease by 191 students at schools in the Templeton study area.

Windermere Study Area

The Windermere study area is comprised of five elementary schools and one annex in the Windermere and Vancouver Technical secondary school catchments. The Renfrew catchment lies entirely within the Vancouver Technical catchment and the Nootka catchment is shared between the Windermere and Vancouver Technical secondary catchments. The capacity utilization of the five schools range between 64% and 89%. The current overall capacity utilization in the study area is 75% and is forecast to decline to 69% in 2027.

FIGURE 8.2-25: **Windermere study area**

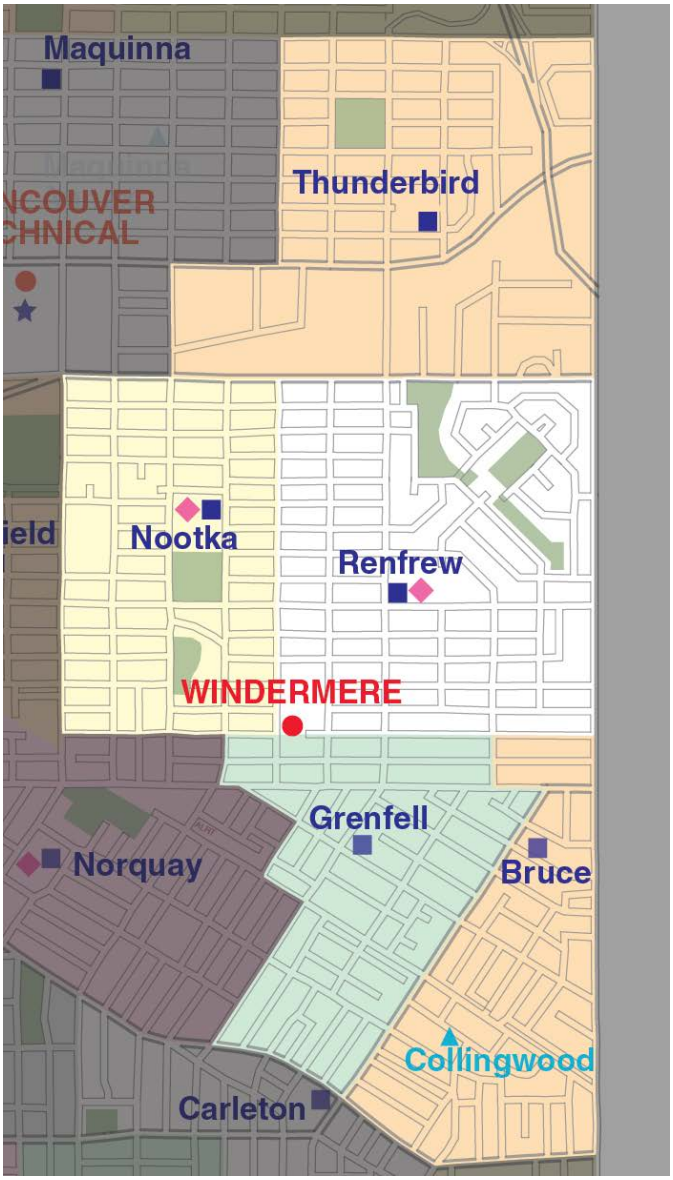


FIGURE 8.2-26: **Current capacity utilization and surplus of enrolling capacity in the Windermere study area**

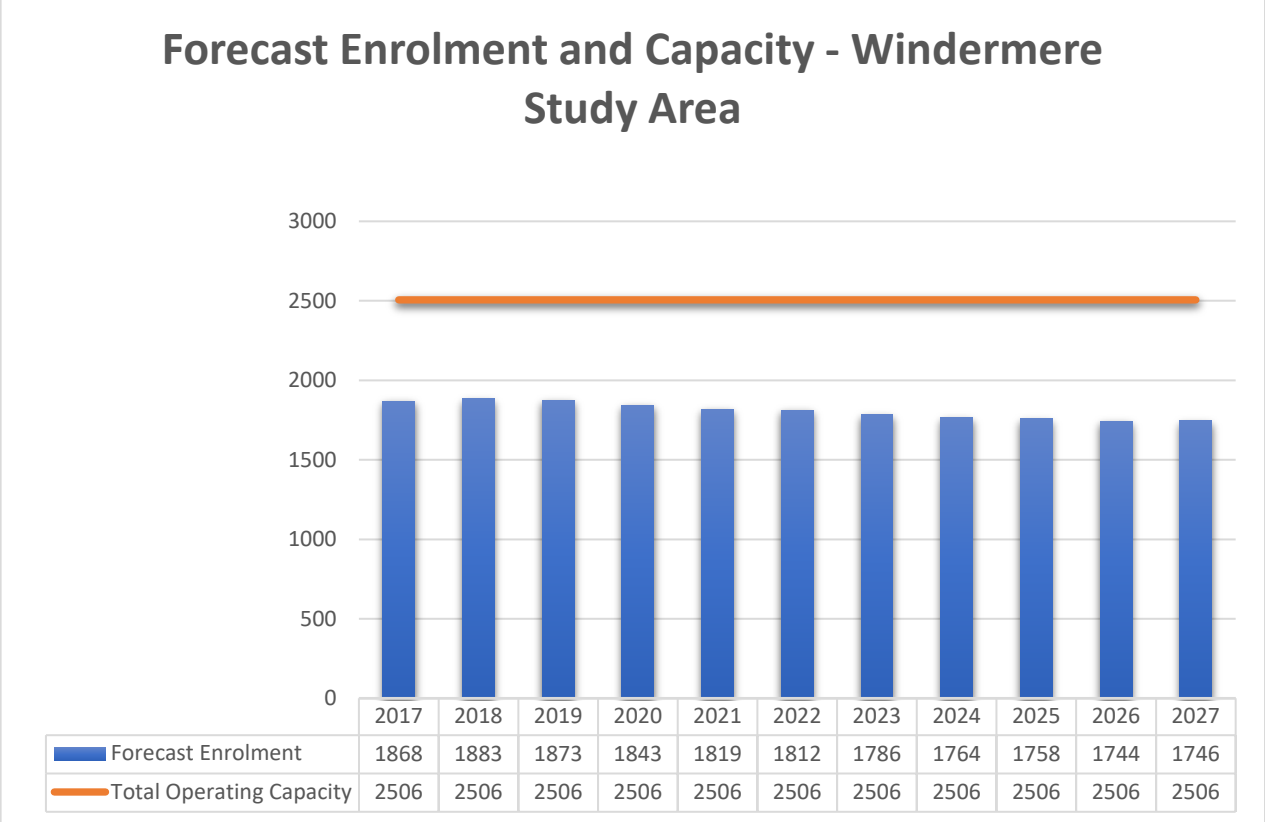
School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	Surplus
Bruce	317	74%	233	84
Collingwood Annex	185	67%	124	61
Grenfell	503	89%	449	54
Nootka	522	76%	399	123
Renfrew	639	70%	445	194
Thunderbird	340	64%	218	122
Total	**2506**	**75%**	**1868**	**638**

FIGURE 8.2-27: **Forecast capacity utilization and surplus or shortage of enrolling capacity in the Windermere study area**

School	Operating Capacity	Capacity Utilization	2027 Enrolment	Surplus
Bruce	317	69%	219	98
Collingwood Annex	185	64%	118	67
Grenfell	503	67%	339	164
Nootka	522	78%	406	116
Renfrew	639	75%	478	161
Thunderbird	340	55%	186	154
Total	**2506**	**69%**	**1746**	**760**

Surplus capacity is forecast to increase from 638 seats in 2017 to 760 seats in 2027 at schools in the Windermere study area.

FIGURE 8.2-28: **Enrolment and capacity analysis for the elementary schools in the Windermere study area.**

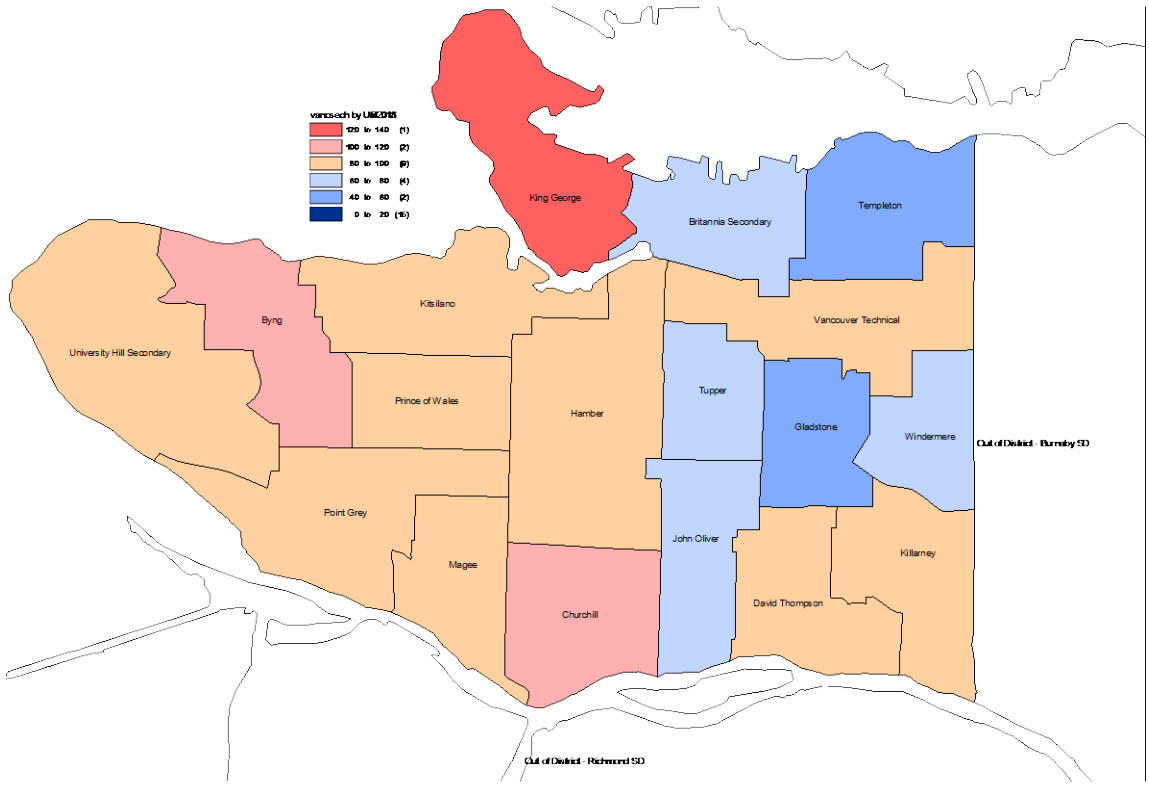


By 2027, enrolment is forecast to decline by 122 students in the Windermere study area.

8.3 Secondary schools in areas with low capacity utilization

Capacity utilization of facilities varies widely across the District. The 'heat map' below illustrate the wide variance in capacity utilization at secondary schools.

FIGURE 8.3-1: **current capacity utilization at Secondary schools**



All of the enrolment totals in this section include International Students. The number of international students in each of the study areas is noted below the tables. International student enrolment is assumed to remain stable for 2027 enrolment forecasts.

FIGURE 8.3-2: **Secondary school study areas**

Secondary School Area	Secondary Schools in Study Area
Northeast	Britannia, Templeton, Vancouver Technical
Southeast	David Thompson, Gladstone, Killarney, Windermere
West	Kitsilano, Byng, Magee, Point Grey, Prince of Wales

Secondary Schools in the Northeast Area of the District

The secondary schools found in the Northeast Area of the District are Britannia, Templeton and Vancouver Technical.

Figure 8.3-3: Secondary schools in the Northeast Area of the District

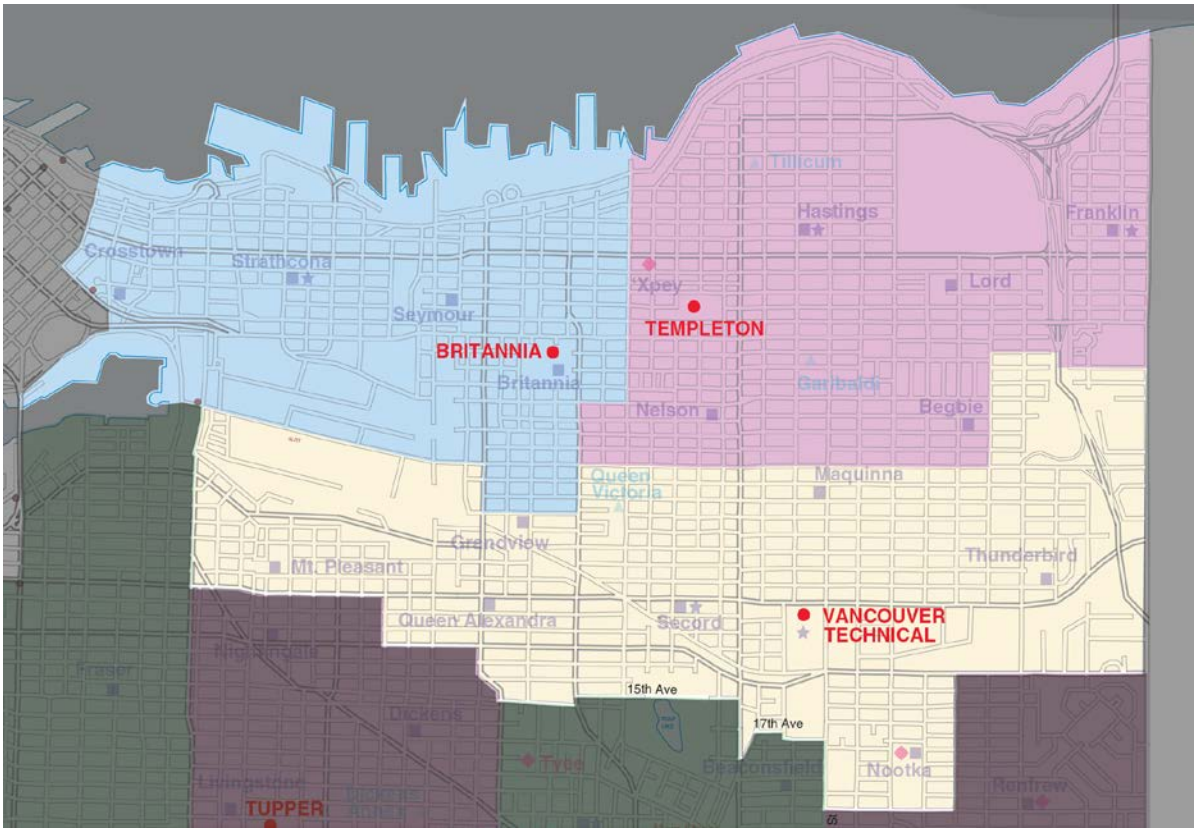


FIGURE 8.3-4: **shows current enrolment for the three secondary schools in the Northeast Area of the District**

School	Operating Capacity	*2017 Enrolment	Capacity Utilization	Surplus
Britannia Sec	1025	572	56%	453
Templeton	1400	801	57%	599
Vancouver Technical	1700	1641	97%	59
TOTAL	**4125**	**3014**	**73%**	**1111**

**Includes 130 International Student enrolment*

Note: In 2017 a total of 129 International Students attended these three schools. These students are included in the data shown in **FIGURE 8.3-5**.

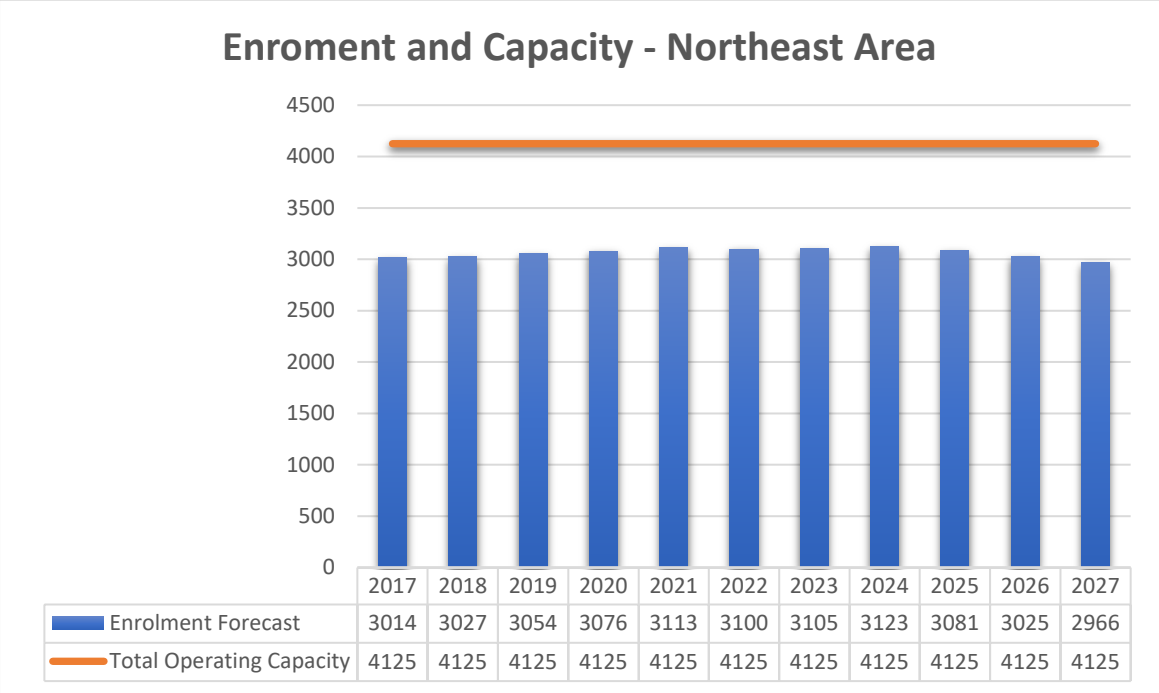
FIGURE 8.3-5: **Enrolment and capacity analysis for the secondary schools in the Northeast area of the District**

School	Operating Capacity	*2027 Enrolment	Capacity Utilization	Surplus
Britannia Sec	1025	569	56%	456
Templeton	1400	771	55%	629
Vancouver Technical	1700	1626	96%	74
TOTAL	**4125**	**2966**	**72%**	**1159**

**Includes 130 International Student forecast enrolment*

Surplus capacity is forecast to increase from 1111 seats in 2027 to 1159 seats in 2027 at secondary schools in the Northeast area of the district.

FIGURE 8.3-6: **Enrolment and capacity analysis for the secondary schools in the Northeast area of the District**



Forecast enrolment for the secondary schools in the Northeast area of the district is forecast to remain stable.

Secondary Schools in the Southeast Area of the District

The secondary schools found in the Southeast Area of the District are David Thompson, Gladstone, Killarney, and Windermere.

FIGURE 8.3-7: **Secondary schools in the Southeast area of the District**

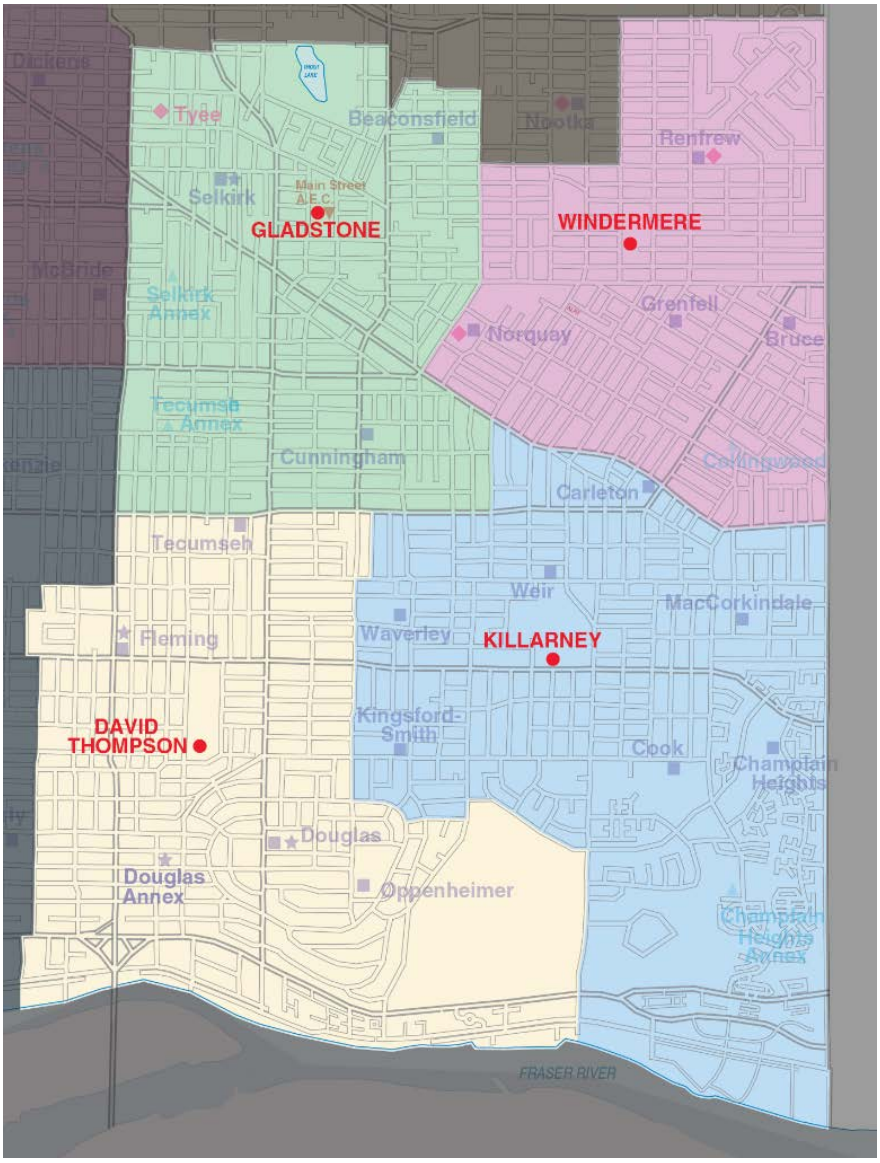


FIGURE 8.3-8: **shows current enrolment for the four secondary schools in the Southeast Area of the District**

School	Operating Capacity	*2017 Enrolment	Capacity Utilization	Surplus
David Thompson	1550	1410	91%	140
Gladstone	1600	965	60%	635
Killarney	2200	1895	86%	305
Windermere	1500	1009	67%	491
TOTAL	**6850**	**5279**	**77%**	**1571**

**Includes 258 International Student enrolment*

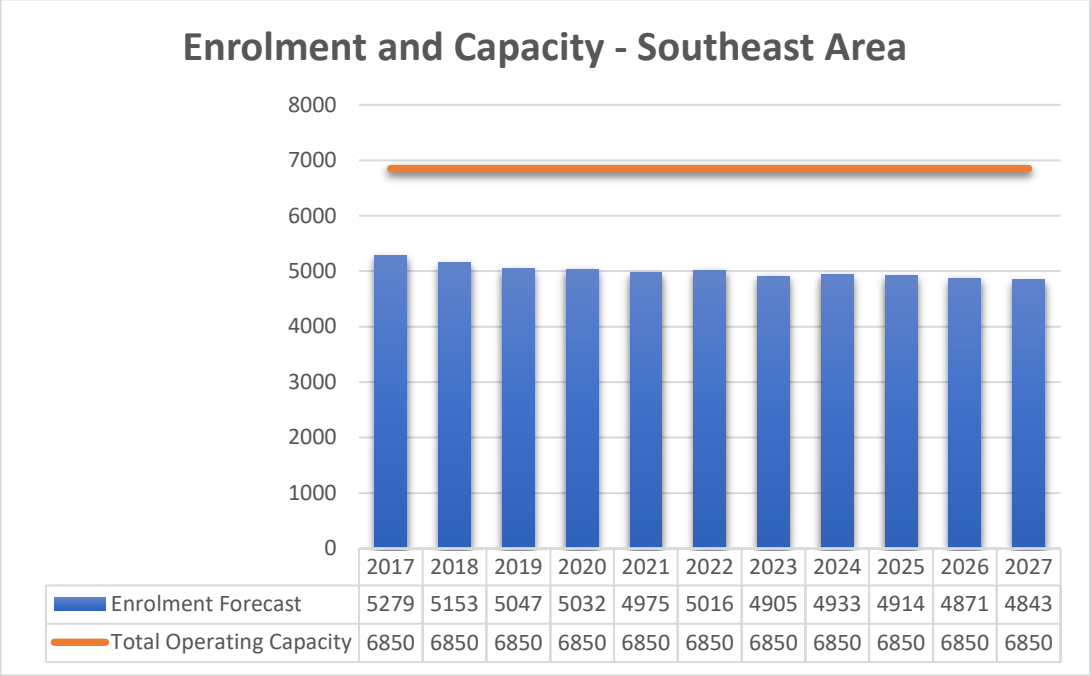
FIGURE 8.3-9 **shows forecast enrolment in 2027 for the three secondary schools in the Southeast Area of the District**

School	Operating Capacity	*2027 Enrolment	Capacity Utilization	Surplus

David Thompson	1550	1320	85%	230
Gladstone	1600	914	57%	686
Killarney	2200	1753	80%	447
Windermere	1500	856	57%	644
TOTAL	**6850**	**4843**	**71%**	**2007**

**Includes 258 International Student forecast enrolment*

Figure 8.3-10: Enrolment and capacity analysis for the secondary schools in the Southeast area of the District



By 2027, enrolment is forecast to decline by 436 students at secondary schools in the Southeast area of the District.

Secondary Schools in the West Area of the District

The secondary schools found in the West Area of the District are Kitsilano, Byng, Magee, Point Grey, and Prince of Wales.

FIGURE 8.3-11**: Secondary Schools in the West Area of the District**

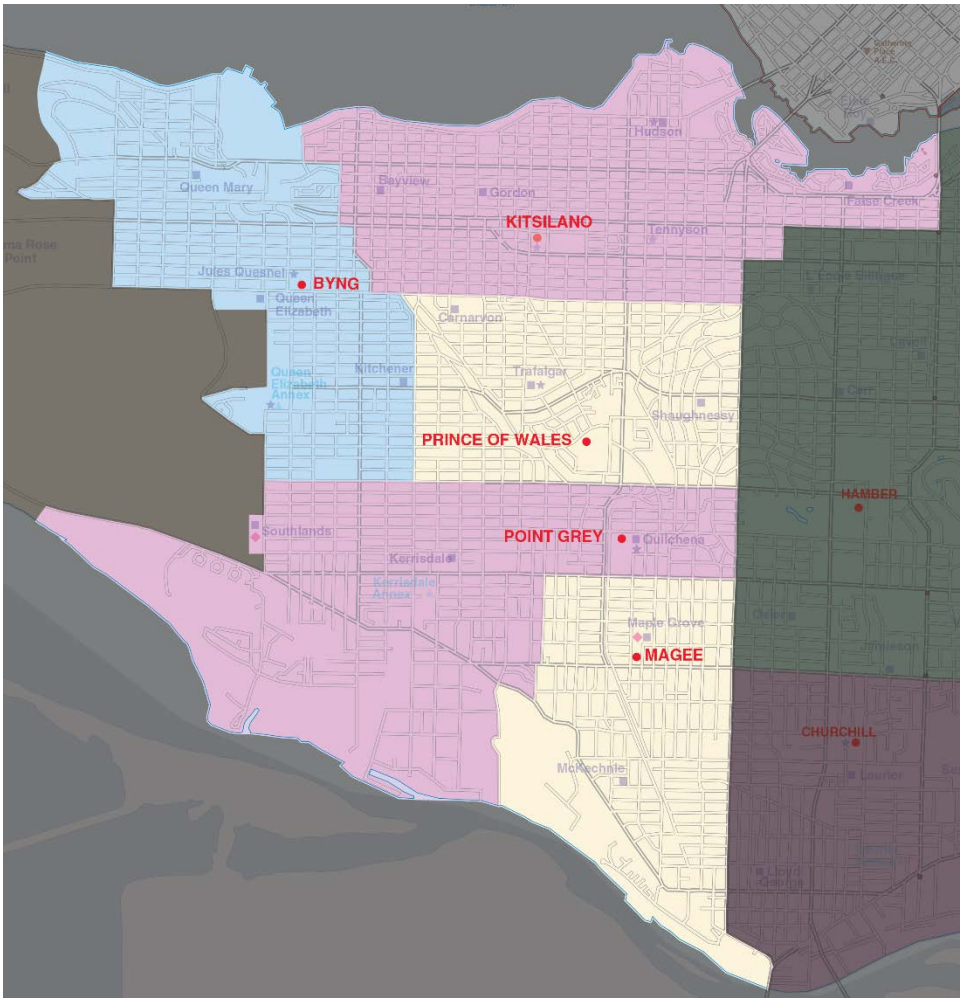


FIGURE 8.3-12: **shows current enrolment for the five secondary schools in the West area of the District**

School	Operating Capacity	*2017 Enrolment	Capacity Utilization	Surplus or (Shortage
Kitsilano	1500	1371	91%	129
Byng	1200	1284	107%	-84
Magee	1200	1089	91%	111
Point Grey	1050	975	93%	75
Prince of Wales	1100	1043	95%	57
TOTAL	**6050**	**5762**	**95%**	**288**

**Includes 580 International Student enrolment*

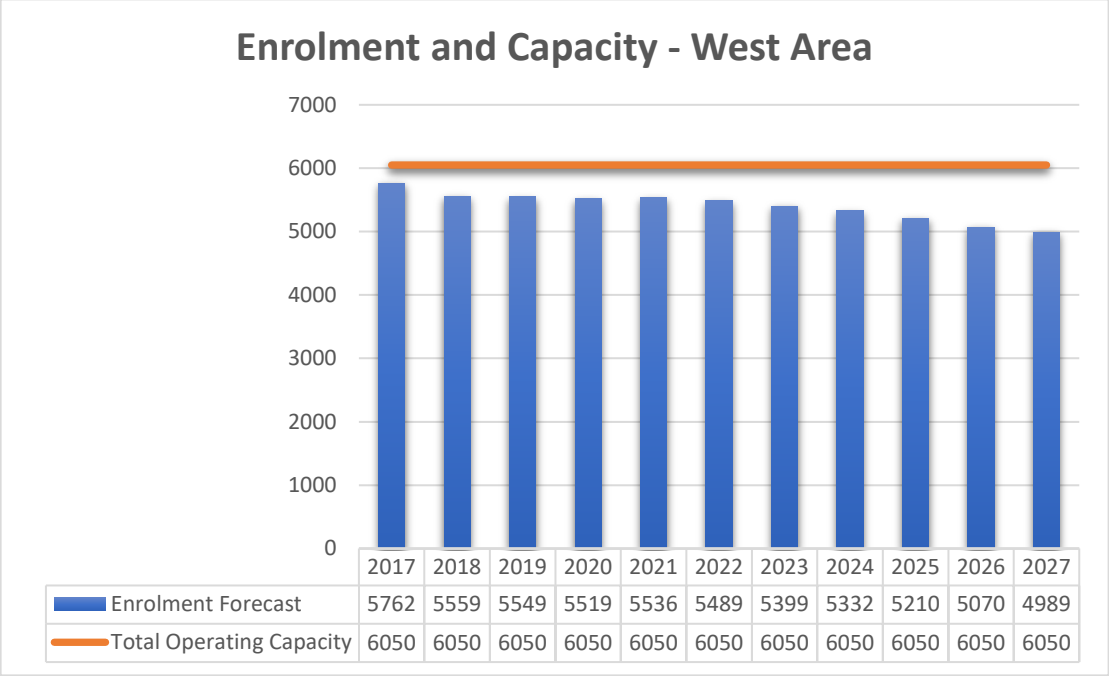
FIGURE 8.3-13: **shows forecast enrolment in 2027 for the five secondary schools in the West Area of the District**

School	Operating Capacity	*2027 Enrolment	Capacity Utilization	Surplus or Shortage
Kitsilano	1500	1462	97%	38
Byng	1200	1014	85%	186

Magee	1200	836	70%	364
Point Grey	1050	772	74%	278
Prince of Wales	1100	905	82%	195
TOTAL	**6050**	**4989**	**82%**	**1061**

**Includes 580 International Student forecast enrolment*
Surplus capacity is forecast to increase to 1061 seats in 2027

FIGURE 8.3-14: **Enrolment and capacity analysis for the secondary schools in the West area of the District**



Enrolment is forecast to decline at secondary schools in the West area of the District

9 Seismic Mitigation Program

The Seismic Mitigation Program (SMP) is a major province-wide initiative to make schools safer in the event of a seismic event by minimizing the probability of structural collapse. In March 2004, the Ministry of Education initiated seismic assessments of 877 schools in 37 school districts located in high-risk seismic zones. Based on the assessment results, the provincial government announced Phase 1 of the SMP in November 2004 with a $1.5 billion plan for seismic upgrading of 747 schools over 15 years. At the time, the primary objective of the Seismic Mitigation Program (SMP) was described as a plan to reduce life-safety risk for schools.

Since 2005 a technical team led by the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC), working with its partners at the University of British Columbia, has continued to refine the risk assessment and mitigation strategies through experience in actual seismic upgrade projects, extensive laboratory testing at UBC's world-class Earthquake Engineering Research Facility, and peer review by leading international structural experts. Based on the latest research and the availability of more detailed local geotechnical information, the engineers re-evaluated more than 500 schools previously identified for potential funding under the SMP. This work resulted in new technical guidelines and assessment methodology that refined the list of high priority schools to be addressed under the SMP.

Base on the new methodology, new seismic risk assessment categories were released in May 2012, which initiated Phase 2 of the SMP. These new categories are described below:

9.1 Seismic Risk Categories

1. **High 1 (H 1):**
   Most vulnerable structure; at highest risk of widespread damage or structural failure; not reparable after event Structural and non-structural seismic upgrades required.
2. **High 2 (H2):**
   Vulnerable structure; at high risk of widespread damage or structural failure; likely not reparable after event Structural and non-structural seismic upgrades required.
3. **High 3 (H3):**
   Isolated failure to building elements such as walls are expected; building likely not reparable after event Structural and non-structural seismic upgrades required.
4. **Medium (M):**
   Isolated damage to building elements is expected; non-structural elements (such as bookshelves, lighting) are at risk of failure. Non-structural upgrades required. Building to be upgraded or replaced within the Capital Plan when it has reached the end of its useful life.
5. **Low (L):**
   Least vulnerable structure. Would experience isolated damage and would probably be reparable after an event Non-structural upgrades may be required.

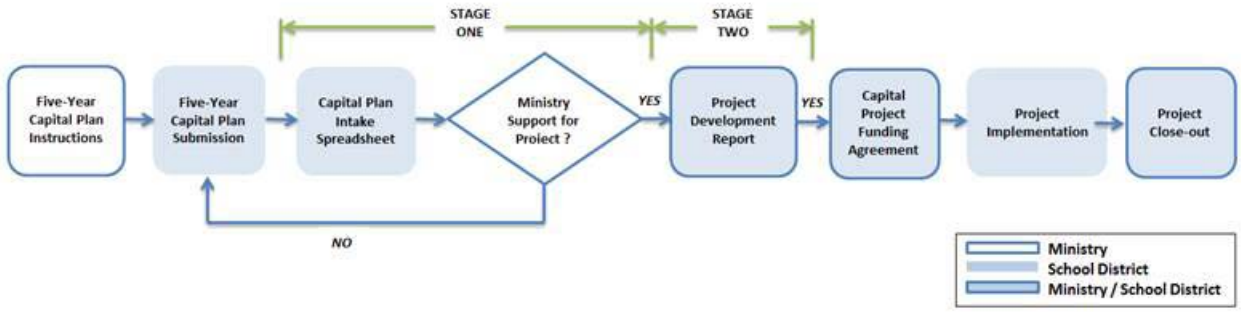
The government is providing funding to structurally upgrade schools that have a high-risk rating (High 1, High 2 or High 3), as identified in the Seismic Mitigation Program Progress Report (PDF) shown above.

Under Phase 2 of the SMP, the Provincial Government identified 152 schools in BC with at least one "high risk" building section that need to be addressed with structural upgrades under the School Seismic Mitigation Program. The cost to address these high-priority schools was estimated at the time to be $1.3 billion. The remaining schools have building sections classified as "low" or "medium" risk, which means seismic safety can be achieved through non-structural mitigation or through a school district's regular capital renewal process.

9.2 Seismic Project Approval Process

In the 2012 Capital Plan instructions, the Ministry directed school districts to review and prioritize requirements for future seismic projects based on the new categories. The identification and prioritization of schools to advance for seismic upgrading in the District's annual Five-Year Capital Plan submission forms the major portion of the Capital Plan submission. The following 2-stage process chart illustrates the required steps to bring a project funded through the SMP to its conclusion.

Figure 9.2-1: Seismic project approval process



9.3 Vancouver Project Office and Ministry of Education

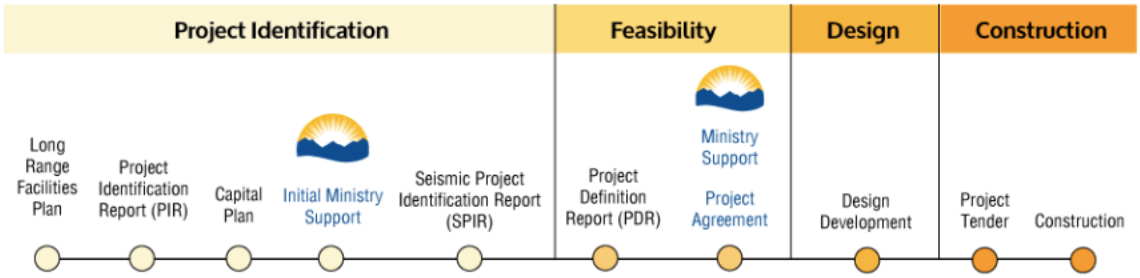
The Vancouver Project Office oversees the Seismic Mitigation Program in Vancouver. A Memorandum of Understanding, originally signed in 2014 and renewed in August 2017, governs the SMP. The current seismic program is scheduled to end in 2030. The District has the responsibility, in collaboration with the Ministry of Education, to ensure that Vancouver students are educated in seismically safe schools. The Ministry of Education has indicated it is committed to providing enough safe seats in the District to ensure that all VSB students are able to attend schools that are seismically safe through the mitigation of high-risk segments.

The current District enrolment (including international students) of approximately 50,200 is projected to decline to approximately 48,500 by 2022 and 47,800 by 2027. Given the Ministry's commitment to provide enough safe seats for the projected enrolment, it can be concluded that not all District schools will be seismically upgraded at the end of the SMP. With overall operating capacity of 58,000 student seats, the District needs to develop strategies to consolidate school populations to ensure that all students are in seismically safe schools. Section 10 of this report describes a methodology for the District to undertake that work. The School Consolidation Feasibility Analysis methodology is not intended to identify specific school for possible closure but provides information on those schools that have low capacity utilization or are experiencing declining enrolment. Section 10 of this report also contains a hypothetical analysis of the seismic safety status of VSB schools at the scheduled conclusion of the SMP.

9.4 SMP Supported Projects

The Feasibility Analysis detailed in Section 10 identifies individual schools "Supported" in the SMP or "Not Supported". In order to understand why certain schools are listed in the District's Five-Capital Plan above others, it is important to understand how they became "Supported". Prior to revisions to the Ministry Five-Year Capital Plan Instructions in April 2017, there was a concerted effort between the Ministry and the District to publicly support schools in the SMP in a ranking system that was published. That listing of schools became the sixty-nine schools that the Vancouver Project Office was responsible for when it was created. The District considers schools on that list "Supported". A number of these schools have had Seismic Project Investigation Reports (SPIRs) completed in anticipation of Ministry approval, as per the diagram below:

Figure 9.4-1



Beginning with the 2017 Five-Year Capital Plan, the Ministry began providing responses to the District's Five-Year Capital Plan submission in a Capital Plan Response Letter. The letter will direct the District to proceed to the feasibility phase (PDR) for consideration by the Steering Committee of the Vancouver Project Office. This process is a more formal process for indicating a project is "Supported", as it is only the projects in the Capital Plan Response Letter that the Ministry would consider for funding.

Status of Vancouver Schools in the SMP

The Ministry of Education maintains listings of all schools in the Province by district that are part of Phase 2 of the SMP. According to that listing at February 1, 2019 the following 27 Vancouver schools have received seismic upgrades:

FIGURE 9.4-2 **Ministry of Education Listing of Schools Receiving Seismic Upgrades**

#	School Name	#	School Name
1	Britannia Community Elementary	15	Lord Strathcona Community Elementary
2	Captain James Cook Elementary	16	Queen Mary Elementary
3	Charles Dickens Elementary	17	Simon Fraser Elementary
4	Dr. Annie B. Jamieson Elementary	18	Sir Charles Kingsford-Smith Elementary
5	École Jules Quesnel Elementary	19	Sir James Douglas Annex
6	General Gordon Elementary	20	Sir James Douglas Elementary
7	Ideal Mini School (Laurier Elementary Site)	21	Sir Richard Mcbride Elementary
8	J.W. Sexsmith Community Elementary	22	Sir Wilfred Laurier Elementary
9	John Norquay Elementary	23	Total Education (General Brock Annex)
10	Kerrisdale Elementary	24	Trafalgar Elementary
11	Kitsilano Secondary	25	University Hill Secondary
12	Laura Secord Elementary	26	Vancouver Technical Secondary
13	L'ecole Bilingue Elementary	27	Walter Moberly Elementary
14	Lord Kitchener Elementary		

According to the Ministry listing, the following eighteen schools are in various stages of the approval process described above:

FIGURE 9.4-3

Approved and in Planning	Under Construction	PDR Phase
School Name	School Name	School Name
Bayview Elementary	Lord Nelson Elementary	Chief Maquinna Elementary
David Lloyd George Elementary	Lord Tennyson Elementary	David Thompson Secondary
Edith Cavell Elementary	Fleming Elementary	George M. Weir Elementary
Eric Hamber Secondary		Henry Hudson Elementary
General Wolfe Elementary		Lord Byng Secondary
Maple Grove Elementary		Lord Selkirk Elementary
Sir Matthew Begbie Elementary		Vancouver Point Grey
		Sir Guy Carleton Elementary

Below is the schedule of seismic project requests that the District submitted to the Ministry in June 2018 for the 2019-2020 5-Year Capital Plan. Six of the eight schools in the chart above under the PDR Phase column from that submission were approved by the Ministry in the Capital Plan Response Letter for the 2018-2019 Capital Plan to proceed to the Project Definition Report phase. It is a Ministry requirement that projects from a previous year's Capital Plan be included in the next year's Capital Plan because the PDR's are required to be submitted in that subsequent year. Point Grey and David Thompson were approved in a previous Capital Plan Response Letter.

FIGURE 9.4-4: **Seismic Mitigation Requests in the 2019-2020 5-Year Capital Plan**

SEISMIC MITIGATION PROGRAM (SMP) PROJECTS					
Project Priority	Facility Name	Project Code	Project Description	Total	
1	ERIC HAMBER SECONDARY (1700S)	SMP	SEISMIC MITIGATION PROGRAM	$	79,300,000
2	DAVID THOMPSON SECONDARY (1550S)	SMP	SEISMIC MITIGATION PROGRAM	$	94,000,000
3	POINT GREY SECONDARY (1100S)	SMP	SEISMIC MITIGATION PROGRAM	$	78,000,000
4	DR GEORGE M WEIR ELEMENTARY (40K/425E)	SMP	SEISMIC MITIGATION PROGRAM	$	17,000,000
5	EDITH CAVELL ELEMENTARY (40K/250E)	SMP	SEISMIC MITIGATION PROGRAM PROPOSED CAPACITY OF 60K/450E	$	15,600,000
6	GENERAL WOLFE ELEMENTARY (40K/350E)	SMP	SEISMIC MITIGATION PROGRAM	$	20,500,000
7	HENRY HUDSON ELEMENTARY (40K/300E)	SMP	SEISMIC MITIGATION PROGRAM	$	27,000,000
8	SIR GUY CARLETON ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	25,000,000
9	LORD BYNG SECONDARY (H3)	SMP	SEISMIC MITIGATION PROGRAM	$	15,000,000
10	CHIEF MAQUINNA ELEMENTARY (H3)	SMP	SEISMIC MITIGATION PROGRAM	$	10,000,000
11	LORD SELKIRK ELEMENTARY (H3)	SMP	SEISMIC MITIGATION PROGRAM	$	5,000,000
12	KILLARNEY SECONDARY (2200S)	SMP	SEISMIC MITIGATION PROGRAM	$	101,700,000
13	DAVID LIVINGSTONE ELEMENTARY (40K/325E)	SMP	SEISMIC MITIGATION PROGRAM PROPOSED CAPACITY: 60K/450E (AREA=4,094SM)	$	26,800,000
14	SIR WILFRED GRENFELL ELEMENTARY (40K/525E)	SMP	SEISMIC MITIGATION PROGRAM	$	25,300,000
15	FALSE CREEK ELEMENTARY (40K/200E)	SMP	SEISMIC MITIGATION PROGRAM PROPOSED CAPACITY: 60K/350E (AREA=3,576SM)	$	24,500,000
16	RENFREW COMMUNITY ELEMENTARY (60K/700E)	SMP	SEISMIC MITIGATION PROGRAM	$	37,300,000
17	TEMPLETON SECONDARY (1400S)	SMP	SEISMIC MITIGATION PROGRAM	$	106,300,000
18	WAVERLEY ELEMENTARY (60K/450E)	SMP	SEISMIC MITIGATION PROGRAM	$	29,300,000
19	SIR ALEXANDER MACKENZIE ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	37,000,000
20	FLORENCE NIGHTINGALE ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	25,800,000
21	PRINCE OF WALES SECONDARY	SMP	SEISMIC MITIGATION PROGRAM	$	95,900,000
22	EMILY CARR ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	28,700,000
23	GLADSTONE SECONDARY	SMP	SEISMIC MITIGATION PROGRAM	$	129,300,000
24	WINDERMERE COMMUNITY SECONDARY	SMP	SEISMIC MITIGATION PROGRAM	$	125,200,000
25	DR H N MACCORKINDALE ELEM	SMP	SEISMIC MITIGATION PROGRAM	$	26,900,000
26	KING GEORGE SECONDARY (375S)	SMP	SEISMIC MITIGATION PROGRAM PROPOSED CAPACITY OF 1500S	$	50,400,000
27	QUEEN ALEXANDRA ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	20,400,000
28	SIR JOHN FRANKLIN COMMUNITY	SMP	SEISMIC MITIGATION PROGRAM	$	20,400,000
29	JOHN OLIVER SECONDARY	SMP	SEISMIC MITIGATION PROGRAM	$	87,900,000
30	QUILCHENA ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	23,700,000
31	SIR WINSTON CHURCHILL SECONDARY	SMP	SEISMIC MITIGATION PROGRAM	$	137,800,000
32	GRANDVIEW ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	17,700,000
33	BRITANNIA COMMUNITY SECONDARY	SMP	SEISMIC MITIGATION PROGRAM	$	72,000,000
34	Xpey' ELEMENTARY (formerly Macdonald Elementary)	SMP	SEISMIC MITIGATION PROGRAM	$	15,400,000
35	GRAHAM BRUCE COMMUNITY ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	17,700,000
36	G T CUNNINGHAM ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	25,200,000
37	LORD BEACONSFIELD ELEMENTARY	SMP	SEISMIC MITIGATION PROGRAM	$	22,300,000
			GRAND TOTAL	$	1.717.300.000

In the Table Figure 9.4-4, Eric Hamber Secondary was approved in the Capital Plan Response Letter received in April 2017 to move to the PDR stage.

The next schools for possible consideration for approval by the Ministry to move to the PDR Phase are:

- Killarney Secondary
- David Livingstone Elementary
- Grenfell Elementary
- False Creek Elementary
- Renfrew Elementary

The District will need to consider the School Consolidation Feasibility Analysis in Section 10 with respect to the possible Grenfell and Renfrew projects. The Grenfell analysis includes Carleton as an enrolling school with a capacity of 573 students in the determination that Grenfell students come be accompanied at neighbourhood schools.

The Ministry has approved Carleton to move forward to the PDR phase (feasibility study) for seismic upgrading. The school is not used as an enrolling school, having suffered fire damage in 2016. The Carleton enrolment figures use in the Grenfell analysis are the students who are resident in the catchment but who attend other schools, mostly Cunningham. The District will need to decide, if the seismic upgrade project proceeds, to either use it for enrolling students or as temporary accommodation space for other elementary school seismic projects.

In addition, the District will also need to carefully consider the comments in Section 3 pertaining to False Creek Elementary in moving that project forward.

9.5 Secondary Schools

There are currently approximately 5,400 empty secondary school student spaces (including international students) in the District, basically the equivalent of more than twice the capacity of the District's biggest secondary schools. That excess capacity is projected to grow to approximately 6,300 seats by 2027. Using the conclusion above that the SMP will only support the number of safe seats that is required by the projected enrolment, moving secondary students to schools with seismically safe seats will become a priority for the SMP moving forward.

Section 10 contains a detailed analysis of the secondary schools in the District. It is assumed that the following schools will continue to be function as seismically safe seats for students:

FIGURE 9.5-1

School	Year First Opened	Seismic Risk	Seismic Status
Byng	1924	*High 3 (H3)	SEISMIC UPGRADE
Kitsilano	1919	Completed Project	REPLACEMENT SCHOOL
Magee	1998	Completed Project	REPLACEMENT SCHOOL
Tupper	1958	MEDIUM (M) / LOW (L)	PARTIAL SEISMIC UPGRADE (BLDG. A)
Vancouver Technical	1928	Completed Project	SEISMIC UPGRADE / Heritage Restoration

**The remaining H3 Building Block at Byng has been approved for seismic upgrade.*

School	Year First Opened	Seismic Risk	Seismic Status
John Oliver	1921	High 1 (H1)/ High 2 (H2)	Supported Project
Killarney	1957	High 1 (H1)/ High 2 (H2)	Supported Project
Point Grey	1929	High 1 (H1)/ High 2 (H2)	Supported Project
Prince of Wales	1920	High 1 (H1)/ High 2 (H2)	Supported Project
Templeton	1926	High 1 (H1)/ High 2 (H2)	Supported Project
*Thompson	1958	High 1 (H1)/ High 2 (H2)	Supported Project

*The ministry has requested the submission of a final PDR for Thompson in its Capital Response Letter to the 2018-19 Capital Plan.

Section 10 of this report provides a detailed analysis of the following study areas:

- Britannia Secondary and Templeton Secondary;
- Prince of Wales Secondary and Point Grey Secondary;
- Gladstone Secondary and Windermere Secondary (both not supported in the SMP)

The District will need to determine how to address the excess secondary school capacity in making decisions to place students in seismically safe seats.

Current SMP Implementation Plan

The District's current SMP Implementation Plan is reflected in the 2019-2020 Five-Year Capital Plan illustrated above. In order to move the SMP to completion by 2030 and provide seismically safe seats for all students the District should conduct a review of the factors used to determine priority projects for the SMP. Consideration of the factors below along with the School Consolidation Feasibility Analyses contained in Section 10 and possible future ones to be determined will position the District to achieve that goal.

Determination of Projects in the SMP

In order to determine project priorities for the SMP, the District should consider the following factors:

- Schools with high seismic risk (H1, H2 and H3);
- Schools with high capacity utilization;
- Schools with high deferred maintenance requirements;
- Schools that will not be needed for temporary accommodation;
- Full schools with only H3 seismic risk.

The fifth factor above – full schools with only H3 seismic risk – is one the Ministry has conveyed to the District over the past year. Consideration of schools with only H3 Seismic risk that have high capacity utilization will ensure those schools will be upgraded on a more timely basis and at possible less cost.

SMP Challenges

The most significant challenge affecting the successful completion of the SMP the District is the availability of temporary accommodation space to serve as swing space for students who have to leave their site while a seismic upgrading project is completed.

As illustrated, the timing of projects moving forward is dependent on the use of identified space by project. For example, the Killarney Secondary project is scheduled to proceed once the Eric Hamber project is completed and the Killarney students would occupy the old Eric Hamber.

There are a variety of strategies for providing temporary accommodation for schools undergoing seismic construction. These include:

- Clusters of Host Schools – Host schools are open and functioning schools that have extra space. This extra space can be utilized to provide space for students from schools that are undergoing seismic upgrades. A school undergoing seismic upgrading may need to be split between two host schools, as one host school may not have enough space to accommodate the entire school population of the school being upgraded. The option of blending the host and receiving school population vs retaining each school separately needs to be considered
- Vacated and Replaced Schools – Vacant school buildings that have been fully replaced as part of the SMP could be utilized to provide temporary accommodations. It is important to note that this strategy would not result in a reduction of district operating capacity
- Repurpose Closed Schools – In this option an annex, elementary or secondary school that has been closed could be repurposed to provide temporary accommodation. To repurpose an entire school as a temporary accommodation site the school must first be closed, as required by the School Act. The decision to close a school must be made in accordance with the VSB Policy 14 – School Closure. Once approved for closure, a school could then be repurposed as a site to provide temporary accommodation.
- Portables on Site – In this option portables would be installed on the field of a school undergoing seismic upgrading. It is important to note that the VBE would most likely be responsible for the costs associated with the purchase and installation of portables. The Ministry of Education previously funded the cost of on-site portables during construction, which reduced the need for off-site temporary accommodations. The Ministry has indicated that it is unlikely to provide this funding unless the district can demonstrate that temporary accommodation cannot be provided using surplus space.
- Lease of Space – In this option space could be leased and renovated to provide accommodation for schools undergoing seismic construction. This option would be expensive, and costs would most likely need to be covered by the VBE.

Staff will consider the following factors in identifying suitable space to provide temporary accommodation:

- Travel time between temporary accommodation site and school project site
- Ability to accommodate both primary and intermediate grades at an elementary site
- Site can be used sequentially to accommodate more than one seismic project during the SMP
- Site area can accommodate possible portables

In an effort to provide more temporary accommodation space, the District should consider the implications of the School Consolidation Feasibility Analysis work contained in this report.

10 Strategies to Reduce Surplus Capacity

10.1 Overview

The presence of surplus capacity and overall low capacity utilization for the district presents many challenges that restrict the ability of the district to function optimally in the delivery of educational services to students. Fully developing and implementing a plan to reduce surplus capacity will be pivotal to the successful implementation of the other priorities of the LRFP.

FIGURE 10.1-1 - **Shows 2017 capacity utilization and surplus capacity analyzed by school type.**

School Type	Current Operating Capacity	2017 BC Resident Enrolment	Capacity Utilization	Surplus Capacity
Elementary including Annexes	33666	28968	86.0%	4698
Secondary	25100	19666	78.4%	5617
District	**58766**	**48634**	**82.8%**	**10132**

In Vancouver, two other factors contribute to the challenge of reducing surplus capacity:

- Ongoing enrolment decline. Surplus capacity in the district increases each year as the population of school age children in the district diminishes and enrolment declines.
- Adding capacity by opening new schools. When the district opens a new school in an area of enrolment growth, the additional operating capacity lowers the overall capacity utilization for the district.

FIGURE 10.1-2 - **Increasing operating capacity**

Description	Timeframe	Impact on Operating Capacity
Enrolment Decline Forecast for Next 10 years	2017-2027	1700
*Expansion Proposals in Years 1-5 of 2019-2020 Capital Plan	2019-2024	3065
Total		**4765**

**There is no funding commitment from the Ministry for any of these capital projects*

As enrolment continues to decline and new capital projects are completed, the operating capacity in the district will continue to increase, and capacity utilization will continue to decrease.

FIGURE 10.1-3 - **Summarizes and evaluates the effectiveness of the strategies available to the District to reduce surplus capacity.**

Strategy	Description	Evaluation of Effectiveness to reduce surplus capacity
School Consolidation	School Consolidation is the process whereby the number of schools in an area of the district with low enrolment is reduced through the closure process.	School consolidation is the most effective strategy to manage and reduce surplus capacity
Annex Consolidation	Annex Consolidation is the process whereby an annex is closed, the associated elementary school in the catchment remains open	Minimal effect on surplus capacity. Potential educational benefits and more effective use of resources

Relocate District Programs	District choice programs located in stand-alone facilities are relocated to sites with sufficient capacity to accommodate them.	Minimal effect on surplus capacity. Potential educational benefits and more effective use of resources

10.2 School Consolidation

School consolidation is the process whereby the number of schools in an area of the district is reduced through the school closure process. The goal of school consolidation is to reduce surplus capacity. There are many potential educational benefits to be achieved by moving towards a future where surplus capacity is substantially reduced. In addition to the potential for direct educational benefits, implementing a school consolidation plan also has the potential to provide the district with more flexibility in the allocation of operating funds, accelerate and enhance the Seismic Mitigation Program, and move towards sustainable solutions to enrolment challenges in areas with full schools.

Benefits of School Consolidation

The benefits of implementing a school consolidation plan are summarized in Figure 10.2-1.

FIGURE 10.2-1 – **Educational Benefits of school consolidation**

School Consolidation		
Definition	**Educational Benefits**	**Effective and Efficient Use of Resources**
School Consolidation is the process whereby the number of schools in an area of the district with low enrolment is reduced through the closure process	• Create the best possible learning environments that promote professional collaboration and student engagement and inclusive education • Provide improved programs and services for students • Increase program options available to students • Move towards building schools of preferred size that facilitate strong curricular, cocurricular, and extracurricular programs • Increase staffing resources • Use available staffing resources more efficiently and effectively • Provide options for locating District Alternate programs and services at one site	• Reduction in Surplus Operating Capacity • Efficient and effective use of Resources • More flexibility in allocation of operating funds to align with District Priorities • Move further toward District sustainability goals • Provide more options for revenue generation **Student Safety - Seismic Mitigation Program (SMP)** • Potential to accelerate SMP • More and better options for Temporary Accommodations(TA) • Enhance public confidence about TA • More district influence in determining preferred option for seismic projects • Enhance public consultation process by having additional flexibility in SMP • More district influence in determining preferred size of schools **Balance Enrolment with Capacity** • Potential to accelerate new capital projects • More and better options for resolving the issues related to full schools • Move towards locating schools of preferred size to meet current and future district enrolment needs

School Consolidation Challenges

Reducing surplus capacity through the school consolidation process will present challenges. The prospect of school closure will be contentious. In the past, stakeholders potentially impacted by school closure have identified many concerns including the following:

Stakeholder Concerns

- Disruption to school communities and loss of sense of community
- Logistical challenges for parents
- Impact on employees of losing current positions if a school is closed.
- Concerns with maximizing use of enrolling space
- Potential loss of school programs and resources

Methodology for School Consolidation Feasibility Analysis

The School Consolidation Feasibility Analysis is a comprehensive approach to studying individual schools in areas of low and declining enrolment with a focus on opportunities to reduce surplus capacity.

FIGURE 10.2-2 - **School Consolidation Analysis Criteria**

*School Consolidation Feasibility Analysis – Criteria for Schools
School has low capacity utilization or is located a zone of low capacity utilization
School has a High (H1, H2 or H3) seismic risk rating

**Elementary and Secondary Schools. Annexes are analyzed separately*

Each study area is analyzed in two ways:

- Detailed enrolment analysis of study areas to determine if there is sufficient space now and in the future to consolidate nearby schools through a school closure process.
- Facility condition analysis of seismic status and deferred maintenance costs of schools in the study area.

The methodology used in the School Consolidation Feasibility Analysis is consistent with the zonal methodology required by the Ministry of Education in Project Definition Reports (feasibility studies) for projects in the SMP process and new schools and expansions requested by a district in its Five-Year Capital Plan.

The comprehensive approach to the School Consolidation Feasibility Analysis is taken to avoid potential confusion between this analysis and the process of identifying schools for consideration for closure as defined in Policy 14 School Closure. The process of identifying schools for consideration for closure is outside the scope of this LRFP.

The School Consolidation Feasibility Analysis provides the foundation for the VSB to move towards maximizing the number of students accommodated in seismically safe schools in alignment with LRFP priorities and guiding principles.

Elementary School Consolidation Feasibility Analysis

Using the School Consolidation Feasibility Analysis criteria above, the seventeen schools in **Figure 10.2-3** and **Figure 10.2-4** have been identified as schools that should be analyzed.

FIGURE 10.2-3 – **Four schools in areas of low enrolment and enrolment decline that meet the following criteria:**

- School is supported in the SMP, has project approval and a feasibility study is in progress.
- School is supported in the SMP but does not have SMP project approval or funding.

School	Year First Opened	Seismic Risk	Seismic Status
Carleton	1896	High 1 (H1)/ High 2 (H2)	SMP Supported Project
Grenfell	1910	High 1 (H1)/ High 2 (H2)	SMP Supported Project
Mackenzie	1930	High 1 (H1)/ High 2 (H2)	SMP Supported Project
Renfrew	1928	High 1 (H1)/ High 2 (H2)	SMP Supported Project

FIGURE 10.2-4 – **Thirteen schools in areas of low enrolment and enrolment decline that meet the following criteria**

- Have not been seismically upgraded
- Have not yet been supported in the SMP process

School	Year First Opened	Seismic Risk	Seismic Status
Bruce	1964	High 1 (H1)/ High 2 (H2)	Not Upgraded
Champlain Heights	1973	High 3 (H3)	Not Upgraded
Cunningham	1959	High 1 (H1)/ High 2 (H2)	Not Upgraded
Franklin	1912	High 1 (H1)/ High 2 (H2)	Not Upgraded
Grandview	1926	High 1 (H1)/ High 2 (H2)	Not Upgraded
Henderson	1962	High 3 (H3)	Not Upgraded
Lord	1956	High 3 (H3)	Not Upgraded
MacCorkindale	1967	High 1 (H1)/ High 2 (H2)	Not Upgraded
Nootka	1959	High 3 (H3)	Not Upgraded
Queen Alexandra	1909	High 1 (H1)/ High 2 (H2)	Not Upgraded
Queen Elizabeth	1940	High 3 (H3)	Not Upgraded
Seymour	1900	High 1 (H1)/ High 2 (H2)	Not Upgraded
Thunderbird	1944	High 3 (H3)	Not Upgraded

The seventeen elementary school study areas are organized by their secondary school family.

FIGURE 10.2-5– **Elementary school study areas**

Secondary School Family	Elementary School Studies
Britannia	Grandview, Seymour
Byng	Queen Elizabeth
Gladstone	Cunningham
John Oliver	Henderson, MacKenzie

Killarney	Carleton, Champlain Heights, MacCorkindale
Templeton	Franklin, Lord
Vancouver Technical	Queen Alexandra, Thunderbird
Windermere	Bruce, Carleton, Grenfell, Nootka

**The Grandview catchment area is in both the Vancouver Technical and Britannia catchments*

10.3 Britannia Secondary Family

Grandview and Seymour elementary schools are in the Britannia Secondary School family.

Grandview Study Area

The Grandview Study Area is comprised of all schools that share boundaries with the Grandview catchment area. Construction of a new replacement school for Nelson elementary is underway, occupancy is scheduled for spring 2019.

FIGURE 10.3-1– **The Grandview Study Area**

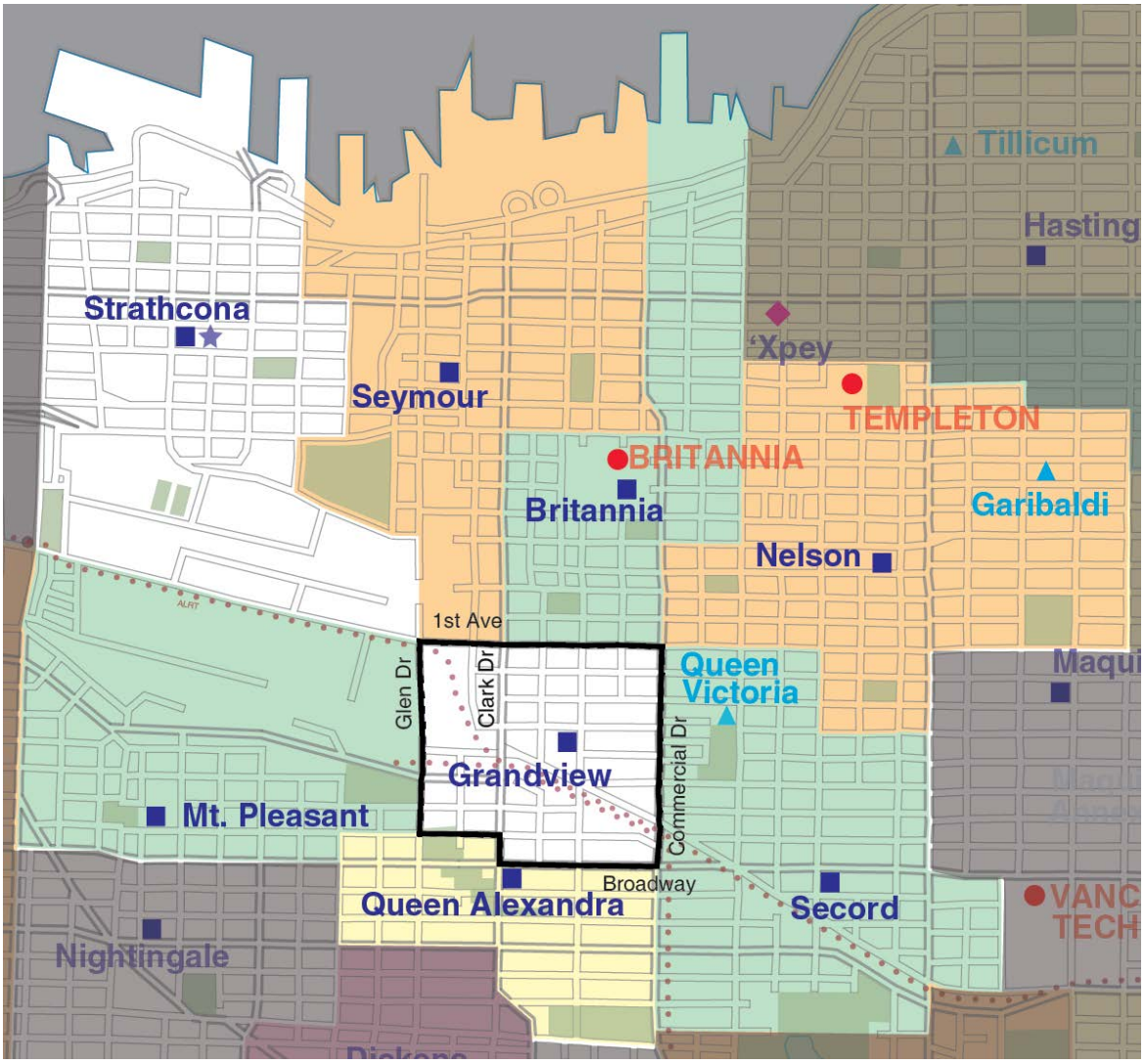


FIGURE 10.3-2 – **Operating capacity and capacity utilization in the Grandview study area.**

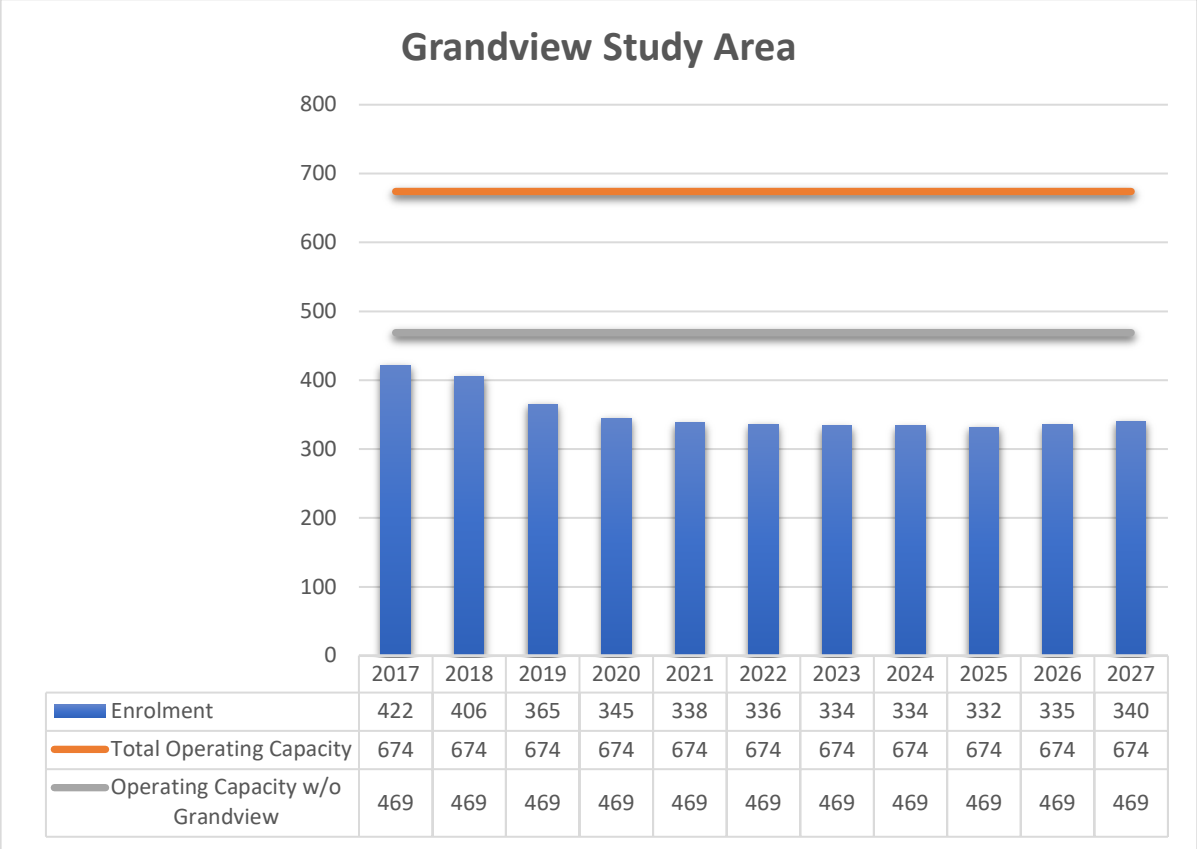
School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Grandview	205	66%	69
Laura Secord	639	103%	-17
Mount Pleasant	294	80%	59
Nelson	429	108%	-35
Queen Alexandra	270	62%	102
Queen Victoria Annex	199	59%	81
Strathcona	476	101%	-7

Laura Secord, Nelson, and Strathcona are not considered in the enrolment analysis in Figure 9.3-2 because they do not have surplus capacity to accommodate additional students. Mount Pleasant is also excluded from the enrolment space analysis. Mount pleasant Enrolment is forecast to increase at Mount Pleasant over the next 10 years. Some students who cannot be accommodated at Fraser are placed at Mount Pleasant.

FIGURE 10.3-3 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Grandview	205	66%	136	135	69	70
Queen Alexandra	270	62%	168	109	102	161
Queen Victoria Annex	199	59%	118	96	81	103
Total	**674**	**63%**	**422**	**340**	**252**	**334**

FIGURE 10.3-4 – **Enrolment and space analysis for Grandview and surrounding schools with space.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	422	406	365	345	338	336	334	334	332	335	340
Total Operating Capacity	674	674	674	674	674	674	674	674	674	674	674
Operating Capacity w/o Grandview	469	469	469	469	469	469	469	469	469	469	469

Enrolment is forecast to decline in the Grandview study area until 2020 and remain stable thereafter. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Grandview Elementary School.

Facility Condition Analysis

FIGURE 10.3-5 – **Facility condition and deferred maintenance for schools in Grandview study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Grandview	1926	High	$5M	0.600
Laura Secord	1911	Seismic Upgrade 2011	$1M	0.110
Mount Pleasant	1972	High	$5M	0.710
Nelson	1910	Replacement School in construction	*$9M	0.630
Queen Alexandra	1909	High	$6M	0.680
Queen Victoria Annex	1963	Medium/Low	$3M	0.680
Strathcona	1900	Completed Project	**$19M	0.580

**Deferred maintenance for existing school*

***Deferred maintenance for all five buildings on Strathcona site.*

Seymour Study Area

The Seymour Study Area is comprised of all schools that share boundaries with the Seymour catchment area.

FIGURE 10.3-6 –**The Seymour Study Area.**

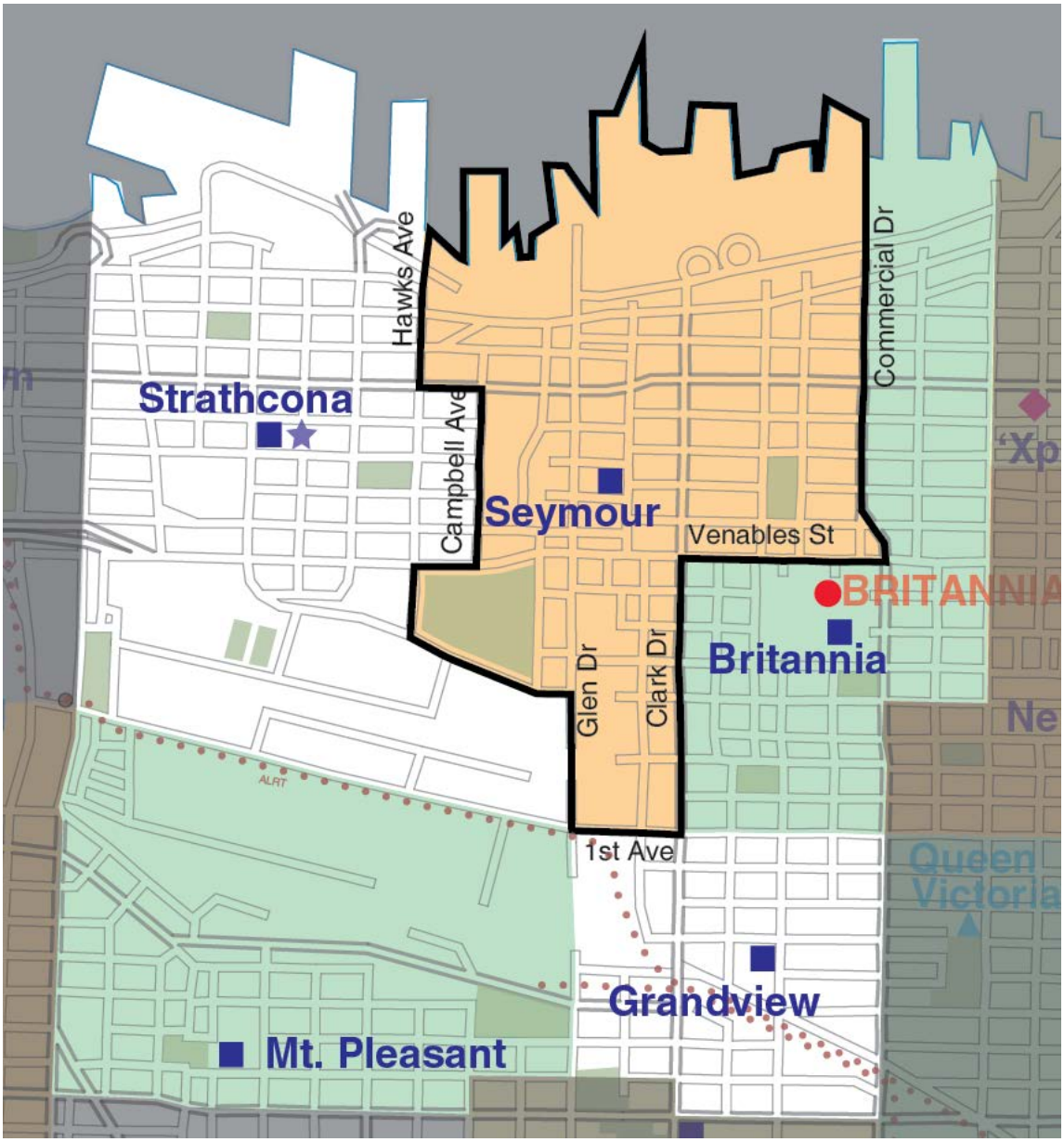


FIGURE 10.3-7 – **Operating capacity and capacity utilization in the Seymour study area.**

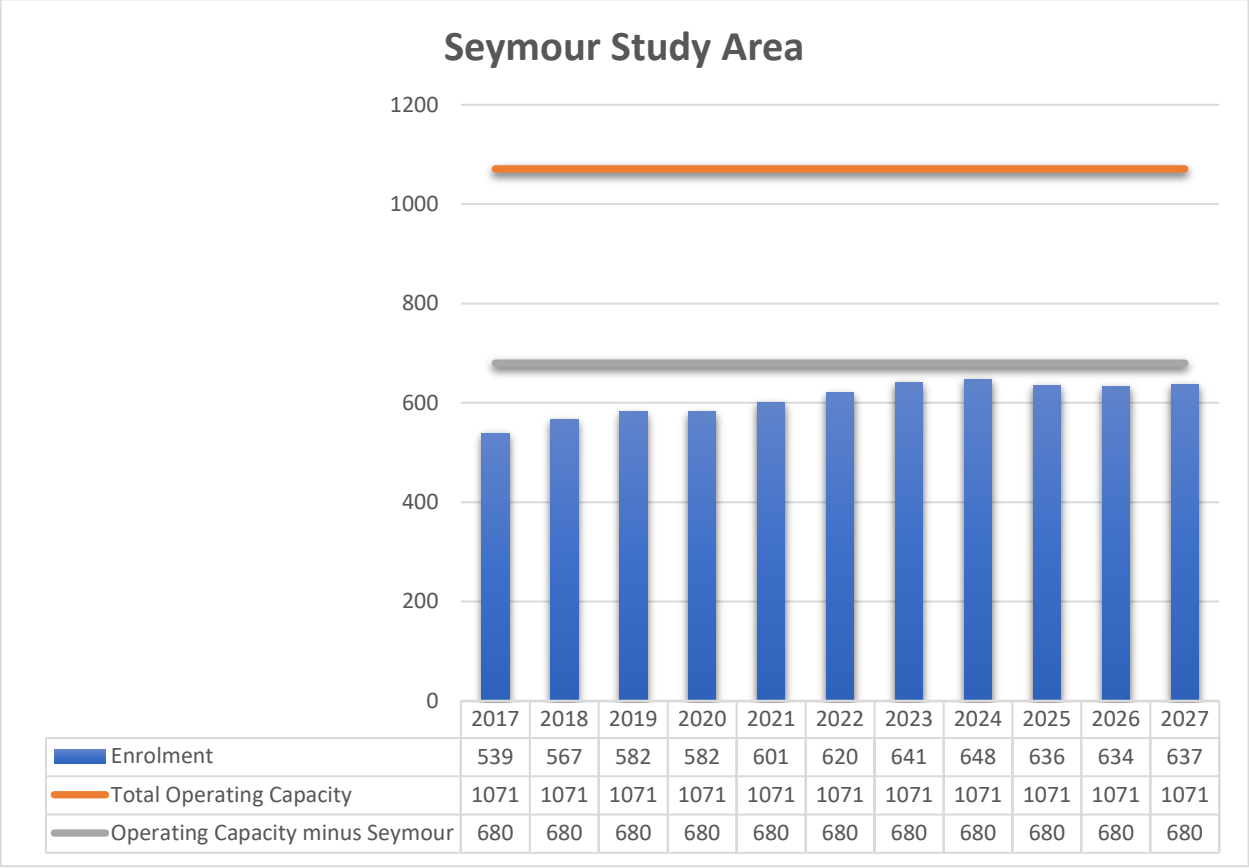
School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Britannia Elem.	228	82%	42
Grandview	205	66%	69
Mount Pleasant	294	80%	59
Seymour	391	32%	264
Strathcona	476	101%	-7
Xpey'	247	36%	157

Strathcona is excluded from the enrolment space analysis in Figure 10.3-8. The current and forecast enrolment indicate that there will be minimal space to accommodate additional enrolment at Strathcona. Mount Pleasant is also excluded from the enrolment space analysis as enrolment is forecast to increase over the next 10 years. In addition, historically, some kindergarten students who cannot be accommodated at nearby schools have been placed at Mount Pleasant.

FIGURE 10.3-8 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Britannia	228	82%	186	215	42	13
Grandview	205	66%	136	135	69	70
Seymour	391	32%	127	178	264	213
Xpey'	247	36%	90	109	157	138
Total	1071	50%	539	637	532	434

FIGURE 10.3-9 – **Enrolment and space analysis for Seymour and surrounding schools with space.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	539	567	582	582	601	620	641	648	636	634	637
Total Operating Capacity	1071	1071	1071	1071	1071	1071	1071	1071	1071	1071	1071
Operating Capacity minus Seymour	680	680	680	680	680	680	680	680	680	680	680

Enrolment is forecast to increase in the Seymour study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Seymour Elementary School.

Facility Condition Analysis

FIGURE 10.3-10 – **Facility condition and deferred maintenance for schools in Seymour study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Britannia Elem.	1975	Seismic Upgrade 2009	$3M	0.480
Grandview	1926	High	$5M	0.600
Mount Pleasant	1972	High	$5M	0.710
Seymour	1900	High	$9M	0.670
Strathcona	1900	Completed Project	n/a	n/a
Xpey'	1905	High	$5M	0.520

10.4 Byng Secondary Family

Queen Elizabeth elementary school is in the Byng secondary family.

The Queen Elizabeth Elementary Study Area is comprised of all schools that share boundaries with the Queen Elizabeth Elementary catchment area. Queen Elizabeth Annex and Jules Quesnel Elementary are both sites where the Early French Immersion program is offered, therefore these schools are not considered in the Queen Elizabeth Elementary study area.

Queen Elizabeth Study Area

FIGURE 10.4-1 – **Queen Elizabeth Elementary Study Area**

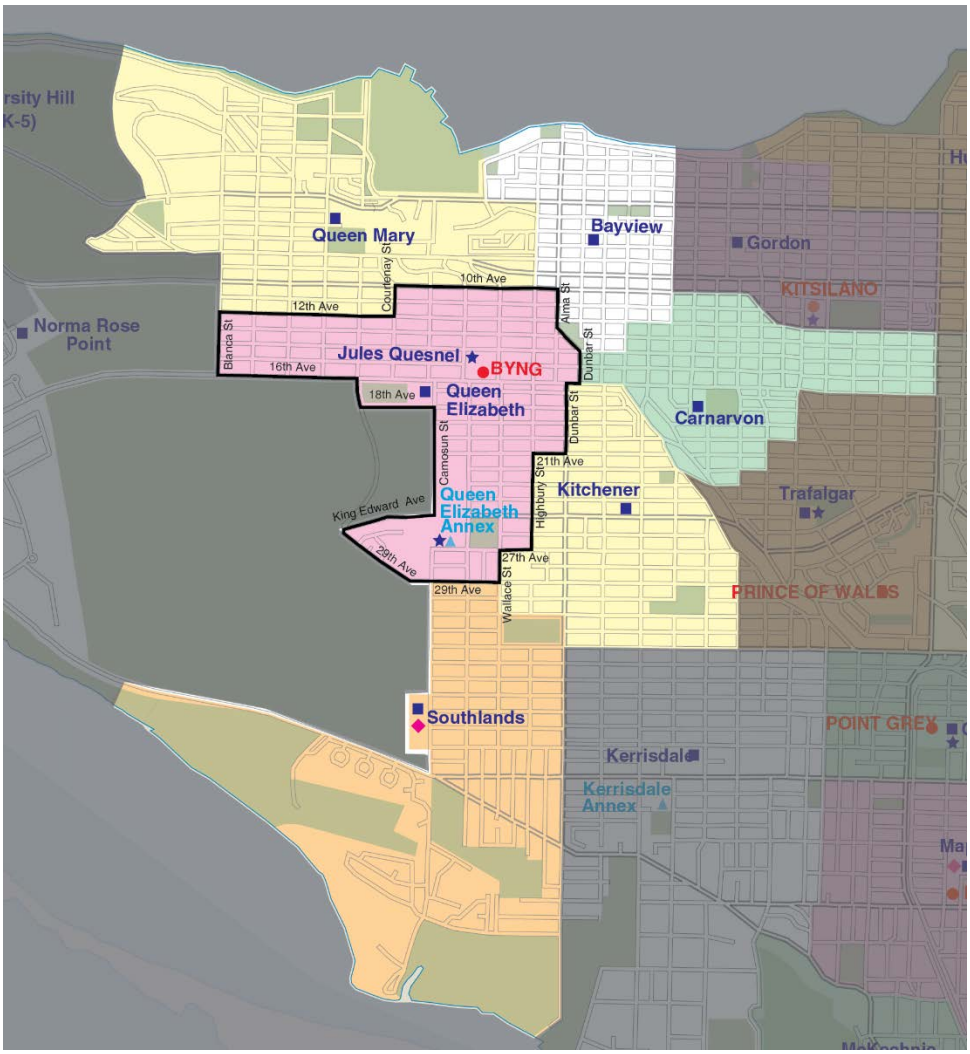


FIGURE 10.4-2– **Operating capacity and capacity utilization in the Queen Elizabeth study area.**

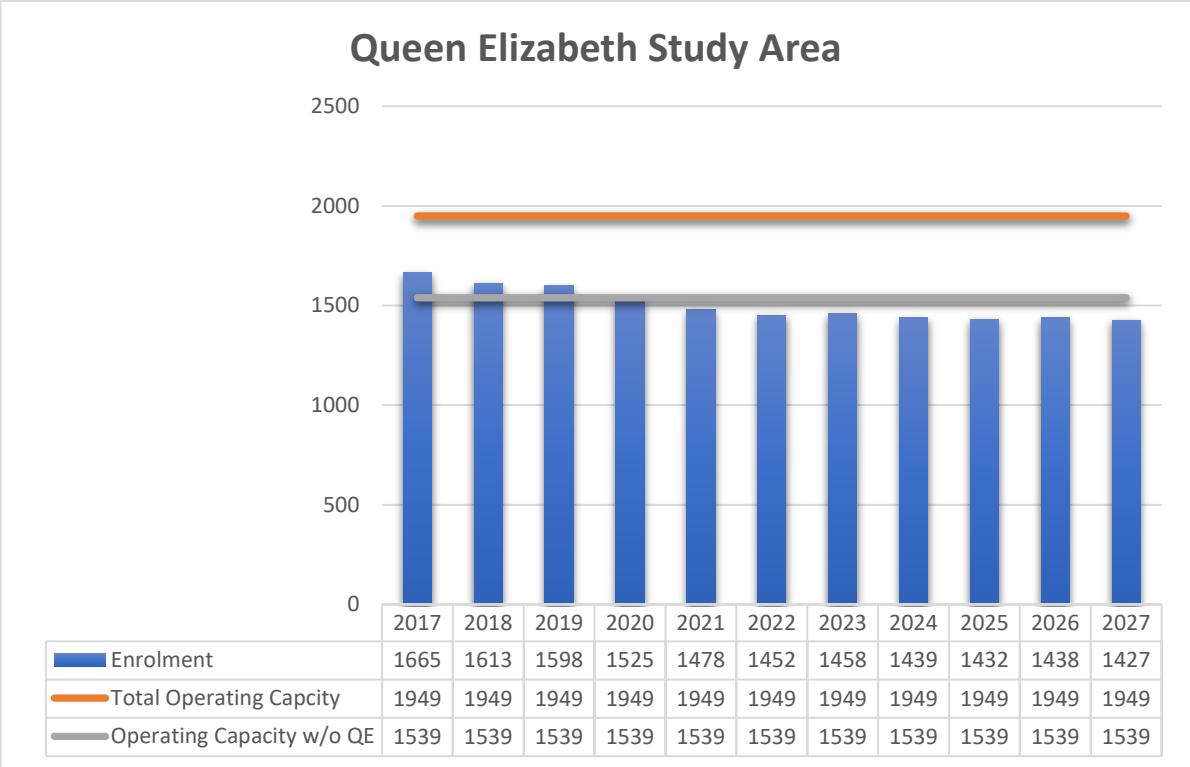
School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Bayview	340	77%	78
Carnarvon	364	109%	-31
Kitchener	476	99%	5
Queen Elizabeth Elem	410	89%	45
Queen Mary	406	77%	93
Southlands	317	80%	63

Carnarvon is excluded from the enrolment space analysis in Figure 9.4-2. The current and forecast enrolment for Carnarvon indicates there will be minimal space to accommodate additional enrolment at this school.

FIGURE 10.4-3 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Bayview	340	77%	262	251	78	89
Kitchener	476	99%	471	395	5	81
Queen Elizabeth Elem	410	89%	365	230	45	180
Queen Mary	406	77%	313	283	93	123
Southlands	317	80%	254	268	63	49
Total	**1949**	**85%**	**1665**	**1427**	**284**	**522**

FIGURE 10.4-4 – **Enrolment and space analysis for Queen Elizabeth Elementary and surrounding schools with space.**



Enrolment is forecast to decline in the Queen Elizabeth Elementary study area. Currently, there is insufficient space available in nearby schools to accommodate the current enrolment of Queen Elizabeth Elementary.

Facility Condition Analysis

FIGURE 10.4-5– **Facility condition and deferred maintenance for schools in Queen Elizabeth Elementary study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Bayview	1913	High	$7M	0.640
Carnarvon	1955	High	$5M	0.670
Kitchener	1914	Partial Replacement 2012	$1M	0.060
Queen Elizabeth Elem	1940	High	$7M	0.580

Queen Mary	1909	Partial Replacement 2016	$0.5M	0.040
Southlands	1952	High	$5M	0.510

10.5 Gladstone Secondary Family

Cunningham elementary school is in the Gladstone family.

Cunningham Study Area

The Cunningham Study Area is comprised of all schools that share boundaries with the Cunningham catchment area. Carleton is included in the enrolment analysis because the Ministry has approved this school to move forward to the PDR phase (feasibility study) for seismic upgrading. The school is currently not used as an enrolling school, having suffered fire damage in 2016. Cunningham elementary was designated as the receiving school for Carleton after the 2016 fire. Carleton elementary is organized as a separate school at the Cunningham site. The enrolment figures in Figure 9.5-3 indicate the number of students (catchment and non-catchment) enrolled to attend Carleton at the Cunningham site. If the seismic upgrade project proceeds, the District will need to decide, to either use Carleton for enrolling students or as a temporary accommodation space for other elementary school seismic projects.

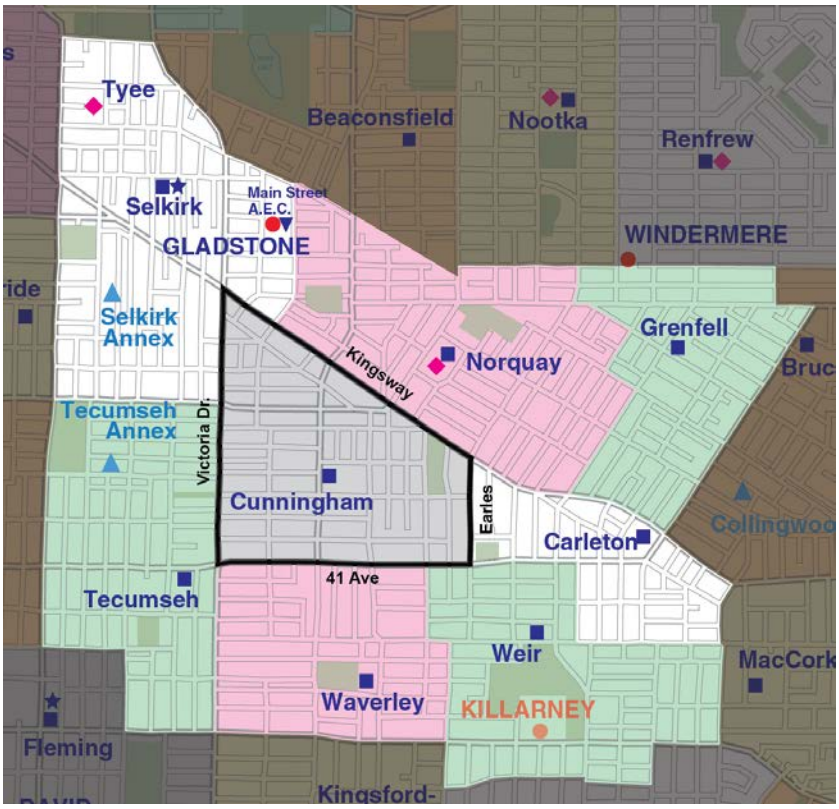


FIGURE 10.5-2 – **Operating capacity and capacity utilization in the Cunningham study area.**

School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Carleton	573	18%	472
Cunningham	615	57%	264
Norquay	774	85%	118

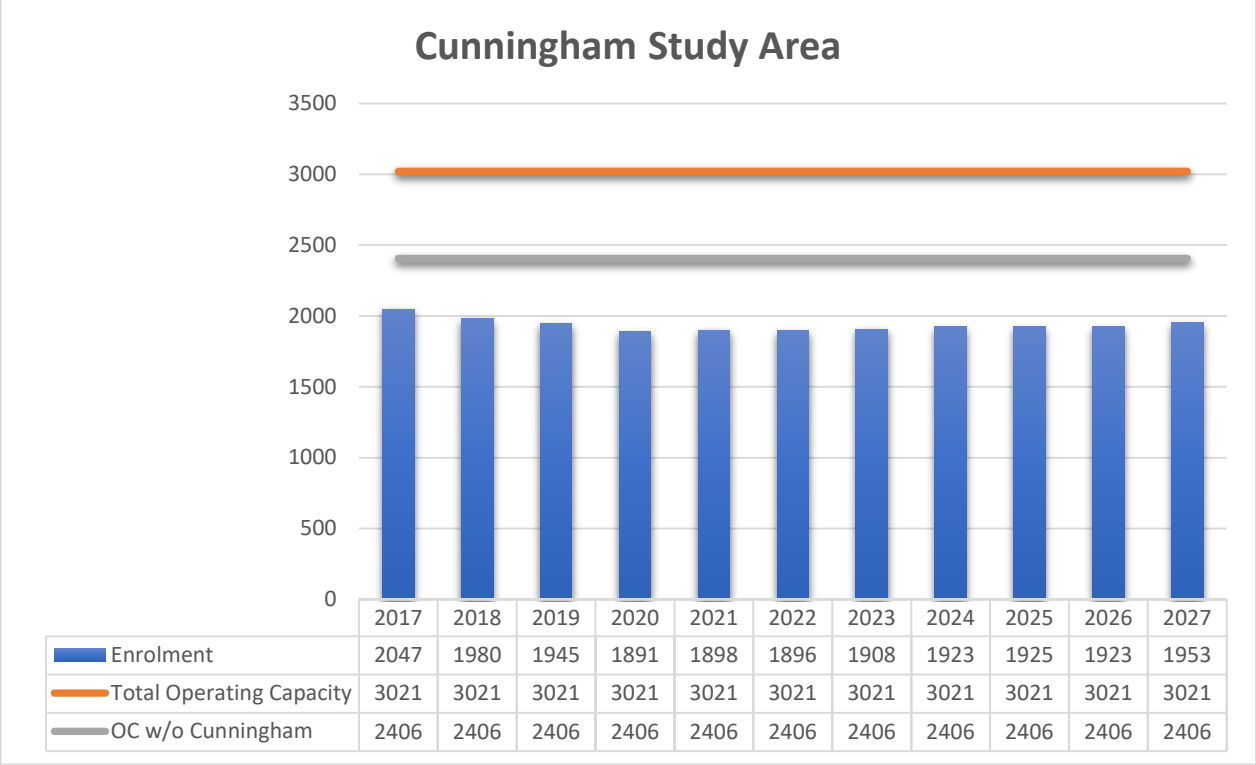
Selkirk	658	100%	3
Selkirk Annex	129	84%	21
Tecumseh	480	94%	31
Tecumseh Annex	103	70%	31
Waverley	476	88%	58
Weir	433	109%	-37

Weir and the Selkirk Catchment are excluded from the enrolment space analysis for Cunningham in Figure 9.5-2. Currently there is no additional space at Weir to accommodate additional enrolment and limited space in Selkirk. Weir and Selkirk Elementary are both approved SMP projects that are approaching the construction phase. Enrolment forecasts indicate that enrolment at Weir and in the Selkirk catchment will decline over the next 10 years.

FIGURE 10.5-3 – **Current and forecast enrolment and space analysis for schools surrounding Cunningham**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Carleton	573	18%	101	90	472	483
Cunningham	615	57%	351	332	264	283
Norquay	774	85%	656	639	118	135
Tecumseh	480	94%	449	403	31	77
Tecumseh Annex	103	70%	72	69	31	34
Waverley	476	88%	418	420	58	56
Total	**3021**	**68%**	**2047**	**1953**	**974**	**1068**

FIGURE 10.5-4– **Enrolment and space analysis for Cunningham and surrounding schools with space.**



Enrolment is forecast to decline and then stabilize in the Cunningham study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Cunningham Elementary School.

Facility Condition Analysis

FIGURE 10.5-5– **Facility condition and deferred maintenance for schools in Cunningham study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Carleton	1896	High	$9M	0.610
Cunningham	1959	High	$6M	0.530
Norquay	1912	Seismic Upgrade 2008	$8M	0.500
Selkirk	1908	*High	$8M	0.470
Selkirk Annex	1964	*High	$2M	0.640
Tecumseh	1910	Medium/Low	$7M	0.670
Tecumseh Annex	1959	Medium/Low	$2M	0.380
Waverley	1958	High	$1M	0.520
Weir	1961	Partial Replacement Approved	$5M	0.610

**Current seismic risk rating of existing building. SMP project has been approved.*

10.6 John Oliver Secondary Family

Henderson and MacKenzie elementary schools are in the John Oliver family.

Henderson Study Area

The Henderson Study Area is comprised of all schools that share boundaries with the Henderson catchment area.

FIGURE 10.6-1 – **The Henderson Study Area**

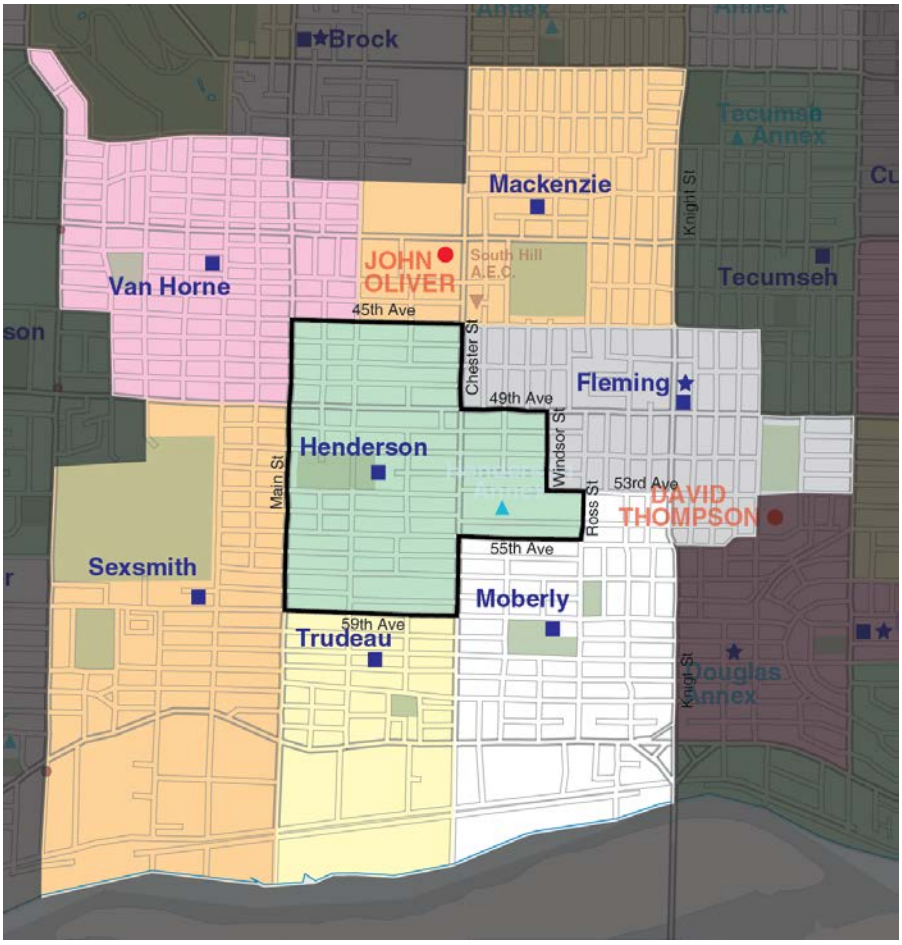


FIGURE 10.6-2 – **Operating capacity and capacity utilization in the Henderson study area.**

School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Fleming	410	120%	-83
Henderson	569	84%	90
Mackenzie	592	69%	183
Moberly	677	69%	212
Sexsmith	410	93%	29
Trudeau	364	64%	132
Van Horne	452	87%	61

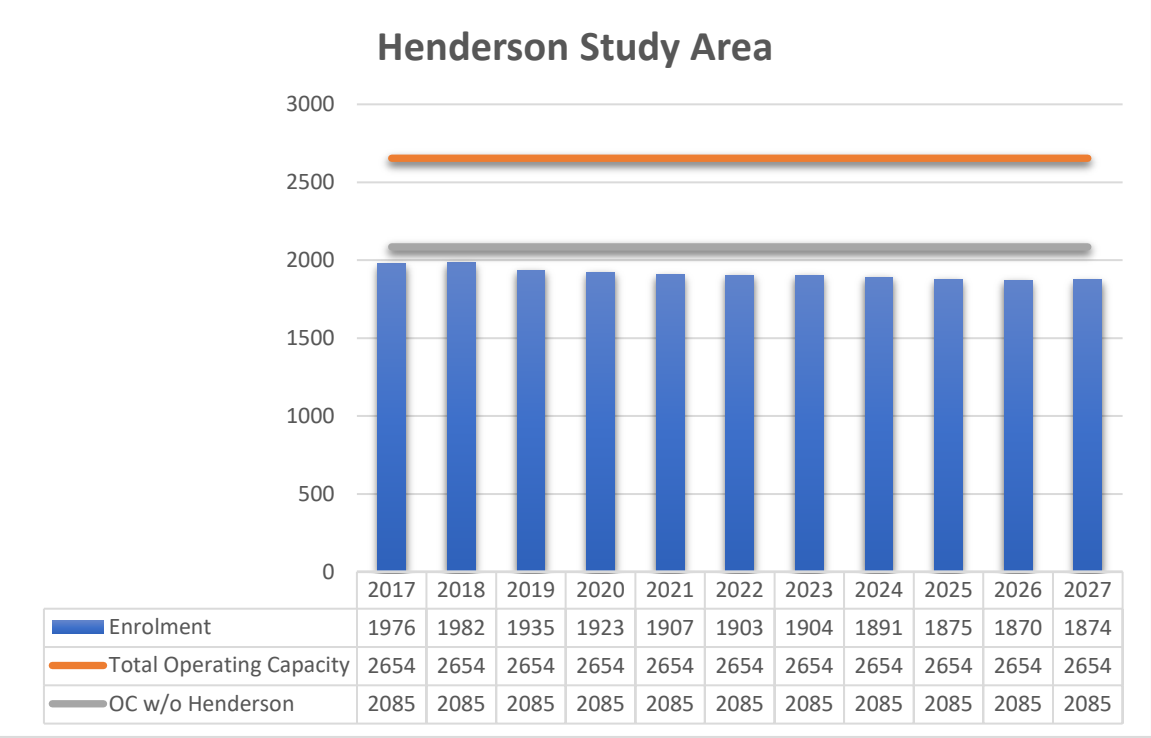
Fleming and Sexsmith are not considered in the enrolment analysis in Figure (_). Fleming does not currently have surplus capacity to accommodate additional students and is not forecast to have surplus capacity. Sexsmith has minimal surplus capacity and is forecast to experience modest enrolment growth.

FIGURE 10.6-3 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Henderson	569	84%	479	409	90	160

Mackenzie	592	69%	409	418	183	174
Moberly	677	69%	465	466	212	211
Trudeau	364	64%	232	148	132	216
Van Horne	452	87%	391	433	61	19
Total	**2654**	**74%**	**1976**	**1874**	**678**	**780**

FIGURE 10.6-4 – **Enrolment and space analysis for Henderson and surrounding schools with space.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	1976	1982	1935	1923	1907	1903	1904	1891	1875	1870	1874
Total Operating Capacity	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654	2654
OC w/o Henderson	2085	2085	2085	2085	2085	2085	2085	2085	2085	2085	2085

Enrolment is forecast to decline in the Henderson study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Henderson Elementary School.

Facility Condition Analysis

FIGURE 10.6-5 – **Facility condition and deferred maintenance for schools in the Henderson study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Fleming	1912	Replacement School in construction	*$8M	0.570
Henderson	1962	High	$6M	0.570
Mackenzie	1930	High	$7M	0.540
Moberly	1911	Seismic Upgrade 2009	$5M	0.300
Sexsmith	2013	Replacement School 2013	$0.3M	0.030
Trudeau	1911	Seismic Upgrade / Expansion 2002	$2M	0.370
Van Horne	1911	Seismic Upgrade 2003	$5M	0.520

**Deferred maintenance for existing school*

Mackenzie Study Area

The Mackenzie Study Area is comprised of all schools that share boundaries with the Mackenzie catchment area.

FIGURE 10.6-6 **MacKenzie Study Area**

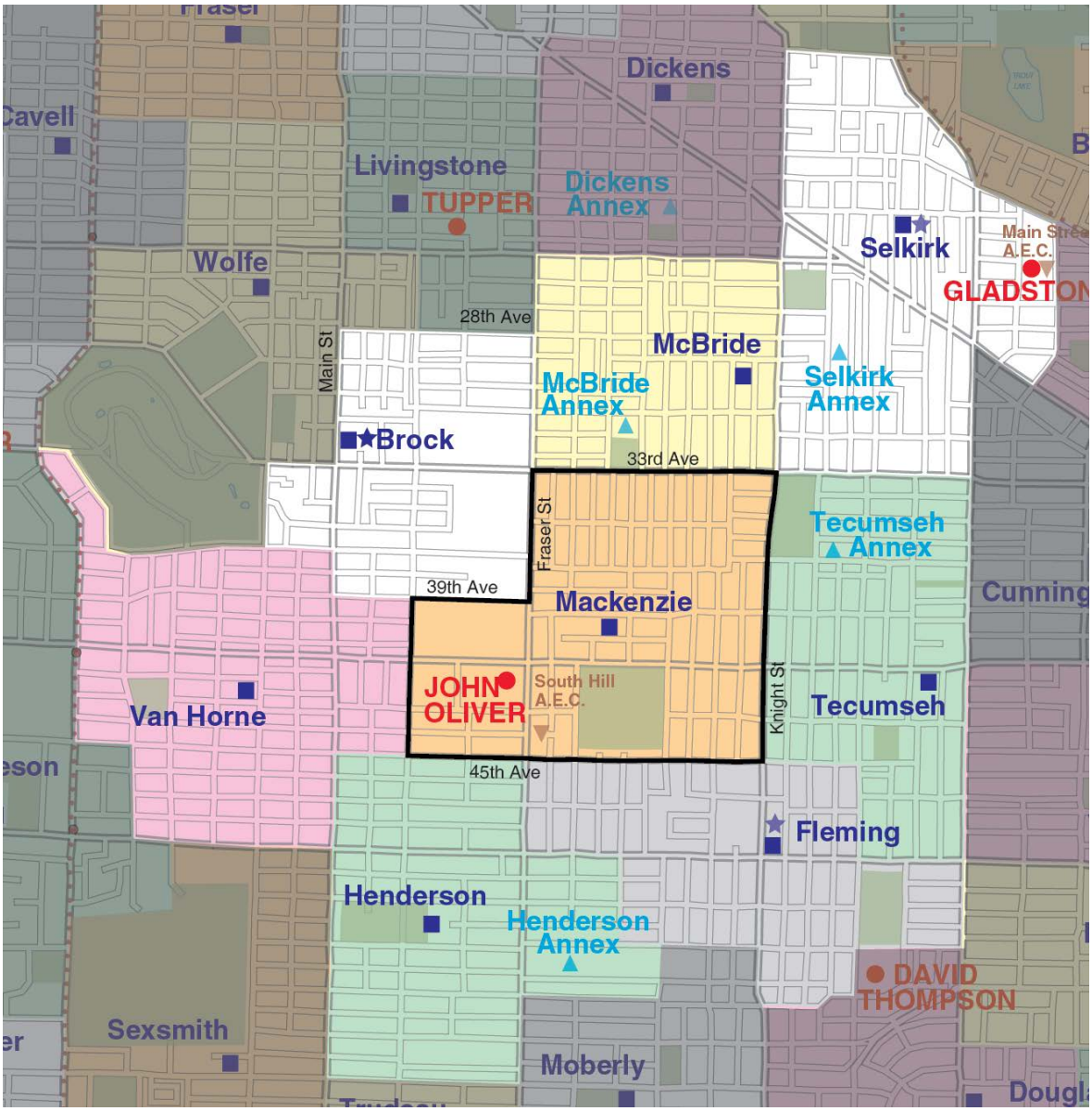


FIGURE 10.6-7 – **Schools in the Mackenzie study area**

School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Brock	364	57%	156
Fleming	410	120%	-83
Henderson	569	84%	90
Mackenzie	592	69%	183
McBride	410	100%	53

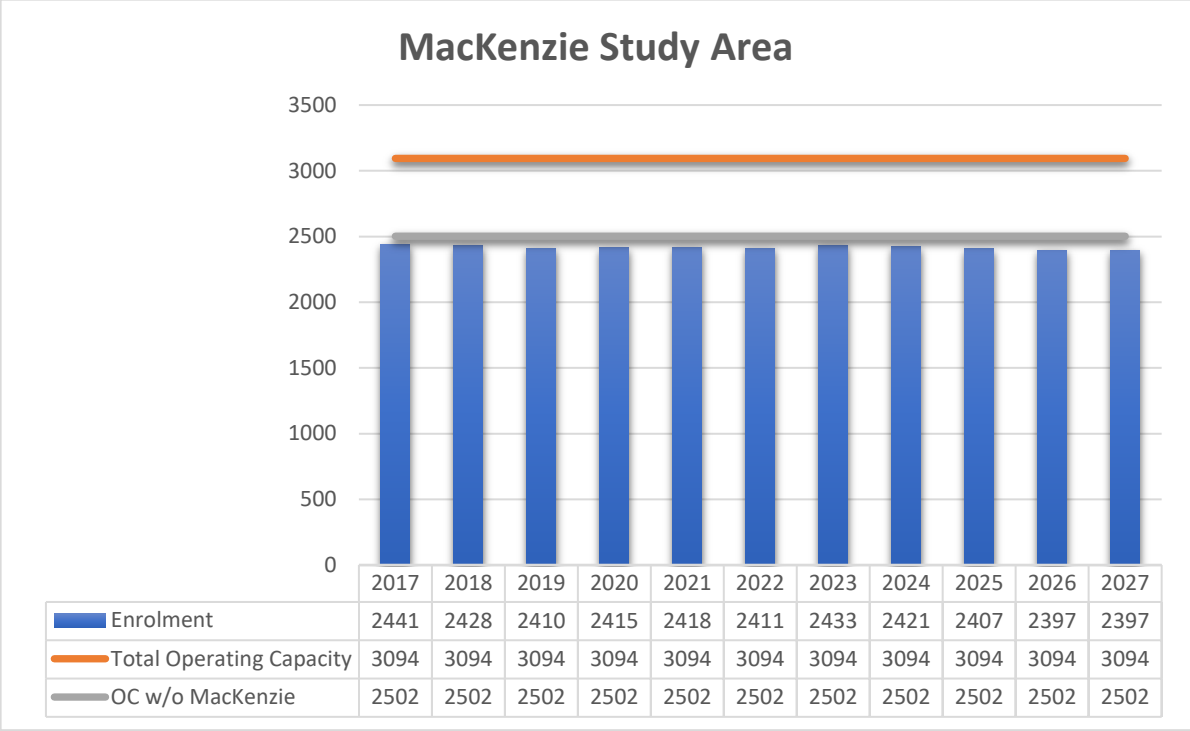
McBride Annex	124	61%	48
Selkirk	658	100%	3
Selkirk Annex	129	84%	21
Tecumseh	480	94%	31
Tecumseh Annex	103	70%	31
Van Horne	452	87%	61

Selkirk and Selkirk Annex are not considered in the enrolment analysis in Figure 9.6-7. Selkirk Elementary and its Annex do not currently have surplus capacity to accommodate additional students. A seismic upgrade is also scheduled to begin at Selkirk Elementary in January 2020.

FIGURE 10.6-8 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Brock	364	57%	208	191	156	173
Henderson	569	84%	479	409	90	160
Mackenzie	592	69%	409	418	183	174
McBride Catchment	534	81%	433	474	101	60
Tecumseh Catchment	583	89%	521	472	62	111
Van Horne	452	87%	391	433	61	19
Total	**3094**	**79%**	**2441**	**2397**	**653**	**697**

FIGURE 10.6-9 – **Enrolment and space analysis for Mackenzie and surrounding schools with space.**



Enrolment is forecast to remain stable in the Mackenzie study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Mackenzie Elementary School.

Facility Condition Analysis

FIGURE 10.6-10 – **Facility condition and deferred maintenance for schools in Mackenzie study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Brock	1908	High	$4M	0.430
Fleming	1912	Replacement School in construction	$*8M	0.570
Henderson	1962	High	$6M	0.570
Mackenzie	1930	High	$7M	0.540
McBride	1910	Seismic Upgrade 2009	$6M	0.740
McBride Annex	1963	High	$2M	0.510
Selkirk	1908	High	$8M	0.470
Selkirk Annex	1964	High	$2M	0.640
Tecumseh	1910	Medium/Low	$7M	0.670
Tecumseh Annex	1959	Medium/Low	$2M	0.380

**Deferred maintenance for existing school*

10.7 Killarney Secondary Family

Carleton, Champlain Heights, and MacCorkindale elementary are in the Killarney Secondary School family.

Carleton Elementary Study Area

The Carleton Elementary Study Area is comprised of all schools that share boundaries with the Carleton Elementary catchment area. The school is currently not used as an enrolling school, having suffered fire damage in 2016. Cunningham elementary was designated as the receiving school for Carleton after the 2016 fire. Carleton elementary is organized as a separate school at the Cunningham site. The enrolment figures in Figure 9.7-2 are the students (catchment and non-catchment) enrolled to attend Carleton at the Cunningham site. If the seismic upgrade project proceeds, the District will need to decide, to either use Carleton for enrolling students or as a temporary accommodation space for other elementary school seismic projects.

FIGURE 9.7-1 - **The Carleton Study Area.**

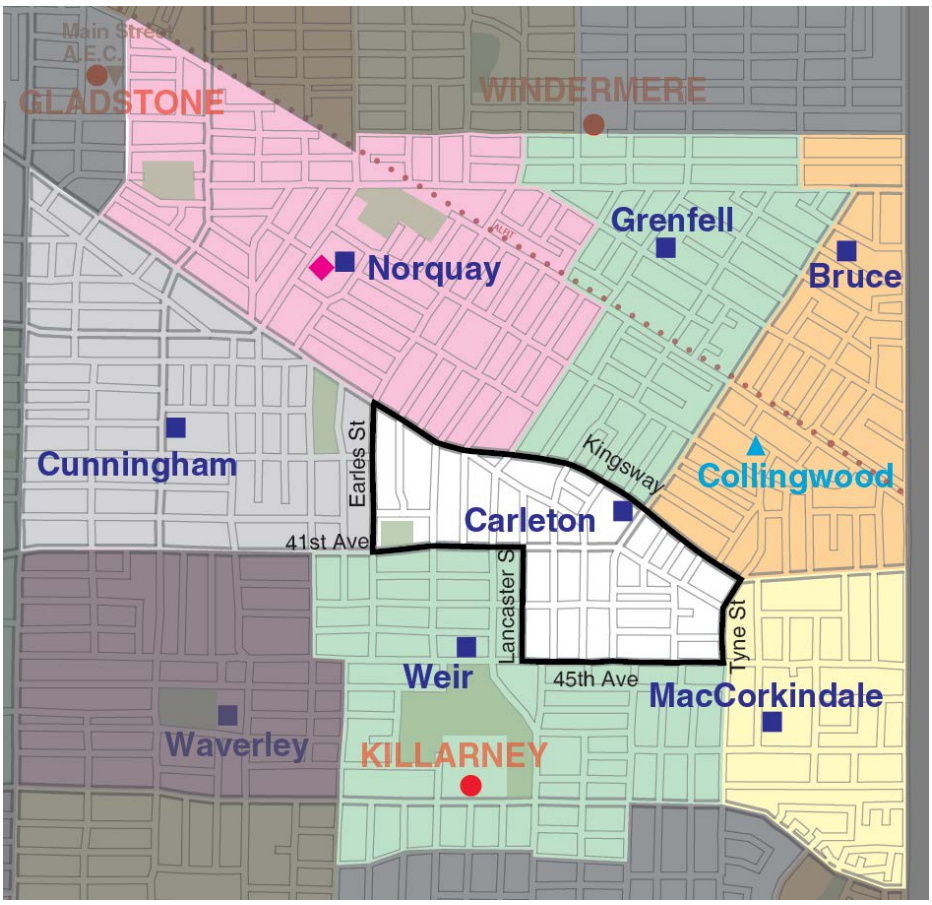


FIGURE 10.7-2 – **Operating capacity and capacity utilization for schools in the Carleton study area.**

School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Bruce	317	74%	84
Carleton	573	18%	472
Collingwood	185	67%	61
Cunningham	615	57%	264
Grenfell	503	89%	54
MacCorkindale	457	55%	207
Norquay	774	85%	118
Weir	433	109%	-37

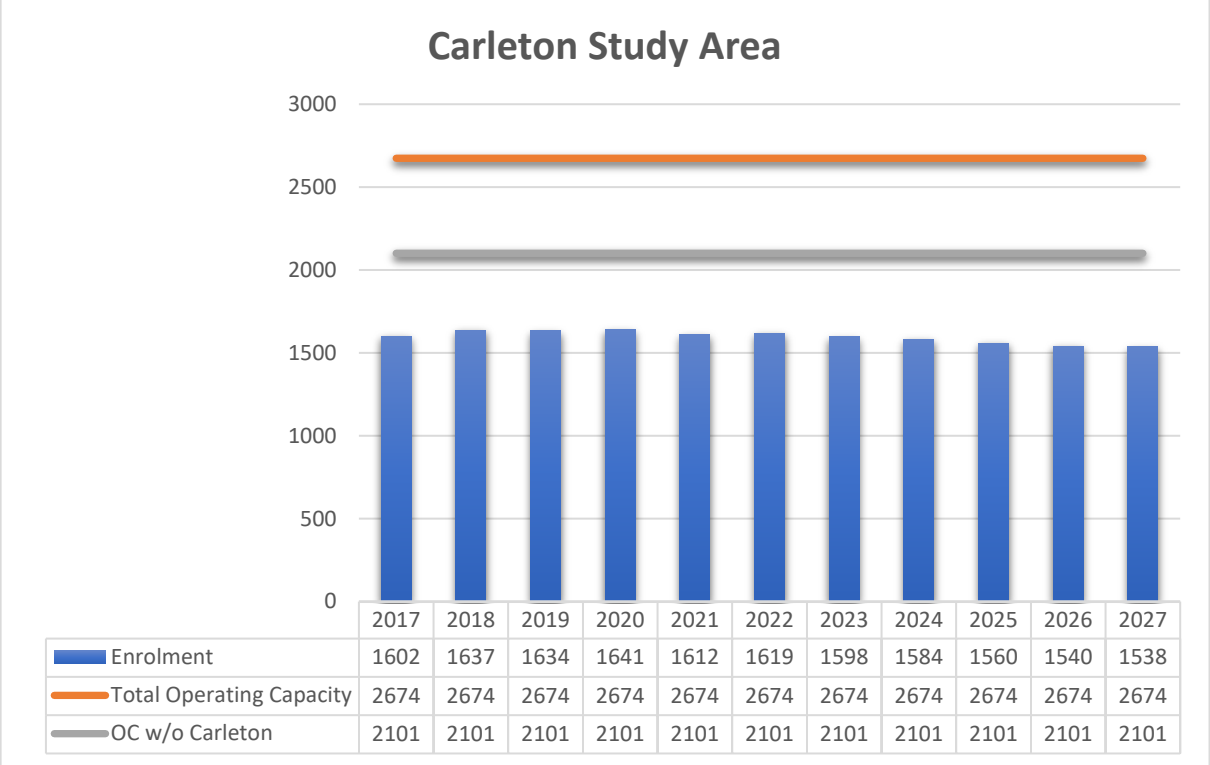
Weir is excluded from the enrolment space analysis for Carleton in Figure 9.7-3. Currently there is no additional space at Weir to accommodate additional enrolment. As part of the SMP Weir will be partially replaced and seismically upgraded beginning in 2020. Enrolment forecasts indicate that enrolment at Weir will decline over the next 10 years.

FIGURE 10.7-3 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus

Bruce Catchment	502	71%	357	337	145	165
Carleton	573	18%	101	90	472	483
Grenfell	503	89%	449	339	54	164
MacCorkindale	457	55%	250	294	207	163
Renfrew	639	70%	445	478	194	161
Total	**2674**	**60%**	**1602**	**1538**	**1072**	**1136**

FIGURE 10.7-4 – **Enrolment and space analysis for Carleton and surrounding schools with space.**



Enrolment is forecast to decline in the Carleton study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Carleton Elementary School.

Facility Condition Analysis

FIGURE 10.7-5 – **Facility condition and deferred maintenance for the schools in the Carleton study area.**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Bruce	1964	High	$6M	0.720
Carleton	1896	High	$9M	0.610
Collingwood	2002	New School 2002	$1M	0.180
Cunningham	1959	High	$6M	0.530
Grenfell	1910	High	$5M	0.490
MacCorkindale	1967	High	$7M	0.810
Norquay	1912	Seismic Upgrade 2008	$8M	0.500
Weir	1961	Partial Replacement Approved	$5M	0.610

Champlain Heights Elementary Study Area

The Champlain Heights Elementary Study Area is comprised of all schools that share boundaries with the Champlain Heights Elementary catchment area.

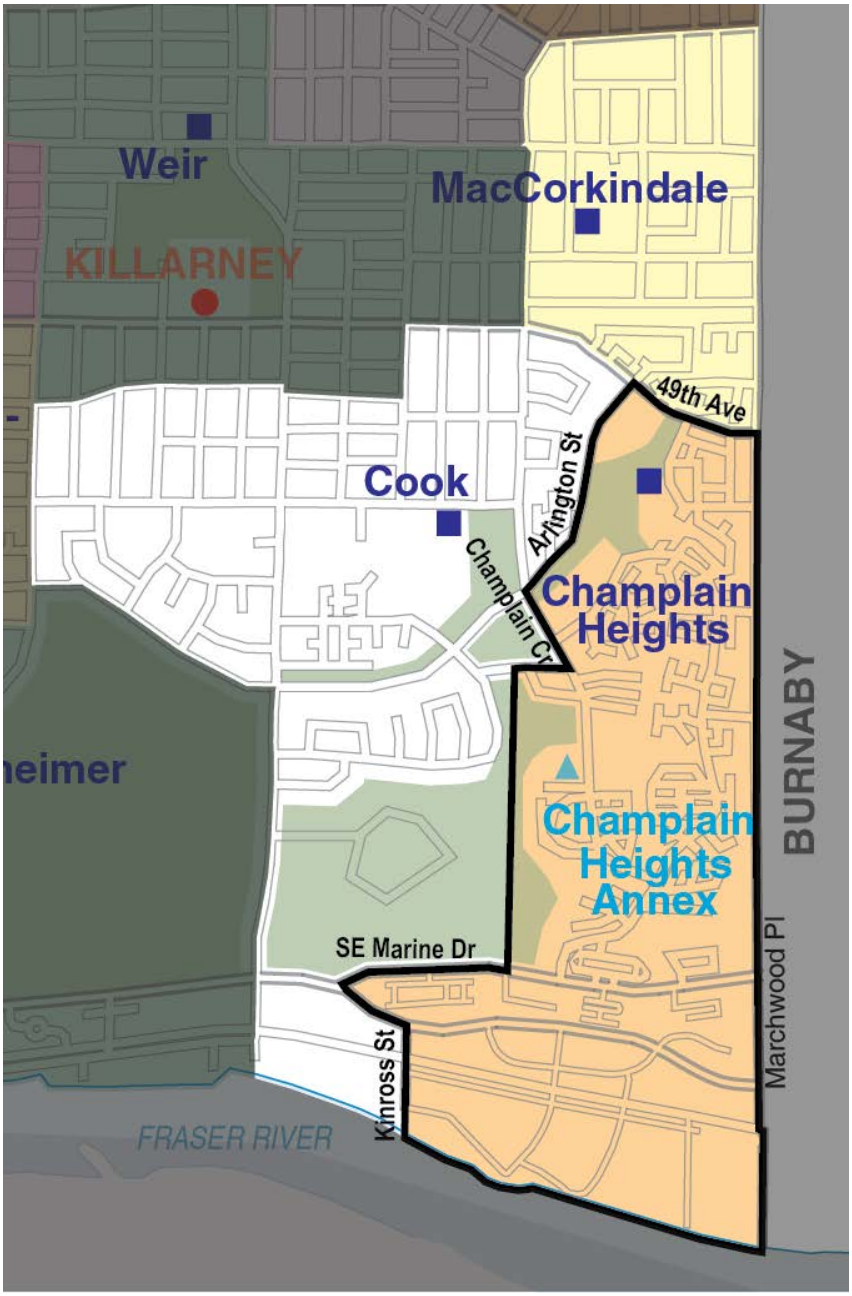


FIGURE 10.7-7 – **Operating capacity and capacity utilization in the Champlain Heights study area**

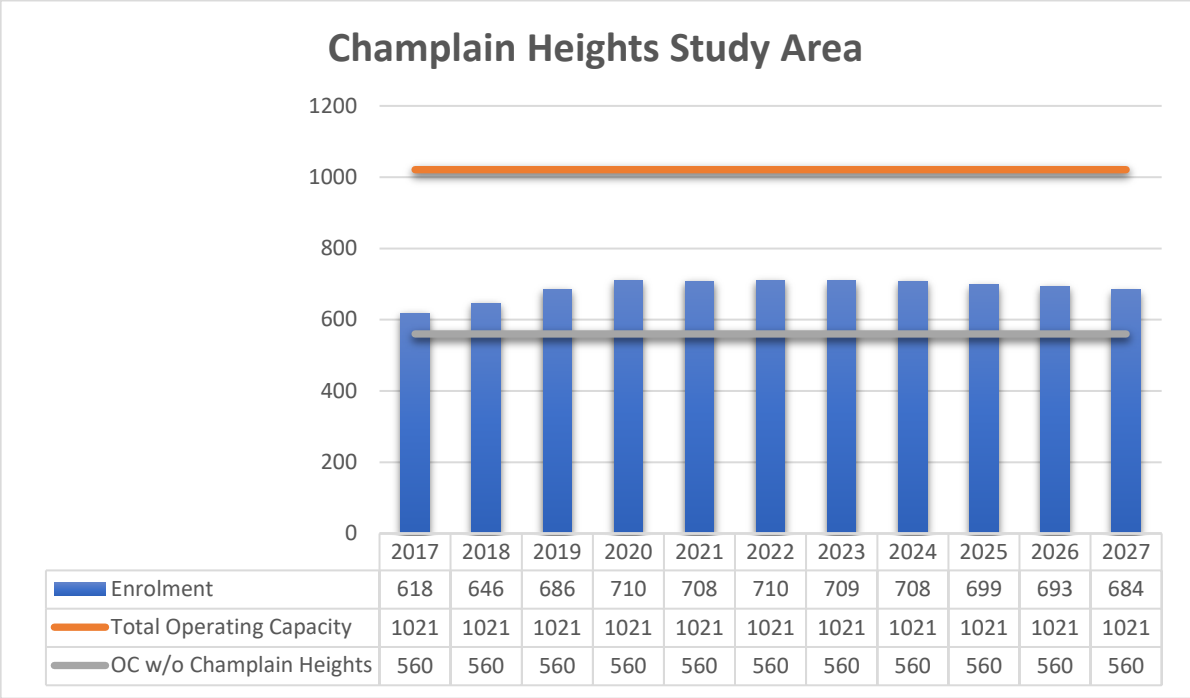
School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Champlain Heights	461	55%	206
Champlain Heights Annex	103	110%	-10
Cook	457	72%	128

MacCorkindale	457	55%	207

FIGURE 10.7-8 – **current and forecast enrolment and space analysis for schools surrounding Champlain Heights Elementary**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Champlain Heights Catchment	564	65%	368	390	196	174
Cook	457	72%	329	287	128	170
MacCorkindale	457	55%	250	294	207	163
Total	**1478**	**64%**	**947**	**971**	**531**	**507**

FIGURE 10.7-9 – **Enrolment and space analysis for Champlain Heights Elementary and surrounding schools with space.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	618	646	686	710	708	710	709	708	699	693	684
Total Operating Capacity	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021
OC w/o Champlain Heights	560	560	560	560	560	560	560	560	560	560	560

Enrolment is forecast to increase in the Champlain Heights Elementary study area until 2022 and stabilize thereafter. There is insufficient space available at schools in the study area to accommodate current and forecast enrolment of Champlain Heights Elementary School. However, here is sufficient capacity in nearby schools to accommodate the current and forecast enrolment of Champlain Heights Elementary School.

Facility Condition Analysis

FIGURE 10.7-10– **Facility condition and deferred maintenance for schools in Champlain Heights Elementary study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Champlain Heights	1973	High	$6M	0.530
Champlain Heights Annex	1986	Medium/Low	$2M	0.610
Cook	1953	Seismic Upgrade 2008	$6M	0.550
MacCorkindale	1967	High	$7M	0.810

MacCorkindale Study Area

The MacCorkindale Study Area is comprised of all schools that share boundaries with the MacCorkindale catchment area. Carleton is included in the enrolment analysis because the Ministry has approved this school to move forward to the PDR phase (feasibility study) for seismic upgrading. The school is currently not used as an enrolling school, having suffered fire damage in 2016. Cunningham elementary was designated as the receiving school for Carleton after the 2016 fire. Carleton elementary is organized as a separate school at the Cunningham site. The enrolment figures in Figure 9.7-13 indicate the number students (catchment and non-catchment) enrolled to attend Carleton at the Cunningham site. If the seismic upgrade project proceeds, the District will need to decide, to either use Carleton for enrolling students or as a temporary accommodation space for other elementary school seismic projects.

FIGURE 10.7-11 – **The MacCorkindale Study Area**

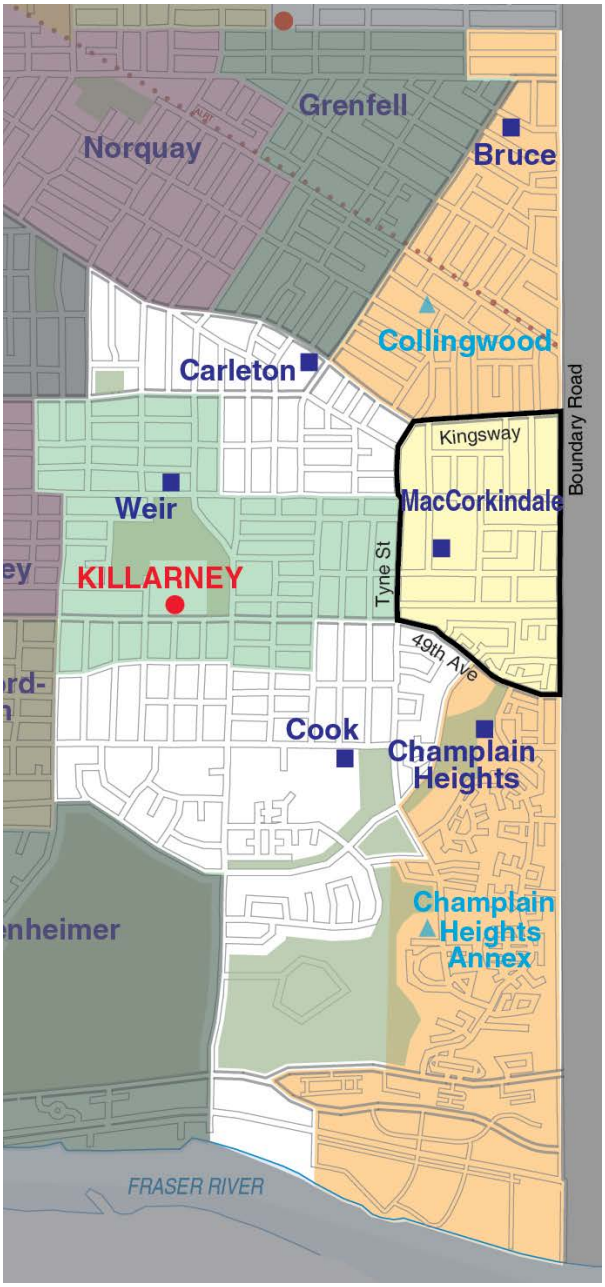


FIGURE 10.7-12 – **Operating capacity and capacity utilization in the MacCorkindale study area.**

School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Bruce	317	74%	84
Carleton	573	18%	472
Champlain Heights	461	55%	206
Champlain Heights Annex	103	110%	-10
Collingwood Annex	185	67%	61
Cook	457	72%	128
MacCorkindale	457	55%	207

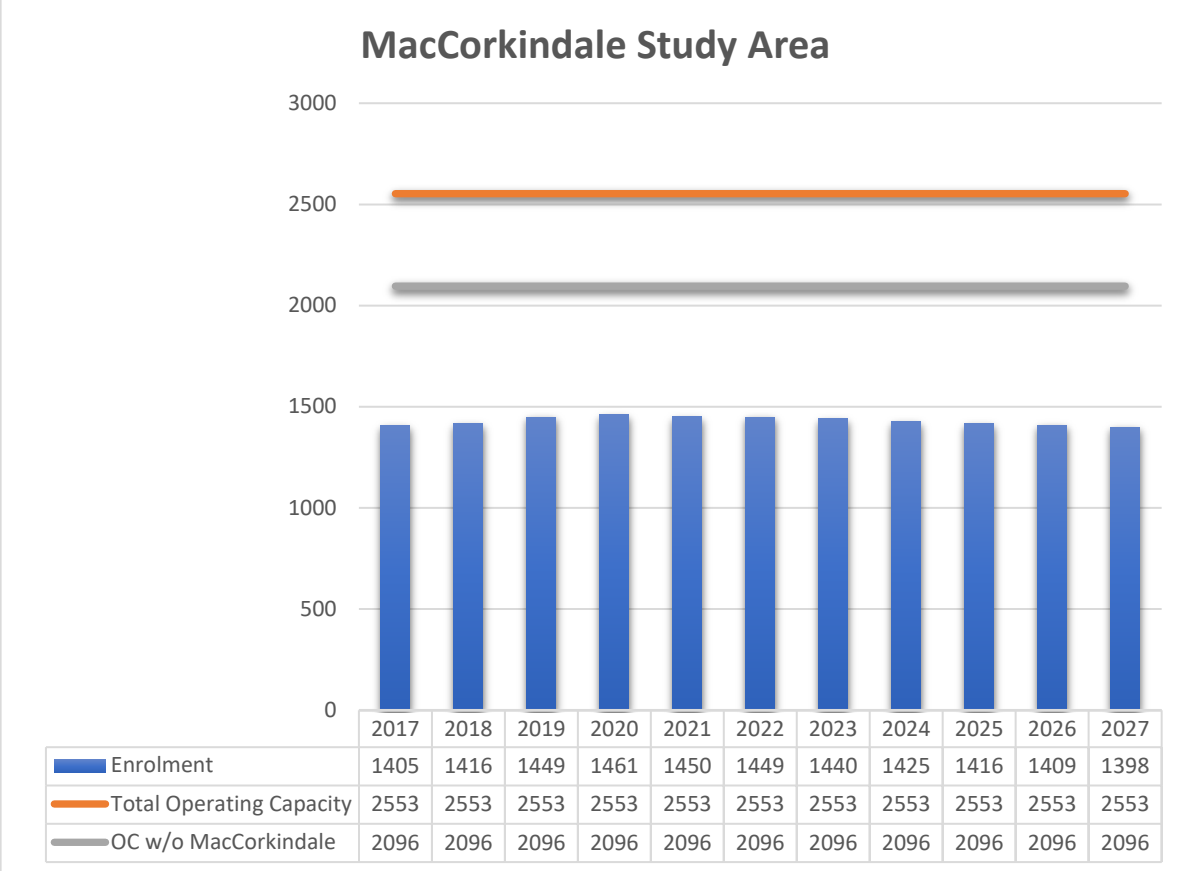
Weir	433	109%	-37

Weir is excluded from the enrolment space analysis for MacCorkindale in Figure (_). Currently there is no additional space at Weir to accommodate additional enrolment. As part of the SMP, Weir will be partially replaced and seismically upgraded beginning in 2020. Enrolment forecasts indicate that enrolment at Weir will decline over the next 10 years.

FIGURE 10.7-13 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Bruce Catchment	502	71%	357	337	84	165
Carleton	573	18%	101	90	472	483
Champlain Heights Catchment	564	65%	368	390	196	174
Cook	457	72%	329	287	128	170
MacCorkindale	457	55%	250	294	207	163
Total	**2553**	**55%**	**1405**	**1398**	**1087**	**1155**

FIGURE 10.7-14 – **Enrolment and space analysis for MacCorkinale and surrounding schools with space.**



Enrolment is forecast to be stable in the MacCorkindale study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of MacCorkindale Elementary School.

Facility Condition Analysis

FIGURE 10.7-15 – **Facility condition and deferred maintenance for schools in MacCorkinale study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Bruce	1964	High	$6M	0.720
Carleton	1896	High	$9M	0.610
Champlain Heights	1973	High	$6M	0.530
Champlain Heights Annex	1986	Medium/Low	$2M	0.610
Collingwood	2002	New School 2002	$1M	0.180
MacCorkindale	1967	High	$7M	0.810
Weir	1961	Partial Replacement Approved	$5M	0.610

10.8 Templeton Secondary Family

Franklin and Lord elementary schools are in the Templeton family.

Franklin Study Area

The Franklin Study Area is comprised of all schools that share boundaries with the Franklin catchment area.

FIGURE 10.8-1 – **The Franklin Study Area**

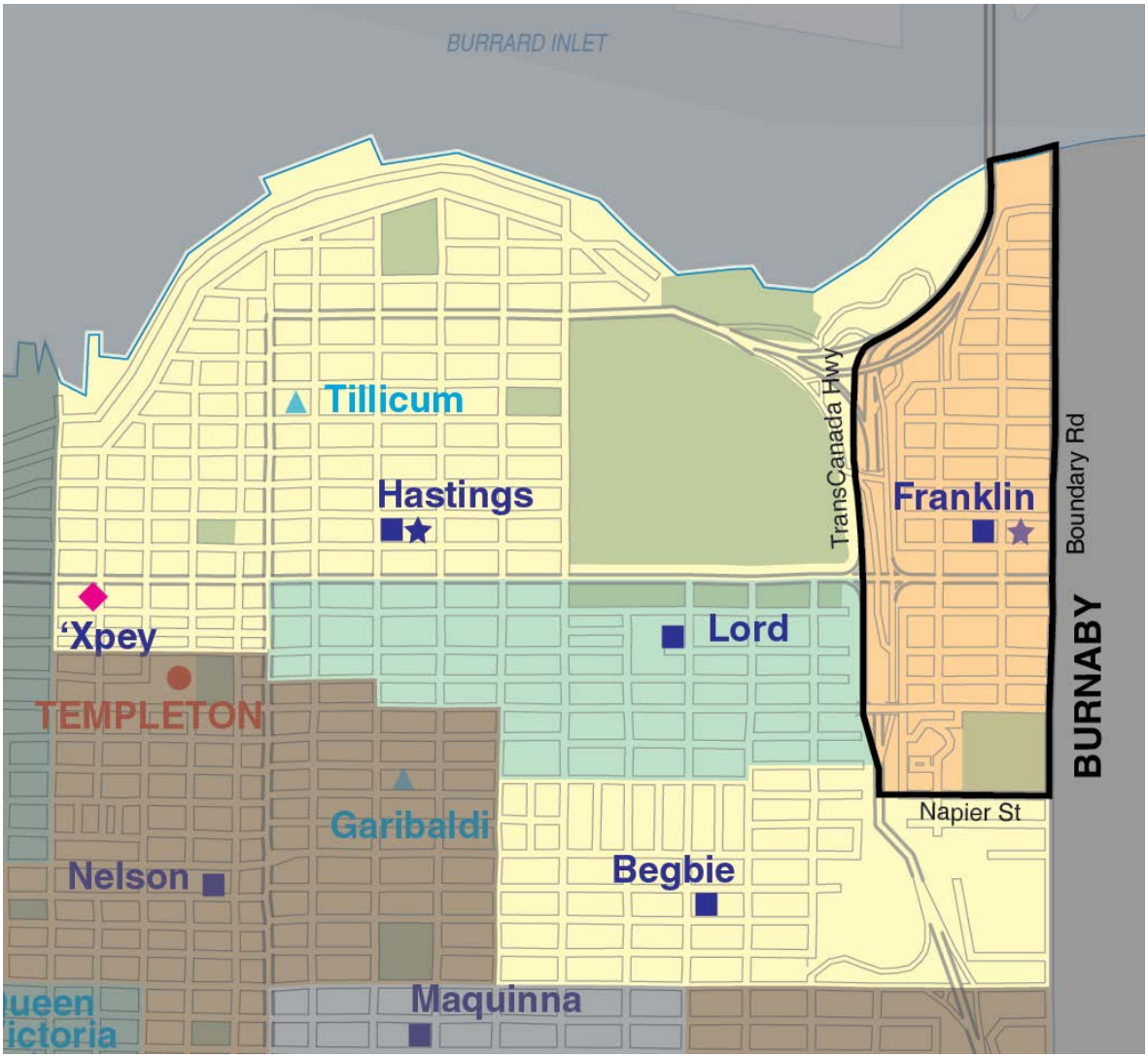


FIGURE 10.8-2 – **Operating capacity and capacity utilization in the Franklin study area.**

School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Begbie	317	105%	-15
Franklin	275	72%	77
Hastings	658	91%	57
Lord	340	46%	183
Tillicum Annex	148	67%	49

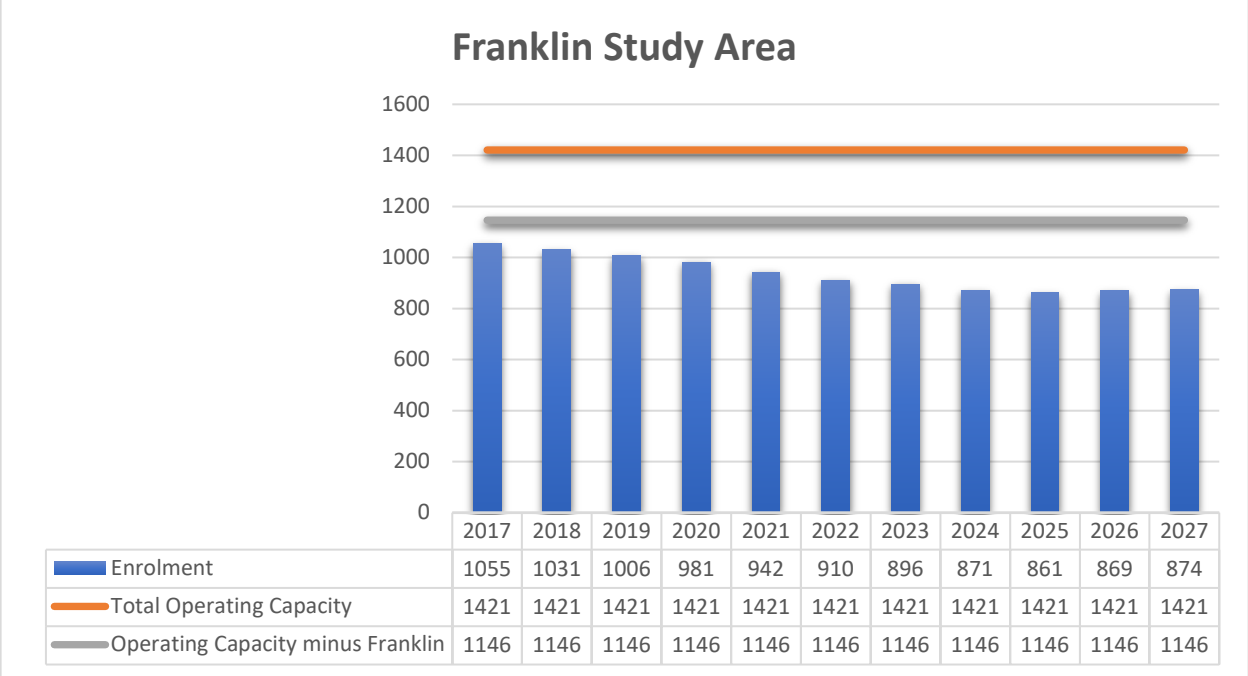
Begbie is excluded from the enrolment space analysis in Figure 9.8-3. The new replacement Begbie school scheduled to open in September 2021 and is not forecast to have surplus capacity to accommodate additional students.

FIGURE 10.8-3 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus

Franklin	275	72%	198	187	77	88
Hastings Catchment	806	87%	700	537	106	269
Lord	340	46%	157	150	183	190
Total	**1421**	**74%**	**1055**	**874**	**366**	**547**

FIGURE 10.8-4 – **Enrolment and space analysis for Franklin and surrounding schools with space.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	1055	1031	1006	981	942	910	896	871	861	869	874
Total Operating Capacity	1421	1421	1421	1421	1421	1421	1421	1421	1421	1421	1421
Operating Capacity minus Franklin	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146

Enrolment is forecast to decline in the Franklin study area. There is sufficient space available in ~~the~~ nearby schools to accommodate the current and forecast enrolment of Franklin Elementary School.

Facility Condition Analysis

FIGURE 10.8-5 – **Facility condition and deferred maintenance for schools in the Franklin study area**

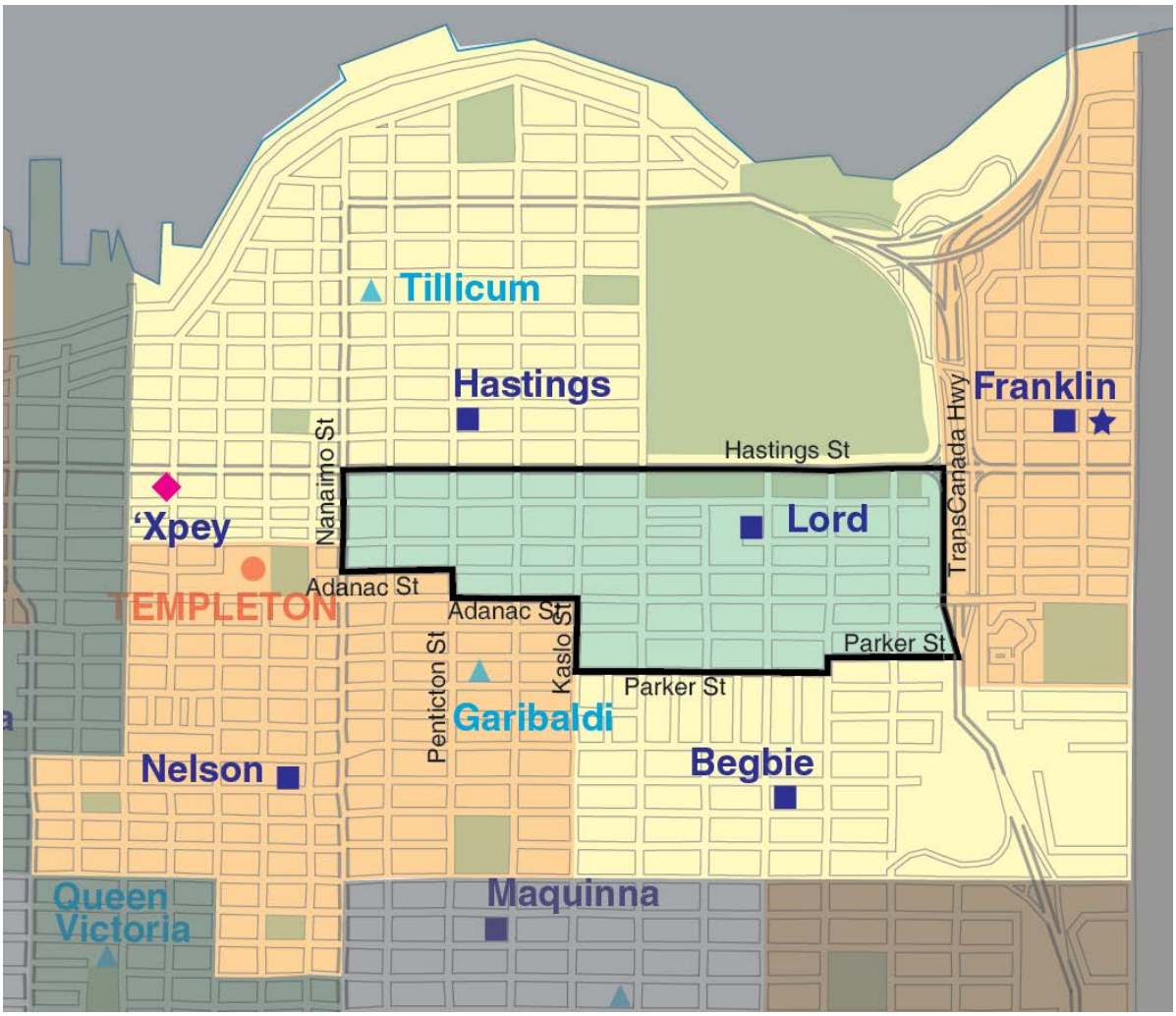
School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Begbie	1922	Replacement School in Design	*$12M	0.870
Franklin	1912	High	$6M	0.720
Hastings	1912	Seismic Upgrade 2003	$4M	0.360
Lord	1956	High	$6M	0.710
Tillicum	1964	High	$3M	0.640

**Deferred maintenance for existing school*

Lord Study Area

The Lord Study Area is comprised of all schools that share boundaries with the Lord catchment area. Occupancy of the new replacement school for Begbie is scheduled for September 2021. Construction of a new replacement school for Nelson elementary is underway with occupancy scheduled for spring 2019.

FIGURE 10.8-6 **Lord Study Area**



Enrolment Analysis

FIGURE 10.8-7 – **Operating capacity and capacity utilization in the Lord study area.**

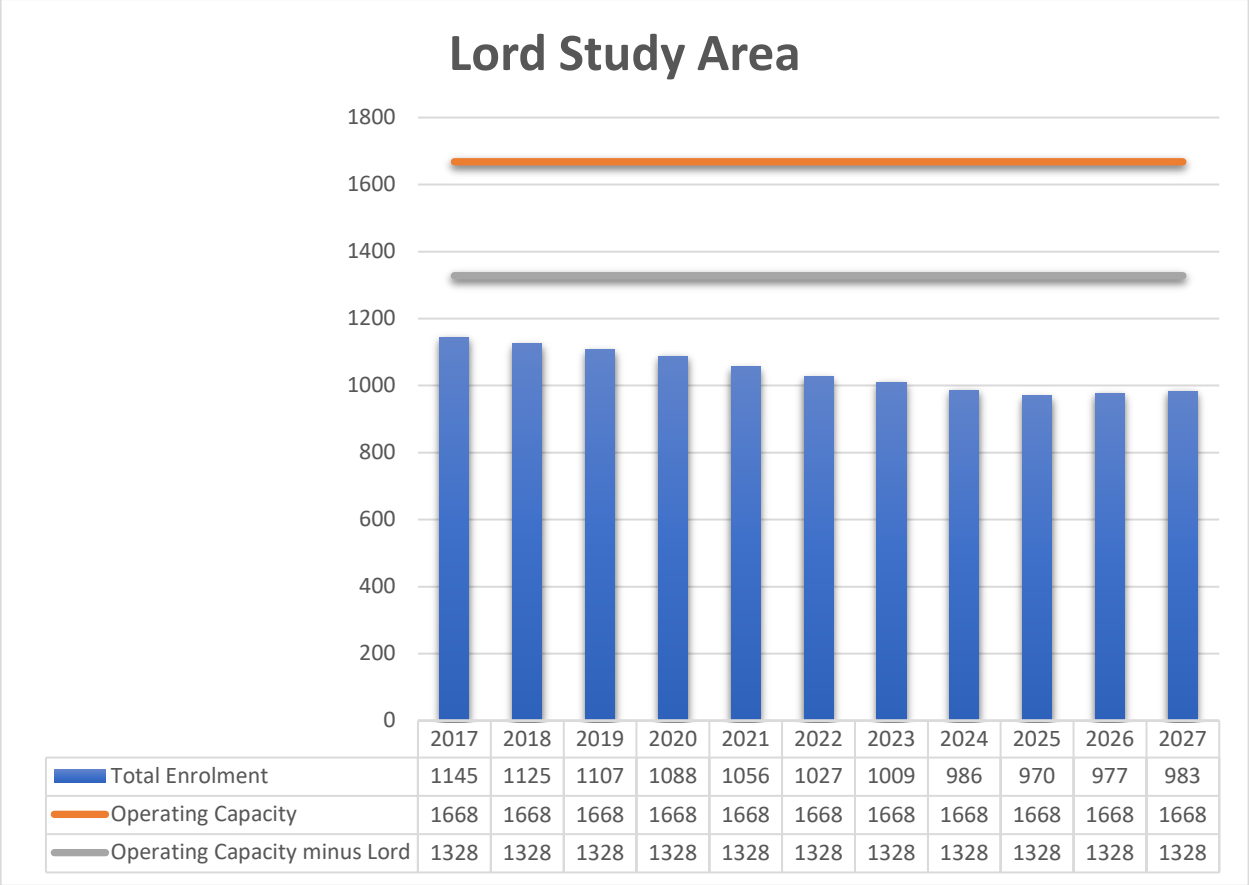
School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Begbie	317	105%	-15
Franklin	275	72%	77
Hastings	658	91%	57
Lord	340	46%	183
Nelson	429	108%	-35
Tillicum Annex	148	67%	49
Xpey'	247	36%	157

Begbie and Nelson are not considered in the enrolment analysis in Figure 9.8-8 because they do not have surplus capacity to accommodate additional students.

FIGURE 10.8-8 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Franklin	275	72%	198	187	77	88
Hastings	658	91%	601	430	57	228
Lord	340	46%	157	150	183	190
Tillicum Annex	148	67%	99	107	49	41
Xpey'	247	36%	90	109	157	138
Total	**1668**	**69%**	**1145**	**983**	**523**	**685**

FIGURE 10.8-9- – **Enrolment and space analysis for Lord and surrounding schools with space.**



Enrolment is forecast to decline in the Lord study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Lord Elementary School.

Facility Condition Analysis

FIGURE 10.8-10 – **Facility condition and deferred maintenance for schools in the Lord study area.**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI

Begbie	1922	Replacement School in Design	$12M	0.870
Franklin	1912	High	$6M	0.720
Hastings	1912	Seismic Upgrade 2003	$4M	0.360
Lord	1956	High	$6M	0.710
Nelson	1910	Replacement School in construction	$9M	0.630
Tillicum	1964	High	$3M	0.640
Xpey'	1905	High	$5M	0.520

10.9 Vancouver Technical Secondary Family

Queen Alexandrea and Thunderbird elementary schools are in the Vancouver Technical family.

Queen Alexandra Study Area

The Queen Alexandra Study Area is comprised of all schools that share boundaries with the Queen Alexandra catchment area.

FIGURE 10.9-1 – **The Queen Alexandra Study Area**

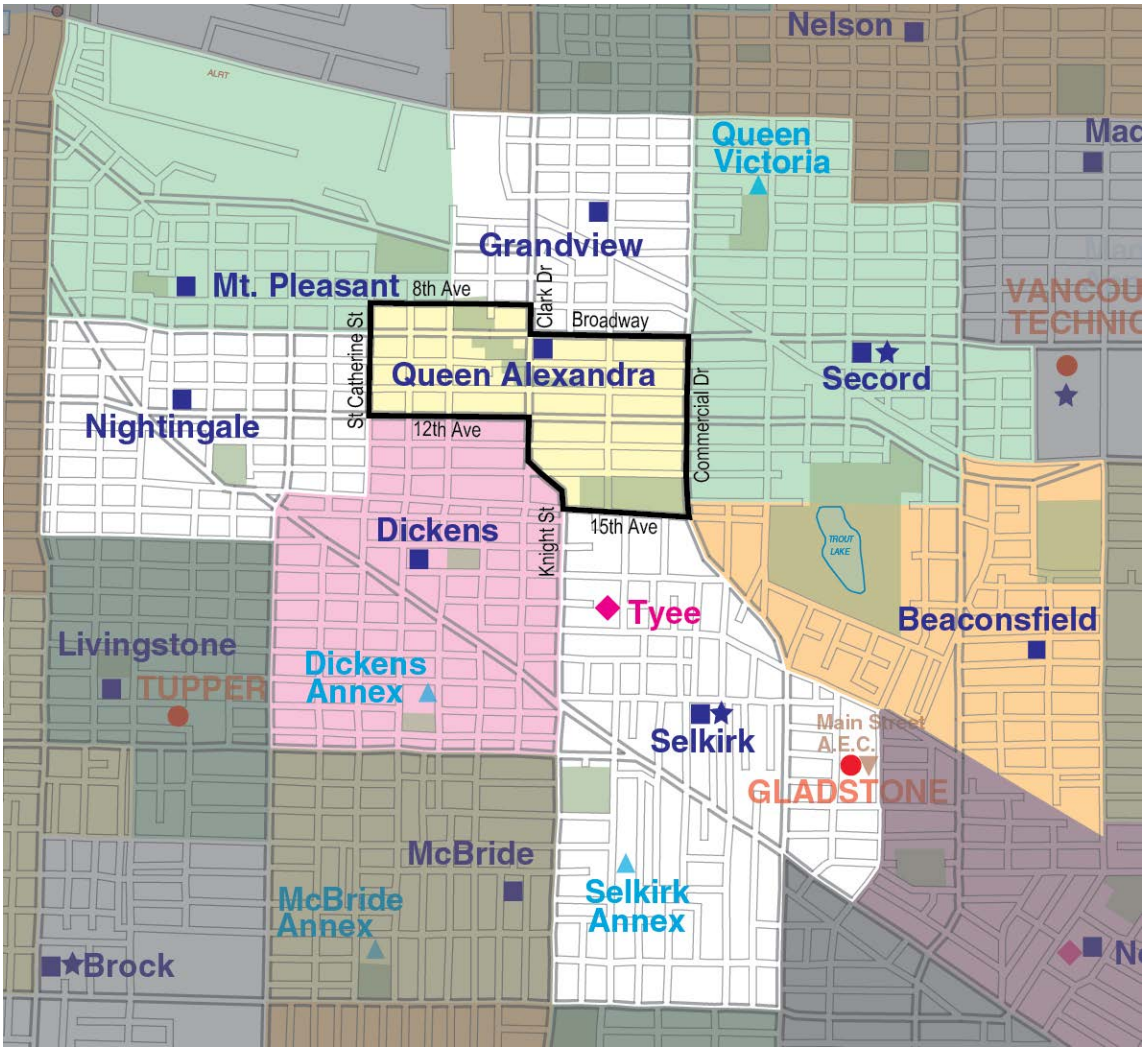


FIGURE 10.9-2 – **Operating capacity and capacity utilization in the Queen Alexandra study area.**

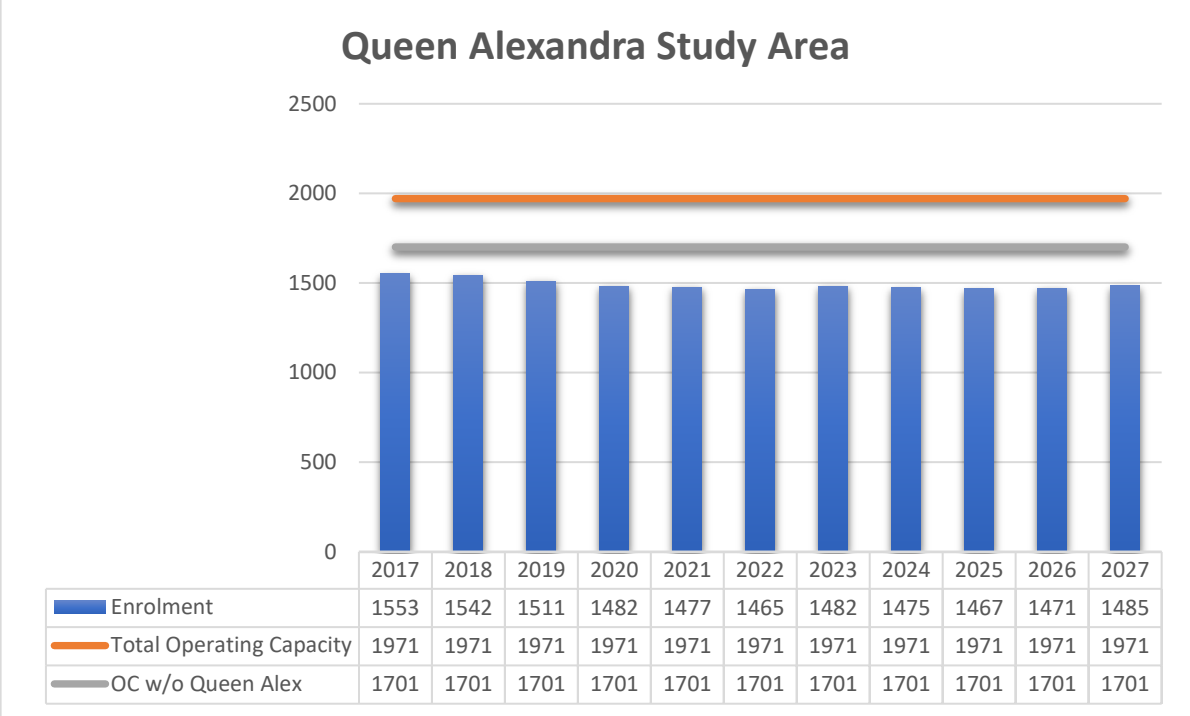
School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Beaconsfield	294	81%	55
Dickens	457	104%	-19
Dickens Annex	122	92%	10
Grandview	205	66%	69
Laura Secord	639	103%	-17
Mount Pleasant	294	80%	59
Nightingale	364	65%	128
Queen Alexandra	270	62%	102
Queen Victoria Annex	199	59%	81
Selkirk	658	100%	3
Selkirk Annex	129	84%	21

Dickens and Dickens Annex are excluded from the enrolment space analysis in Figure (_). The current and forecast enrolment indicate that there will be minimal space to accommodate additional enrolment in the Dickens catchment. Selkirk and Selkirk Annex are excluded from the enrolment space analysis. Selkirk Elementary and its Annex do not currently have surplus capacity to accommodate additional students. A seismic upgrade is also scheduled to begin at Selkirk Elementary in January 2020. Mount Pleasant is excluded from the enrolment space analysis. Enrolment is forecast to increase at Mount Pleasant over the next 10 years. . In addition, historically, some kindergarten students who cannot be accommodated at nearby schools have been placed at Mount Pleasant.

FIGURE 10.9-3 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Beaconsfield	294	81%	239	249	55	45
Grandview	205	66%	136	135	69	70
Nightingale	364	65%	236	263	128	101
Queen Alexandra	270	62%	168	109	102	161
Secord Catchment	838	92%	774	729	64	109
Total	**1971**	**79%**	**1553**	**1485**	**418**	**486**

FIGURE 10.9-4– **enrolment and space analysis for Queen Alexandra and surrounding schools with space.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	1553	1542	1511	1482	1477	1465	1482	1475	1467	1471	1485
Total Operating Capacity	1971	1971	1971	1971	1971	1971	1971	1971	1971	1971	1971
OC w/o Queen Alex	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701

Enrolment is forecast to decline in the Queen Alexandra study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Queen Alexandra Elementary School.

Facility Condition Analysis

FIGURE 10.9-5 – **Facility condition and deferred maintenance for schools in Queen Alexandra study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Beaconsfield	1914	High	$4M	0.440
Dickens	2008	Replacement School 2008	$1M	0.120
Dickens Annex	1971	Medium/Low	$1M	0.530
Grandview	1926	High	$5M	0.600
Laura Secord	1911	Seismic Upgrade 2011	$1M	0.110
Mount Pleasant	1972	High	$5M	0.710
Nightingale	1911	High	$8M	0.680
Queen Alexandra	1909	High	$6M	0.680
Queen Victoria Annex	1963	Medium/Low	$3M	0.680
Selkirk	1908	High	$8M	0.470
Selkirk Annex	1964	High	$2M	0.640

Thunderbird Study Area

The Thunderbird Study Area is comprised of all schools that share boundaries with the Thunderbird catchment area.

FIGURE 10.9-6 – **Thunderbird Study Area**

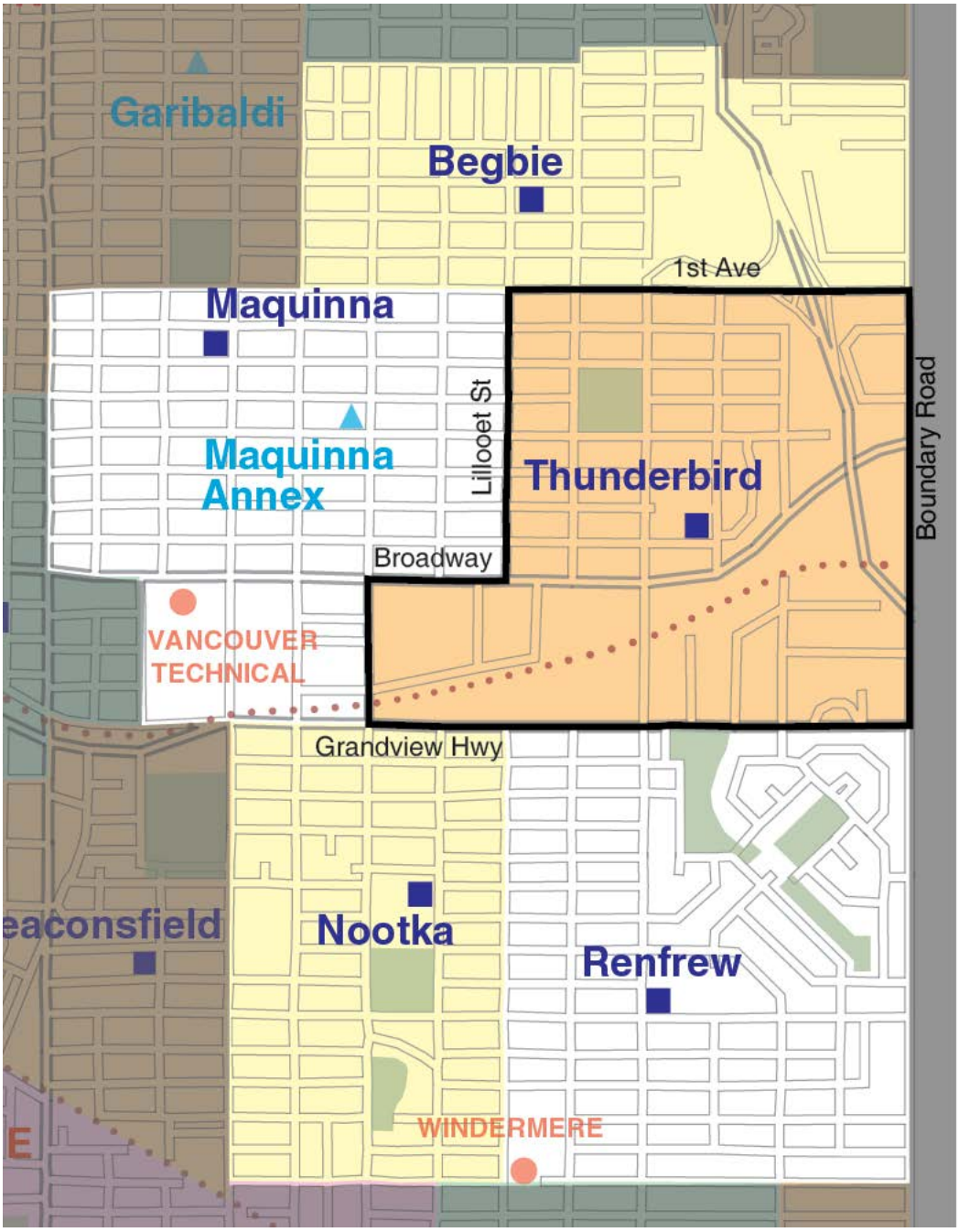


FIGURE 10.9-7 – **Operating capacity and capacity utilization in the Thunderbird study area.**

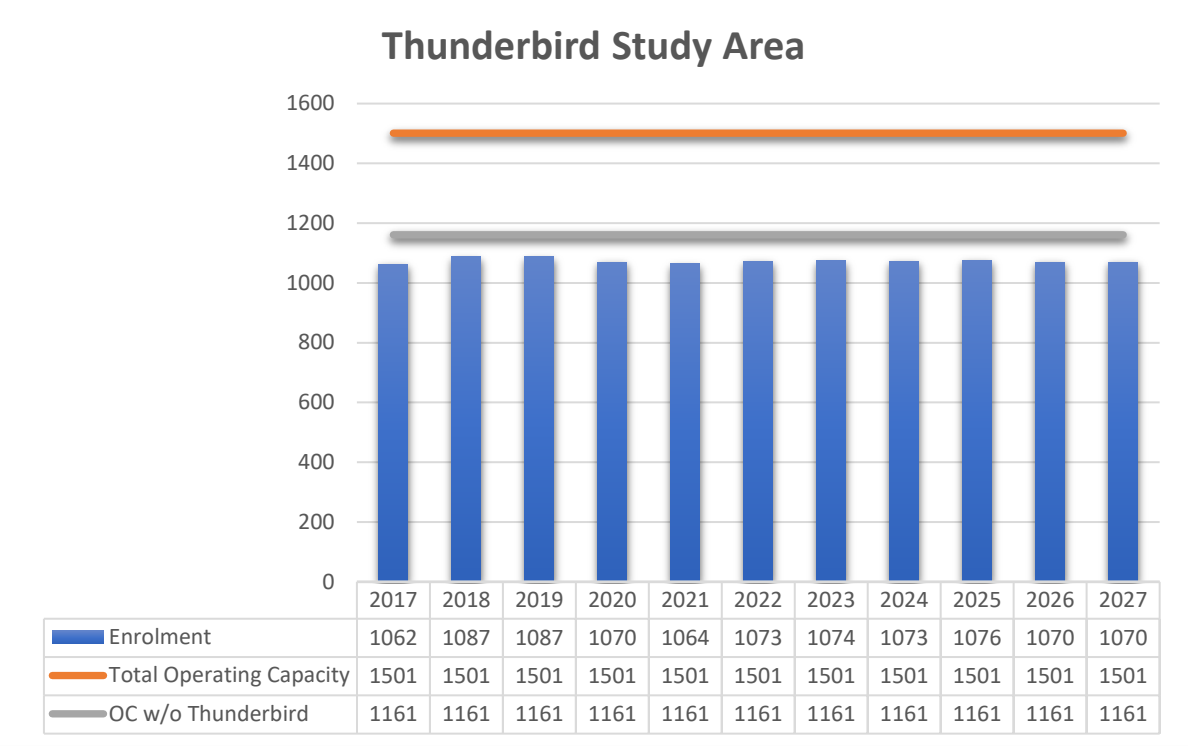
School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Begbie	317	105%	-15
Maquinna	228	97%	6
Nootka	522	76%	123
Renfrew	639	70%	194
Thunderbird	340	64%	122

Begbie is excluded from the enrolment space analysis in Figure 9.9-8. The new replacement Begbie school scheduled to open in September 2021 and not forecast to have surplus capacity to accommodate additional students. Macquinna is excluded from the enrolment space analysis. The current and forecast enrolments for Macquinna indicate there will be minimal space to accommodate additional enrolment at this school.

FIGURE 10.9-8 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Nootka	522	76%	399	406	123	116
Renfrew	639	70%	445	478	194	161
Thunderbird	340	64%	218	186	122	154
Total	**1501**	**71%**	**1062**	**1070**	**439**	**431**

FIGURE 10.9-9 – **Enrolment and space analysis for Thunderbird and surrounding schools with space.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	1062	1087	1087	1070	1064	1073	1074	1073	1076	1070	1070
Total Operating Capacity	1501	1501	1501	1501	1501	1501	1501	1501	1501	1501	1501
OC w/o Thunderbird	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161	1161

Enrolment is forecast to remain stable in the Thunderbird study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Thunderbird Elementary School.

Facility Condition Analysis

FIGURE 10.9-10- **Facility condition and deferred maintenance for schools in Thunderbird study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Begbie	1922	Replacement School in Design	$12M	0.870
Maquinna	1953	High	$5M	0.730
Nootka	1959	High	$7M	0.570

Renfrew	1928	High	$7M	0.460
Thunderbird	1944	High	$8M	0.600

10.10 Windermere Secondary Family

Bruce, Grenfell, Nootka and Renfrew elementary schools are in the Windermere study area.

Bruce Study Area

The Bruce Study Area is comprised of all schools that share boundaries with the Bruce catchment area. Carleton is included in the enrolment analysis because the Ministry has approved this school to move forward to the PDR phase (feasibility study) for seismic upgrading. The school is currently not used as an enrolling school, having suffered fire damage in 2016. Cunningham elementary was designated as the receiving school for Carleton after the 2016 fire. Carleton elementary is organized as a separate school at the Cunningham site. The enrolment figures in Figure 9.10-3 indicate the number students (catchment and non-catchment) enrolled to attend Carleton at the Cunningham site. If the seismic upgrade project proceeds, the District will need to decide, to either use Carleton for enrolling students or as a temporary accommodation space for other elementary school seismic projects.

FIGURE 10.10-1 - **The Bruce Study Area**

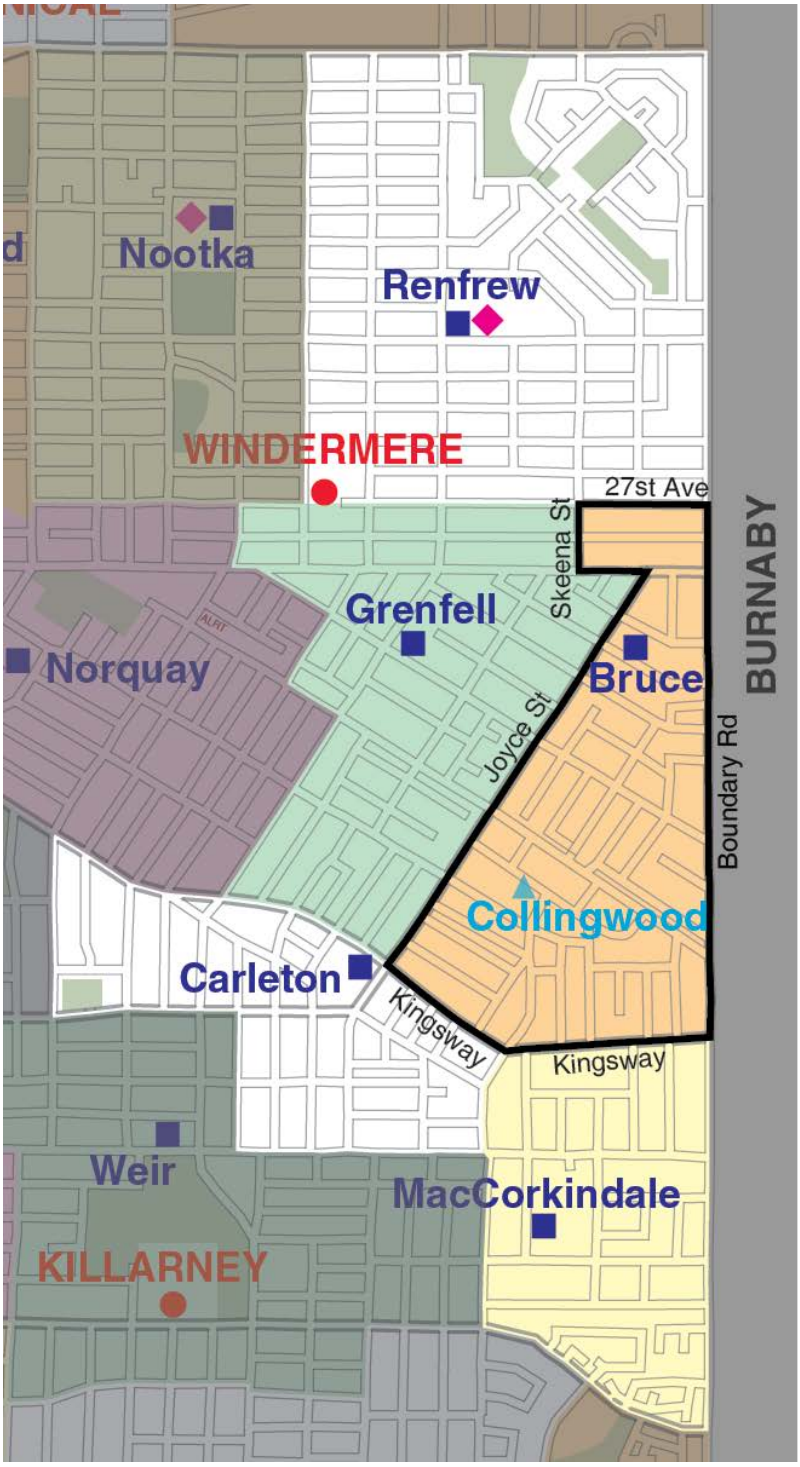


FIGURE 10.10-2 – **Operating capacity and capacity utilization in the Bruce study area.**

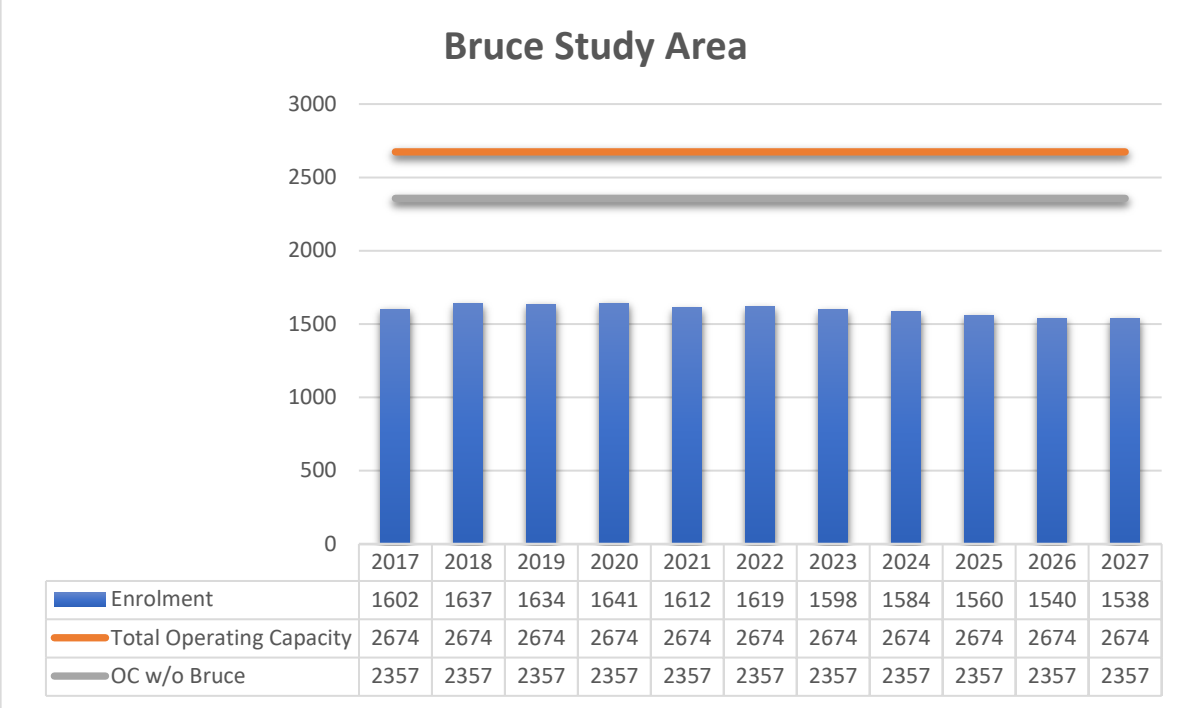
School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Bruce	317	**74%**	84
Carleton	573	**18%**	472
Collingwood Annex	185	**67%**	61

Grenfell	503	**89%**	54
MacCorkindale	457	**55%**	207
Renfrew	639	**70%**	194

FIGURE 10.10-3 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Bruce	317	74%	233	219	84	98
Collingwood Annex	185	67%	124	118	61	67
Carleton	573	18%	101	90	472	483
Grenfell	503	89%	449	339	54	164
MacCorkindale	457	55%	250	294	207	163
Renfrew	639	70%	445	478	194	161
Total	**2674**	**60%**	**1602**	**1538**	**1072**	**1136**

FIGURE 10.10-4– **Enrolment and space analysis for Bruce and surrounding schools with space.**



Enrolment is forecast to decline in the Bruce study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Bruce Elementary School.

Facility Condition Analysis

FIGURE 10.10-5 – **Facility condition and deferred maintenance for schools in Bruce study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI

Bruce	1964	High	$6M	0.720
Carleton	1896	High	$9M	0.610
Collingwood Annex	2002	New School 2002	$1M	0.180
Grenfell	1910	High	$5M	0.490
MaCcorkindale	1967	High	$7M	0.810
Renfrew	1928	High	$7M	0.460

Grenfell Study Area

The Grenfell study area is comprised of all schools that share boundaries with the Grenfell catchment area. Carleton is included in the enrolment analysis because the Ministry has approved this school to move forward to the PDR phase (feasibility study) for seismic upgrading. The school is currently not used as an enrolling school, having suffered fire damage in 2016. Cunningham elementary was designated as the receiving school for Carleton after the 2016 fire. Carleton elementary is organized as a separate school at the Cunningham site. The enrolment figures in Figure 9.10-13 indicate the number students (catchment and non-catchment) enrolled to attend Carleton at the Cunningham site. If the seismic upgrade project proceeds, the District will need to decide, to either use Carleton for enrolling students or as a temporary accommodation space for other elementary school seismic projects.

FIGURE 10.10-6 - **The Grenfell Study Area**

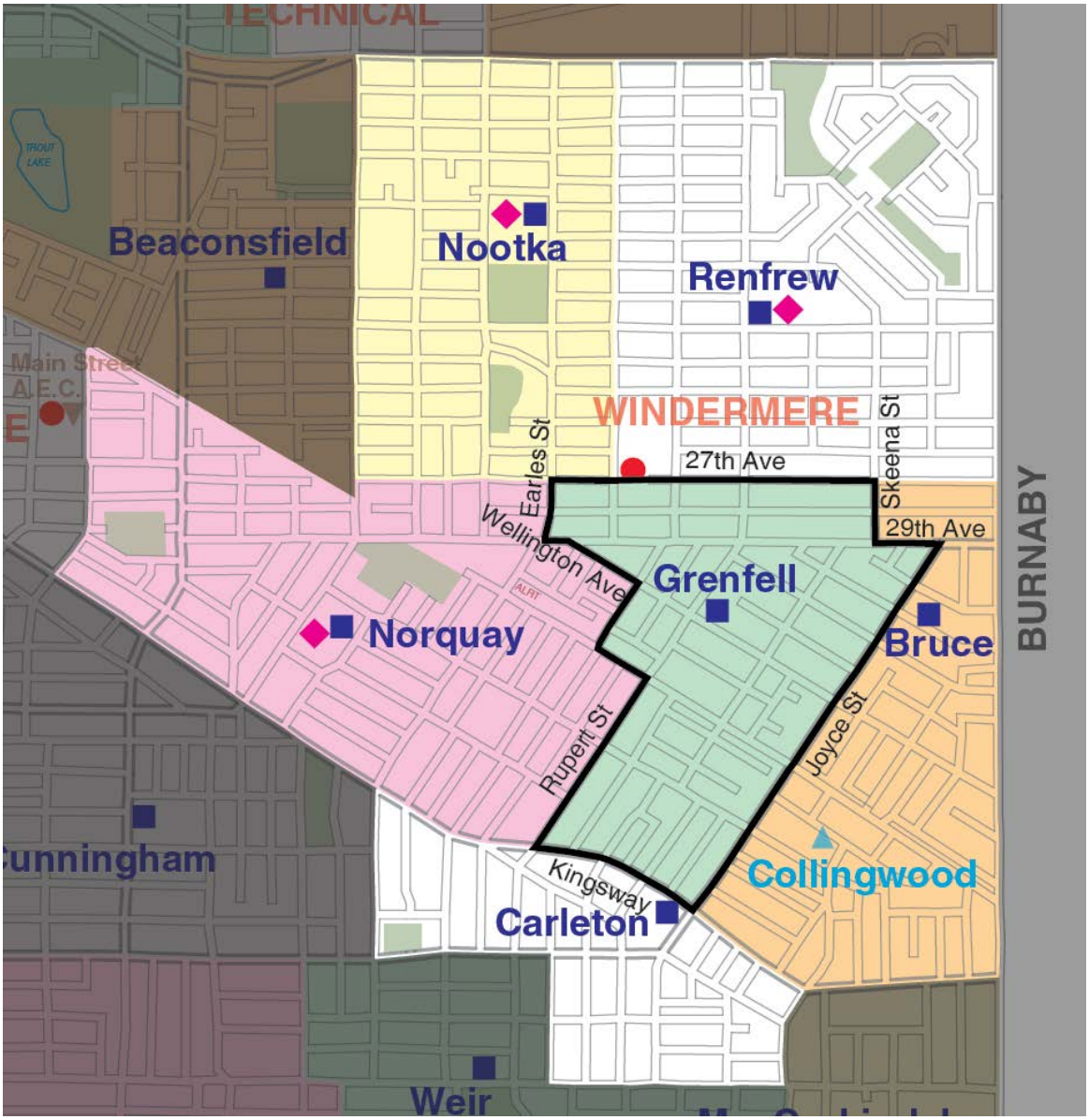


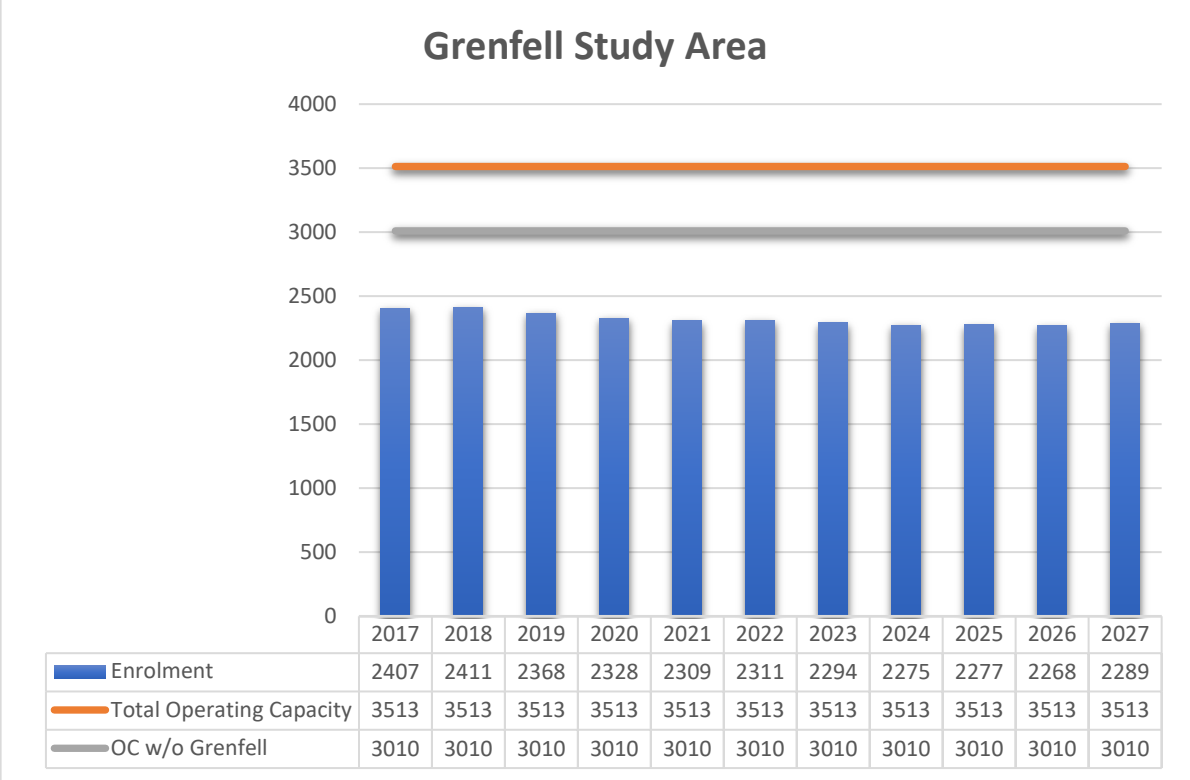
FIGURE 10.10-7 – **Operating capacity and capacity utilization in the Grenfell study area.**

School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Bruce	317	74%	84
Carleton	573	18%	472
Collingwood	185	67%	61
Grenfell	503	89%	54
Nootka	522	76%	123
Norquay	774	85%	118
Renfrew	639	70%	194

Figure 10.10-8 – Current and forecast enrolment and space analysis for surrounding schools

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Bruce Catchment	502	71%	357	337	145	165
Carleton	573	18%	101	90	472	483
Grenfell	503	89%	449	339	54	164
Nootka	522	76%	399	406	123	116
Norquay	774	85%	656	639	118	135
Renfrew	639	70%	445	478	194	161
Total	**3513**	**69%**	**2407**	**2289**	**1106**	**1224**

FIGURE 10.10-9 – **Enrolment and space analysis for Grenfell and surrounding schools with space.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	2407	2411	2368	2328	2309	2311	2294	2275	2277	2268	2289
Total Operating Capacity	3513	3513	3513	3513	3513	3513	3513	3513	3513	3513	3513
OC w/o Grenfell	3010	3010	3010	3010	3010	3010	3010	3010	3010	3010	3010

Enrolment is forecast to decline in the Grenfell study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Grenfell Elementary School.

Facility Condition Analysis

FIGURE 10.10-10 – **Facility condition and deferred maintenance for schools in the Grenfell study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Bruce	1964	High	$6M	0.720
Carleton	1896	High	$9M	0.610

Collingwood	2002	New School 2002	$1M	0.180
Grenfell	1910	High	$5M	0.490
Nootka	1959	High	$7M	0.570
Norquay	1912	Seismic Upgrade 2008	$8M	0.500
Renfrew	1928	High	$7M	0.460

Nootka Study Area

The Nootka Study Area is comprised of all schools that share boundaries with the Nootka catchment area.

FIGURE 10.10-11 - **The Nootka Study Area**

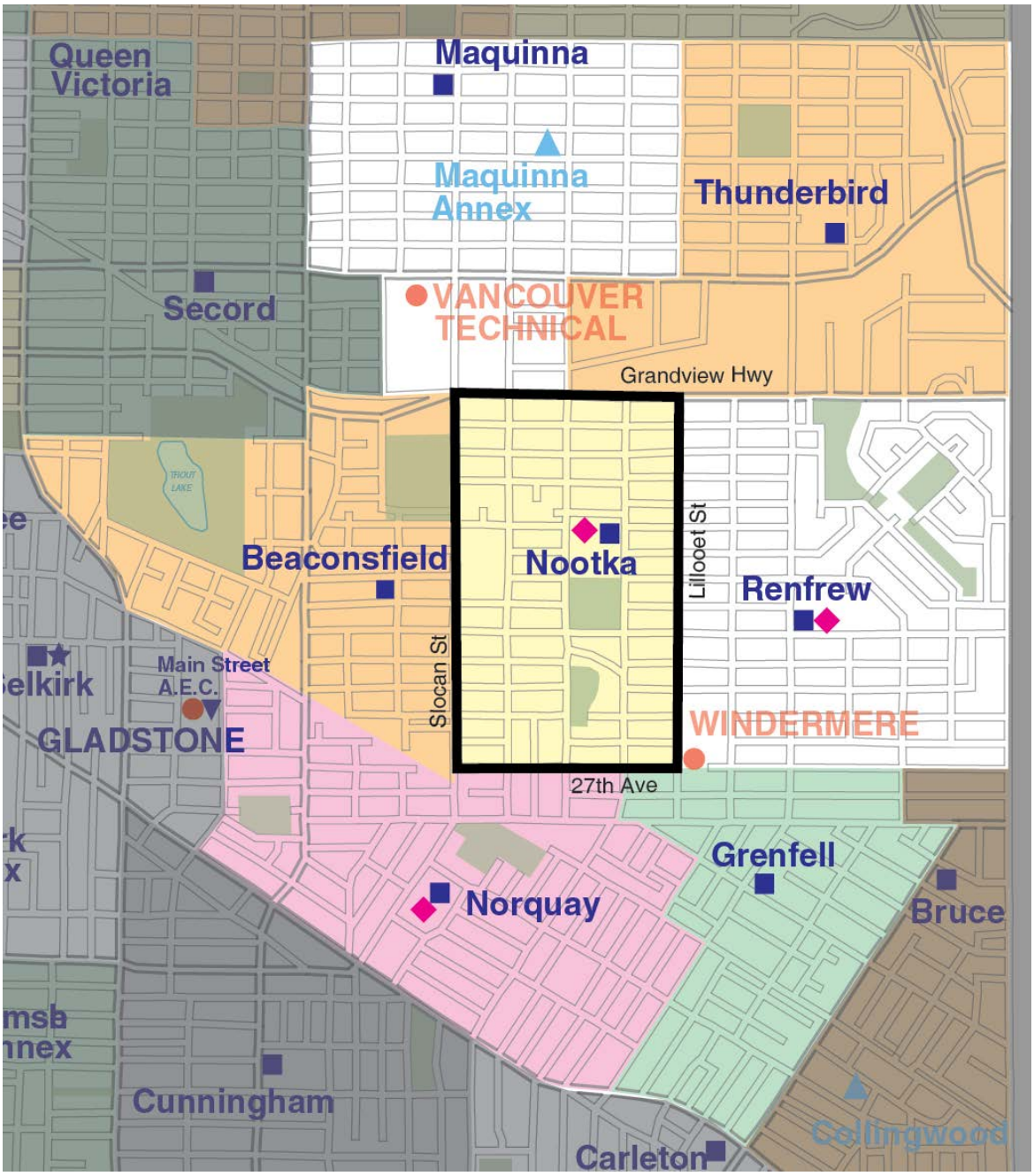


FIGURE 10.10-12 – **Operating capacity and capacity utilization in the Nootka study area.**

School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Beaconsfield	294	81%	55
Grenfell	503	89%	54
Maquinna	228	97%	6

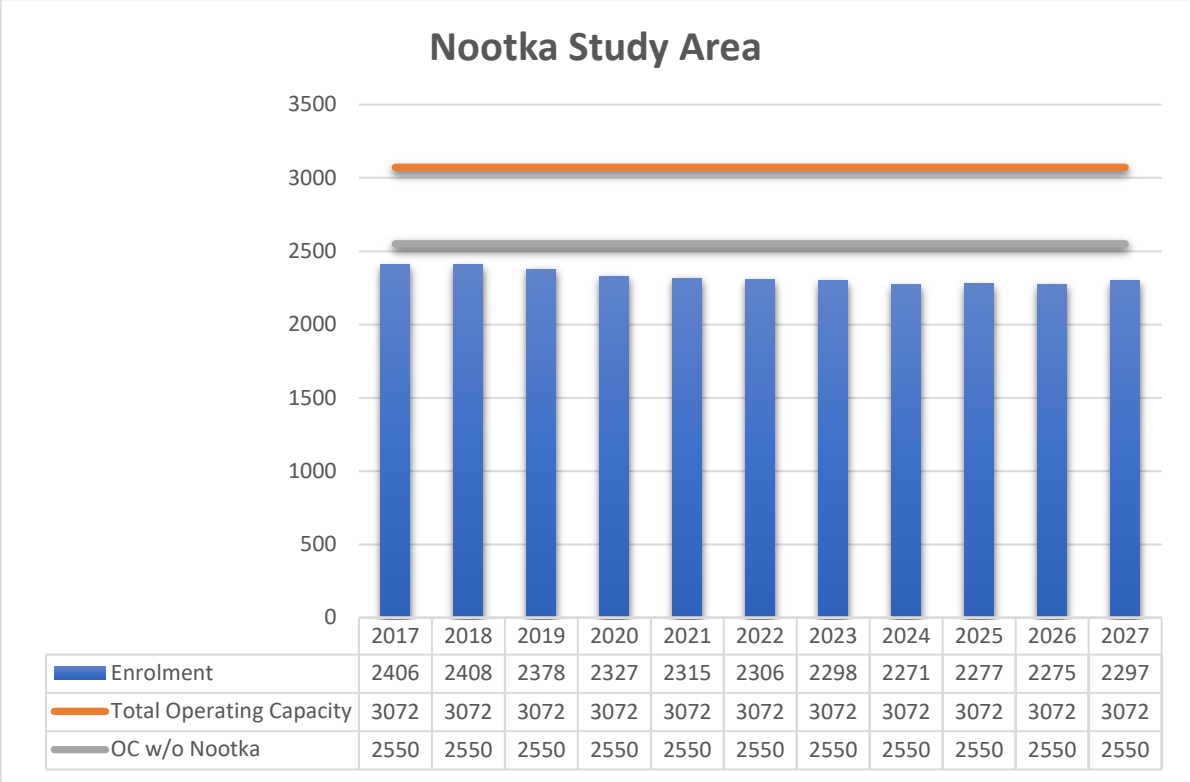
Nootka	522	76%	123
Norquay	774	85%	118
Renfrew	639	70%	194
Thunderbird	340	64%	122

Macquinna is excluded from the enrolment space analysis. The current and forecast enrolment for Macquinna indicate that there will be minimal space to accommodate additional enrolment at this school.

FIGURE 10.10-13 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Beaconsfield	294	81%	239	249	55	45
Grenfell	503	89%	449	339	54	164
Nootka	522	76%	399	406	123	116
Norquay	774	85%	656	639	118	135
Renfrew	639	70%	445	478	194	161
Thunderbird	340	64%	218	186	122	154
Total	**3072**	**78%**	**2406**	**2297**	**666**	**775**

FIGURE 10.10-14 – **Enrolment and space analysis for Nootka and surrounding schools with space.**



Enrolment is forecast to decline in the Nootka study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Nootka Elementary School.

Facility Condition Analysis

FIGURE 10.10-15 – **Facility condition and deferred maintenance for schools in Nootka study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Beaconsfield	1914	High	$4M	0.440
Grenfell	1910	High	$5M	0.490
Maquinna	1953	High	$5M	0.730
Nootka	1959	High	$7M	0.570
Norquay	1912	Seismic Upgrade 2008	$8M	0.500
Renfrew	1928	High	$7M	0.460
Thunderbird	1944	High	$8M	0.600

Renfrew Study Area

The Renfrew Study Area is comprised of all schools that share boundaries with the Renfrew catchment area.

FIGURE 10.10-16 – **The Renfrew study area**

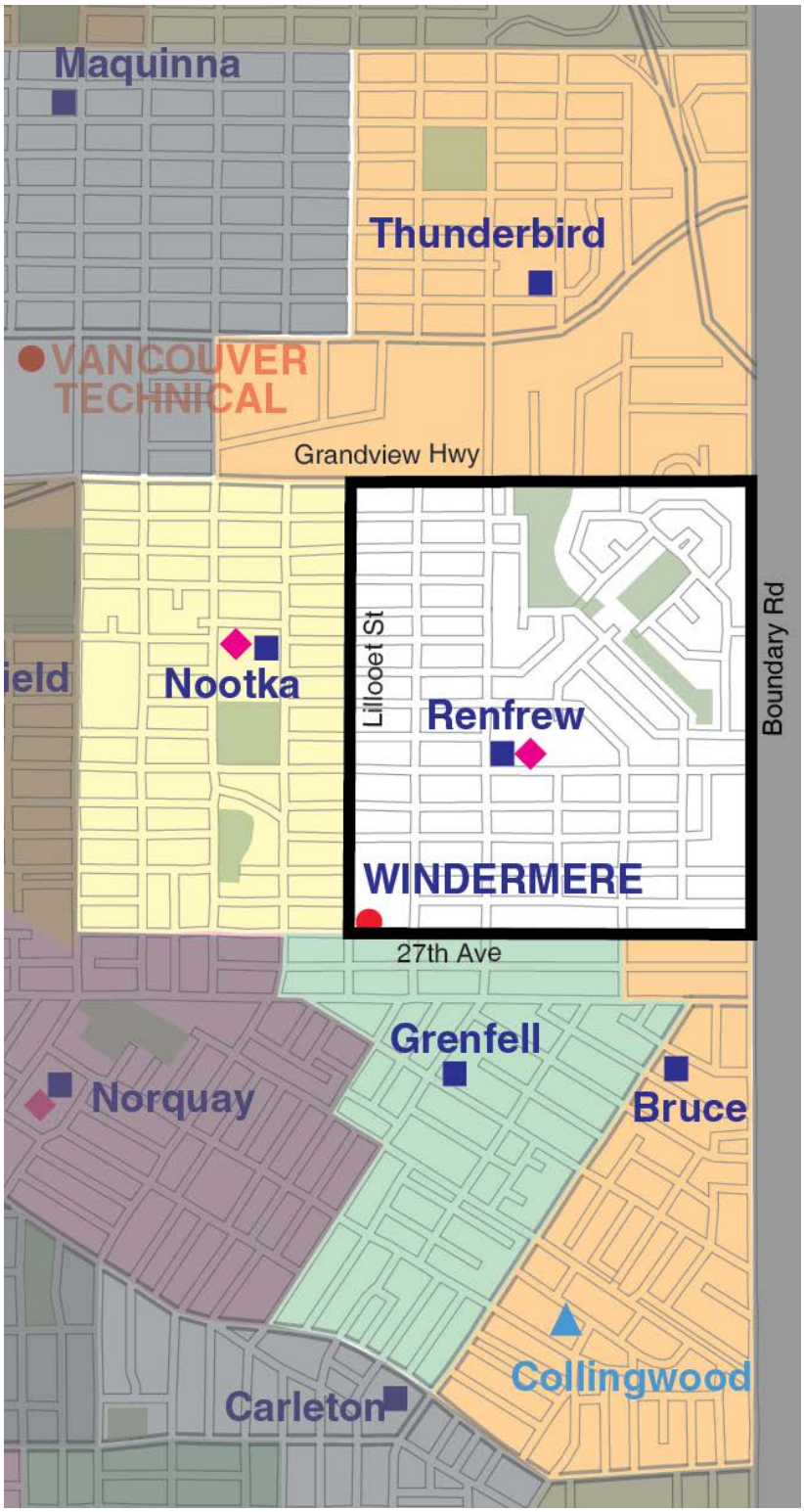


FIGURE 10.10-17 – **Schools in the Renfrew study area**

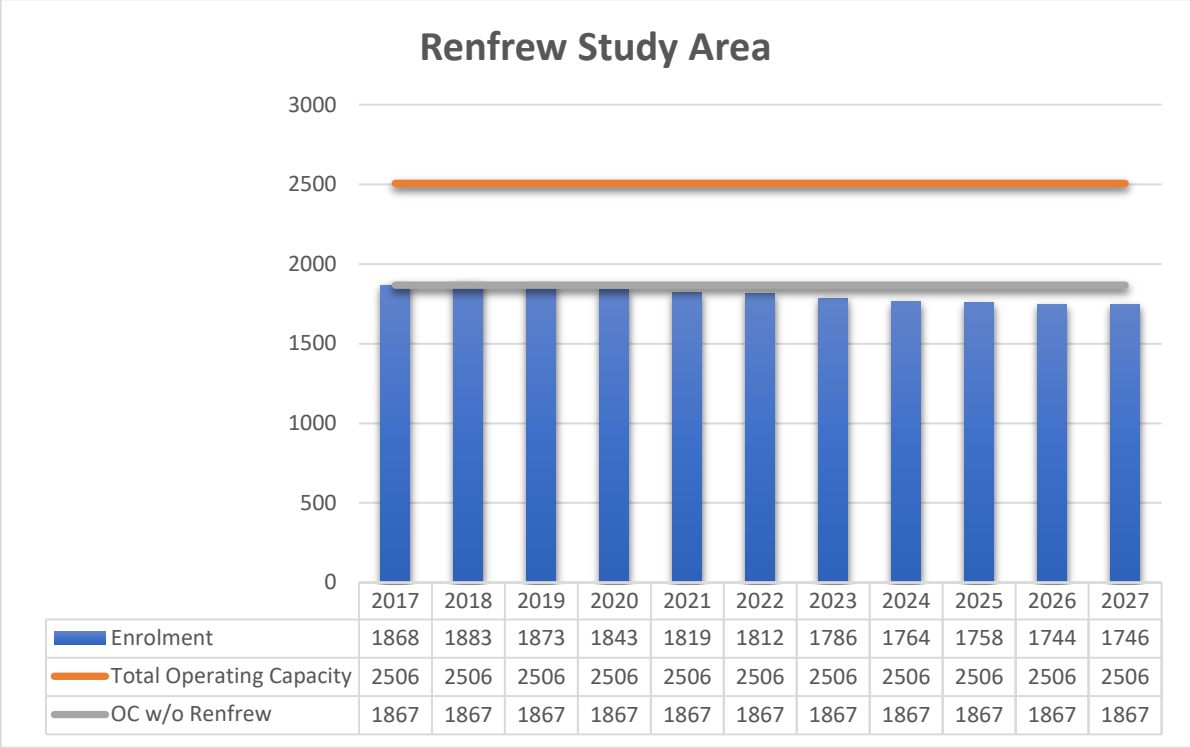
School	Operating Capacity	2017 Capacity Utilization	Surplus or Shortage
Bruce	317	74%	84
Collingwood	185	67%	61
Grenfell	503	89%	54
Maquinna	228	97%	6
Nootka	522	76%	123
Renfrew	639	70%	194
Thunderbird	340	64%	122

Macquinna is excluded from the enrolment space analysis – Figure 9.10-23. The current and forecast enrolments for Macquinna indicate that there will be minimal space to accommodate additional enrolment at this school.

FIGURE 10.10-18 – **Current and forecast enrolment and space analysis for surrounding schools**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Bruce Catchment	502	71%	357	337	84	165
Grenfell	503	89%	449	339	54	164
Nootka	522	76%	399	406	123	116
Renfrew	639	70%	445	478	194	161
Thunderbird	340	64%	218	186	122	154
Total	**2506**	**75%**	**1868**	**1746**	**577**	**760**

FIGURE 10.10-19 – **Enrolment and space analysis for Renfrew and surrounding schools with space.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	1868	1883	1873	1843	1819	1812	1786	1764	1758	1744	1746
Total Operating Capacity	2506	2506	2506	2506	2506	2506	2506	2506	2506	2506	2506
OC w/o Renfrew	1867	1867	1867	1867	1867	1867	1867	1867	1867	1867	1867

Enrolment is forecast to decline in the Renfrew study area. There is sufficient space available in nearby schools to accommodate the current and forecast enrolment of Renfrew Elementary School.

Facility Condition Analysis

FIGURE 10.10-20– **Facility condition and deferred maintenance for schools in Renfrew study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Bruce	1964	High	$6M	0.720
Collingwood Annex	2002	New School 2002	$1M	0.180
Grenfell	1910	High	$5M	0.490
Maquinna	1953	High	$5M	0.730
Nootka	1959	High	$7M	0.570
Renfrew	1928	High	$7M	0.460
Thunderbird	1944	High	$8M	0.600

10.11 Secondary School Consolidation Analysis

The same School Consolidation Feasibility Analysis criteria used for elementary schools also applies to secondary schools. As outlined on page 97, these criteria are:

*School Consolidation Feasibility Analysis – Criteria for Schools
School has low capacity utilization or is located a zone of low capacity utilization
School has a High (H1, H2 or H3) seismic risk rating

Using these criteria, the secondary schools in Table 10.11-2 and Table 10.11-3 below are identified as schools that should be analyzed. The secondary schools in Table 10.11-1 are excluded from the analysis because they have low seismic risk due to having been seismically upgraded or planned for seismic upgrade or have medium or low seismic risk.

FIGURE 10.11-1– **Secondary schools in areas of low enrolment and enrolment decline that meet the following criteria:**

- School is seismically safe – project completed
- Seismic project is underway
- Seismic project has been approved by the Ministry

School	Year First Opened	Seismic Risk	Seismic Status
Byng	1924	*High 3 (H3)	SEISMIC UPGRADE
Kitsilano	1919	Completed Project	REPLACEMENT SCHOOL
Magee	1998	Completed Project	REPLACEMENT SCHOOL
Tupper	1958	MEDIUM (M) / LOW (L)	PARTIAL SEISMIC UPGRADE (BLDG. A)
Vancouver Technical	1928	Completed Project	SEISMIC UPGRADE / Heritage Restoration

**The remaining H3 Building Block at Byng has been approved for seismic upgrade.*

FIGURE 10.11-2 – **Secondary schools in areas of low enrolment and enrolment decline that meet the following criteria:**

- School is supported in the SMP, a feasibility study is in progress
- School does not have SMP project approval or funding

School	Year First Opened	Seismic Risk	Seismic Status
John Oliver	1921	High 1 (H1)/ High 2 (H2)	Supported Project
Killarney	1957	High 1 (H1)/ High 2 (H2)	Supported Project
Point Grey	1929	High 1 (H1)/ High 2 (H2)	Supported Project
Prince of Wales	1920	High 1 (H1)/ High 2 (H2)	Supported Project
Templeton	1926	High 1 (H1)/ High 2 (H2)	Supported Project
*Thompson	1958	High 1 (H1)/ High 2 (H2)	Supported Project

*The ministry has requested the submission of a final PDR for Thompson in its Capital Response Letter to the 2018-19 Capital Plan.

FIGURE 10.11-3 – **Secondary schools in areas of low enrolment and enrolment decline that meet the following criteria:**

- Have not been fully seismically upgraded
- Have not yet been supported in the SMP process

School	Year First Opened	Seismic Risk	Seismic Status
Britannia Sec.	1909	High 1 (H1)/ High 2 (H2)	PART. SEISMIC UPGRADE/Heritage Restoration

Gladstone	1950	High 1 (H1)/ High 2 (H2)	Not Upgraded
Windermere	1961	High 1 (H1)/ High 2 (H2)	Not Upgraded

Britannia Secondary has four separate building blocks in use on the school site.

FIGURE 10.11-4 - **provides detail about the age and seismic risk rating of each building.**

Block	Building Area (sq. m)	Year Constructed	Year Renovated	Seismic Risk Rating
1	5,718	1911	1993	Low
2	4,433	1965		H1
3	2,510	1973		H2
4	2,568	1954	2003	Medium

Britannia/Templeton Study Area

This Britannia/Templeton Study Area is comprised of three secondary schools that share boundaries with the Britannia catchment area. King George Secondary has been excluded from the study area. Although King George shares a common catchment boundary with Britannia Secondary there is no surplus capacity at King George and minimal cross boundary inflow or outflow enrollment between the Northeast Zone and the Downtown Zone. The enrolment analysis for Britannia and Templeton involve the same three schools therefore Templeton and Britannia have been combined into one study area.

FIGURE 10.11-5 –

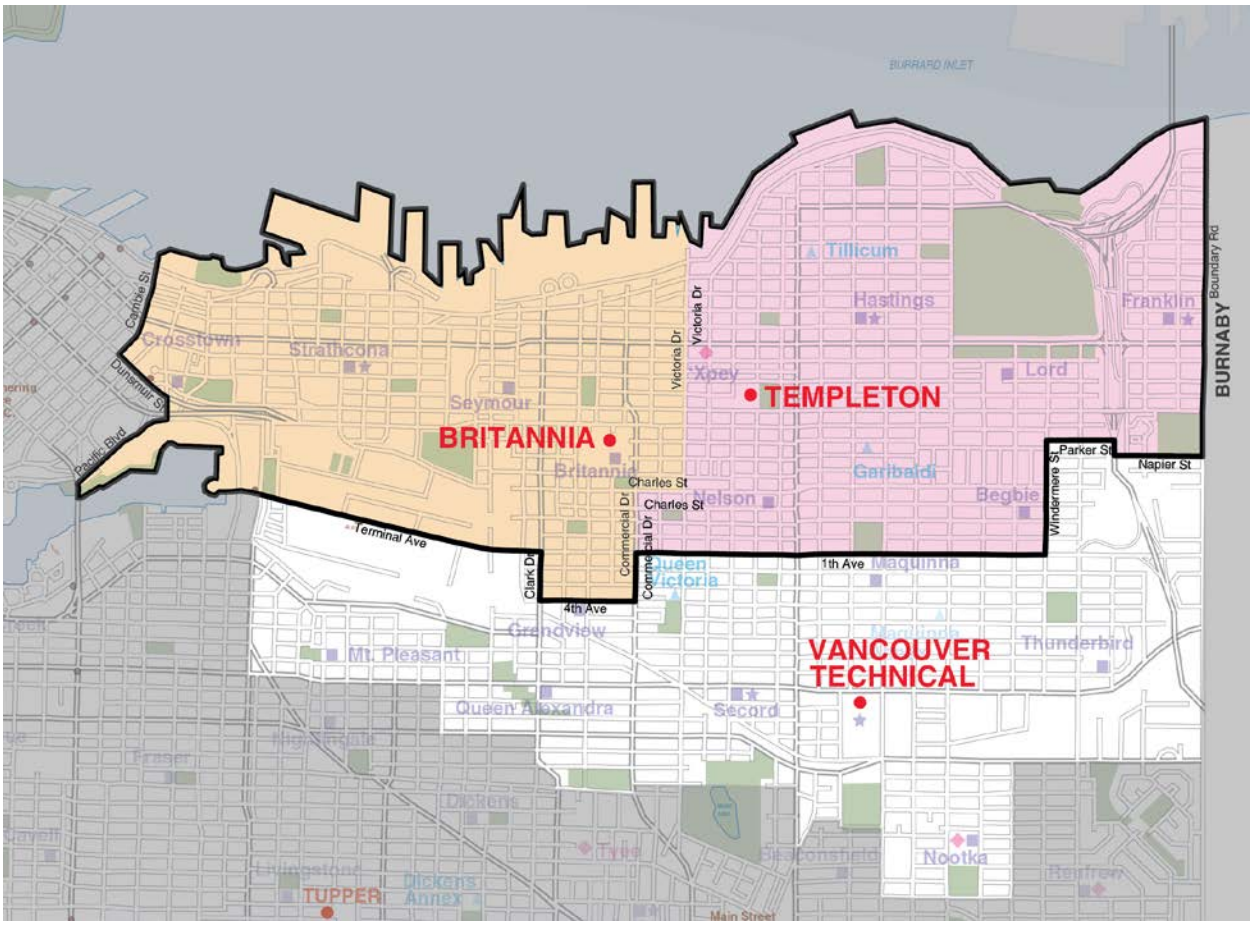


FIGURE 10.11-6 – **Schools in the Britannia/Templeton study area**

School	Operating Capacity	*Scheduling Capacity	2017 Capacity Utilization	Surplus Operating Capacity
Britannia Sec.	1025	1128	56%	453
Templeton	1400	1540	57%	599
Vancouver Technical	1700	1870	97%	59

**Scheduling capacity is 110% of operating capacity. Most secondary schools can adequately accommodate the number of students indicated by the scheduling capacity of the school.*

FIGURE 10.11-7 – **Current and forecast enrolment and space analysis for Britannia/Templeton study area.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Britannia Secondary	1025	56%	572	569	453	455
Templeton	1400	57%	801	771	599	629
Vancouver Technical	1700	97%	1641	1,626	59	74
Totals	**4125**	**73%**	**3014**	**2966**	**1111**	**1159**

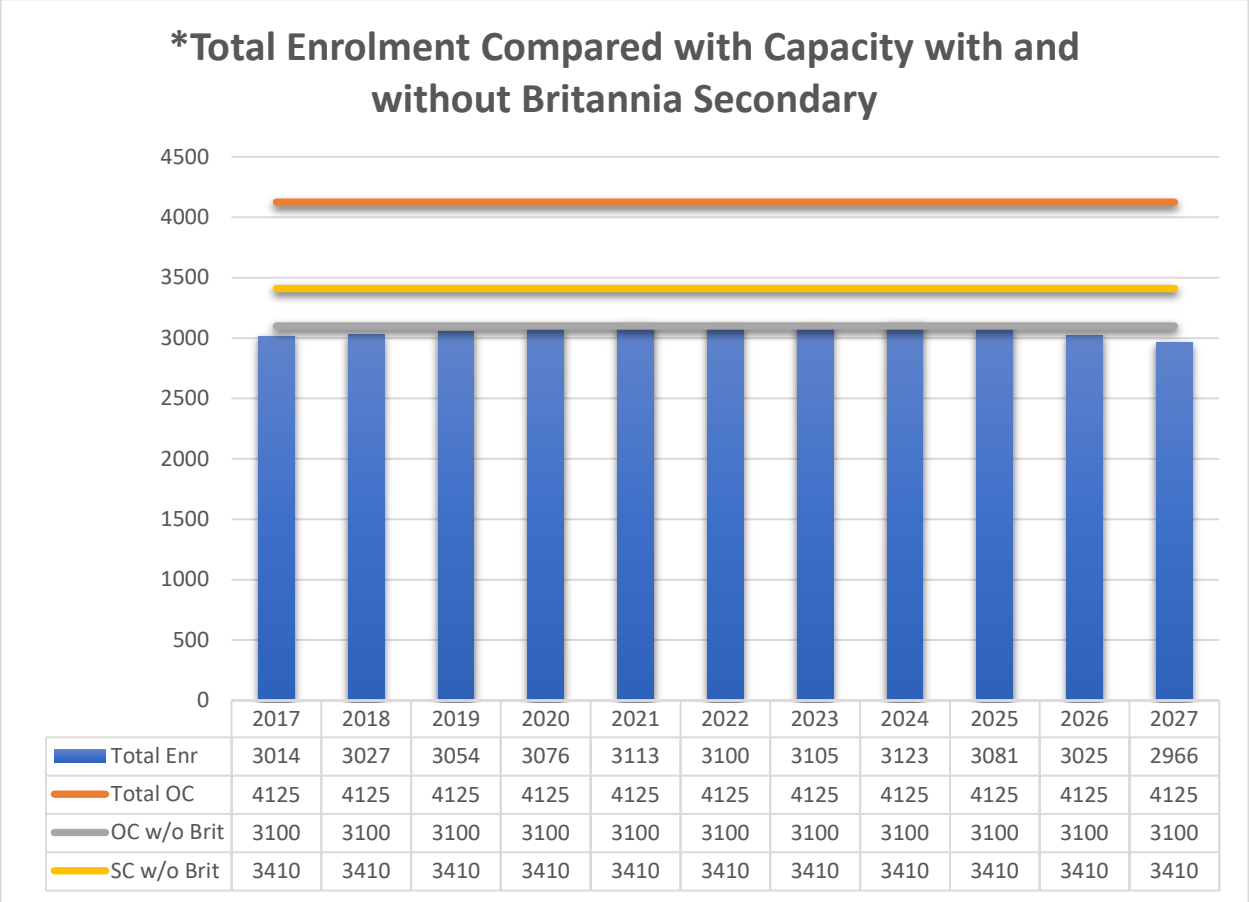
Enrolment forecast and analysis includes International Students

FIGURE 10.11-8 – **BC Resident and International student enrolment**

School	Operating Capacity	2017 Total Enrolment	2017 BC Resident Enrolment	2017 International Enrolment
Britannia Secondary	1025	572	549	23
Templeton	1400	801	763	38
Vancouver Technical	1700	1641	1572	69
Totals	**4125**	**3014**	**2884**	**130**

Figure 10.11-9 – Enrolment and capacity analysis for the Britannia/Templeton study area.

Key OC = Operating Capacity. SC = Scheduling Capacity



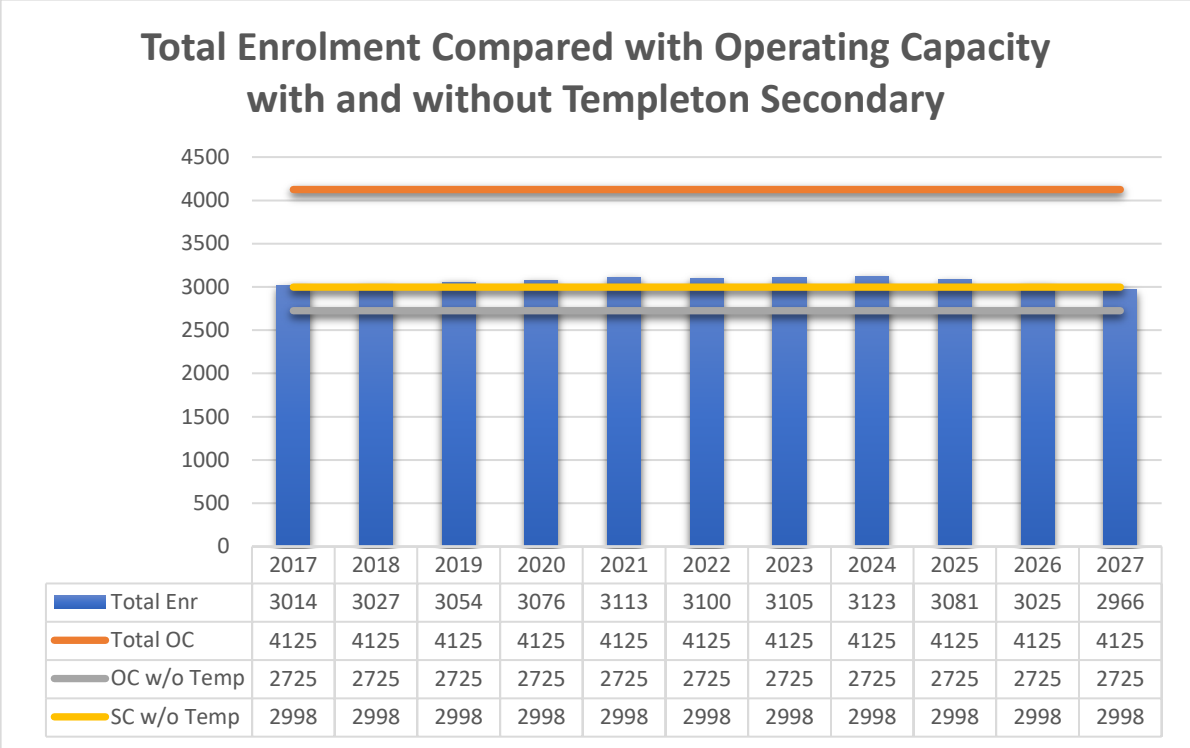
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enr	3014	3027	3054	3076	3113	3100	3105	3123	3081	3025	2966
Total OC	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125
OC w/o Brit	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100
SC w/o Brit	3410	3410	3410	3410	3410	3410	3410	3410	3410	3410	3410

***** Total Enrolment includes International Students*

Figure 10.11-9 shows the operating capacity (OC) and scheduling capacity (SC) in the Britannia/Templeton study area with and without Britannia Secondary school. Current enrolment forecasts indicate that total enrollment in this study area will be stable and that sufficient capacity exists to accommodate Britannia students at Templeton and Vancouver Technical schools.

FIGURE 10.11-10 – **Enrolment and capacity analysis for the Britannia/Templeton study area.**

Key OC = Operating Capacity. SC = Scheduling Capacity



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enr	3014	3027	3054	3076	3113	3100	3105	3123	3081	3025	2966
Total OC	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125
OC w/o Temp	2725	2725	2725	2725	2725	2725	2725	2725	2725	2725	2725
SC w/o Temp	2998	2998	2998	2998	2998	2998	2998	2998	2998	2998	2998

***** *Total Enrolment includes International Students*

Figure 10.11-10 shows the operating capacity (OC) and scheduling capacity (SC) in the Britannia/Templeton study area with and without Templeton Secondary school. Current enrolment forecasts indicate that total enrollment in this study area will be stable. To accommodate the student enrolment of Templeton at Britannia and Vancouver Technical schools, enrolment management and/or facilities changes to add capacity to Britannia and/or Vancouver Technical schools may be required.

Gladstone Secondary School Study Area

The Gladstone study area is comprised of the secondary schools that share a common catchment boundary with Gladstone.

FIGURE 10.11-11 – **The Gladstone study area.**

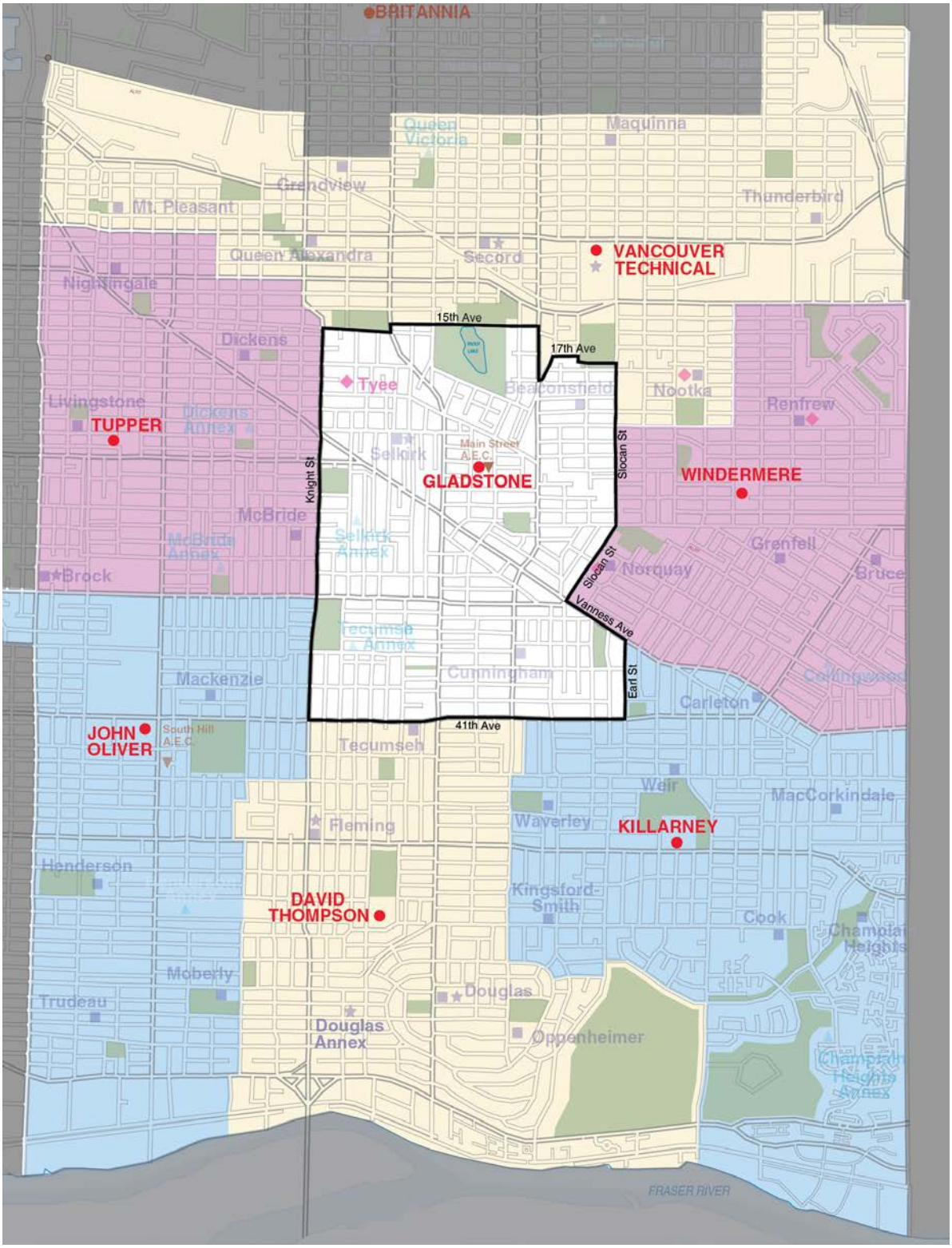


FIGURE 10.11-12 - **Schools in the Gladstone study area**

School	Operating Capacity	Scheduling Capacity	2017 Capacity Utilization	Surplus Operating Capacity
Gladstone	1600	1760	60%	635
John Oliver	1700	1870	65%	594
Killarney	2200	2420	86%	305
Thompson	1550	1705	91%	140
Tupper	1500	1650	68%	487
Vancouver Technical	1700	1870	97%	59
Windermere	1500	1650	67%	491

**Scheduling capacity is 110% of operating capacity. Most secondary schools can adequately accommodate the number of students indicated by the scheduling capacity of the school.*

FIGURE 10.11-13 – **Current and forecast enrolment and space analysis for Gladstone study area.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Gladstone	1600	60%	965	914	635	686
John Oliver	1700	65%	1106	1,059	594	641
Killarney	2200	86%	1895	1,753	305	447
Thompson	1550	91%	1410	1,320	140	230
Tupper	1500	68%	1013	1,229	487	271
Vancouver Technical	1700	97%	1641	1,626	59	74
Windermere	1500	67%	1009	856	491	644
Totals	**11750**	**77%**	**9039**	**8757**	**2711**	**2993**

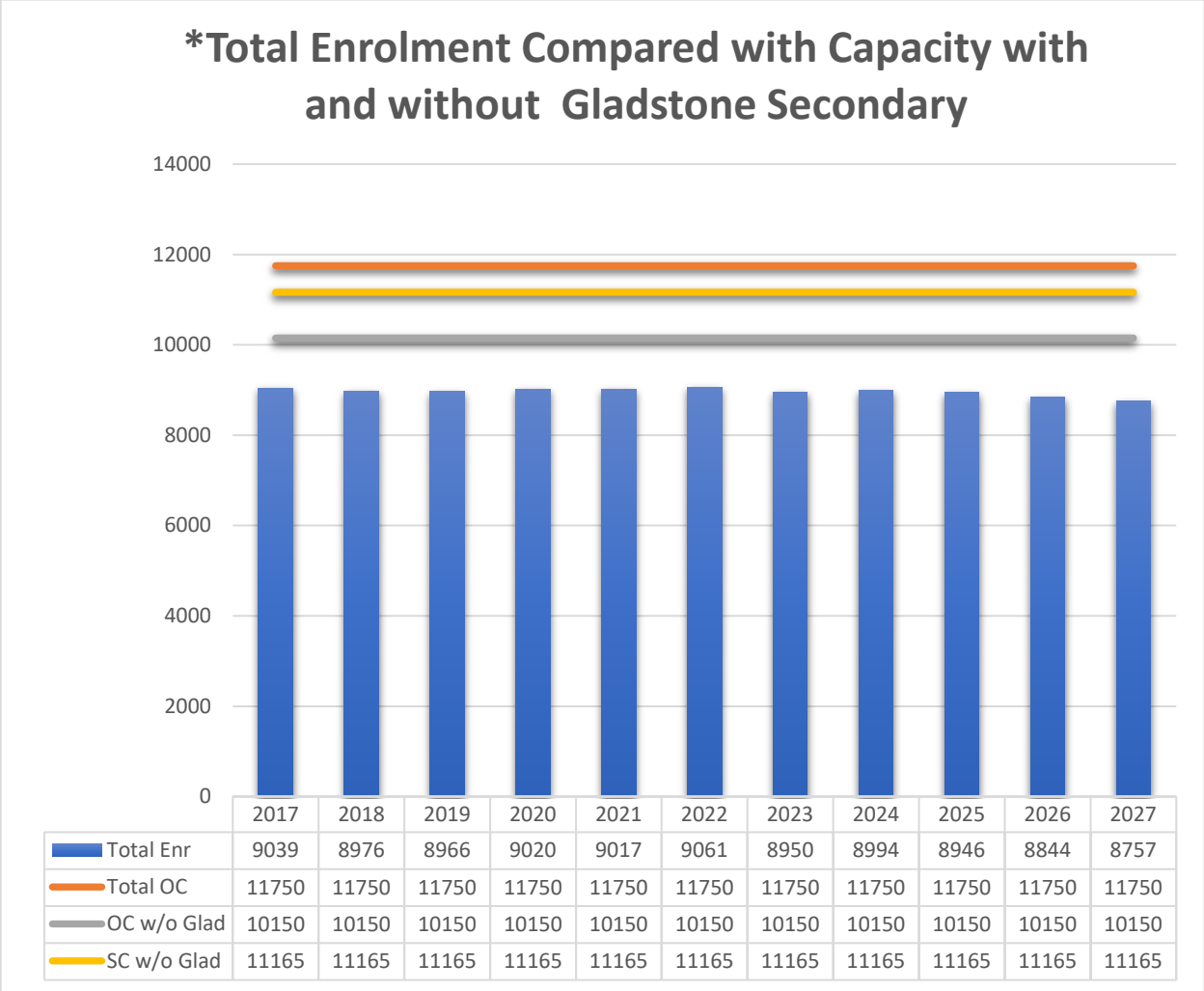
Enrolment forecast and analysis includes International Students

FIGURE 10.11-14 – **BC Resident and International student enrolment in Gladstone study area.**

School	Operating Capacity	2017 Total Enrolment	2017 BC Resident Enrolment	2017 International Enrolment
Gladstone	1600	965	926	39
John Oliver	1700	1106	1089	17
Killarney	2200	1895	1780	115
Thompson	1550	1410	1334	76
Tupper	1500	1013	955	58
Vancouver Technical	1700	1641	1572	69
Windermere	1500	1009	981	28
Totals	**11750**	**9039**	**8637**	**402**

FIGURE 10.11-15 – **Enrolment and capacity analysis for the Gladstone study area.**

Key OC = Operating Capacity. SC = Scheduling Capacity



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enr	9039	8976	8966	9020	9017	9061	8950	8994	8946	8844	8757
Total OC	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750
OC w/o Glad	10150	10150	10150	10150	10150	10150	10150	10150	10150	10150	10150
SC w/o Glad	11165	11165	11165	11165	11165	11165	11165	11165	11165	11165	11165

***** *Total Enrolment includes International Students*

FIGURE 10.11-15 shows the operating capacity (OC) and scheduling capacity (SC) in the Gladstone study area. Current enrolment forecasts indicate that enrolment in this study area is stable. Sufficient space is available in nearby schools to adequately accommodate the current and forecast enrolment of Gladstone Secondary School.

Facility Condition Analysis

FIGURE 10.11-16 – **Facility condition and deferred maintenance for schools in the Gladstone study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Gladstone	1950	High	$23M	0.740
John Oliver	1921	High	$30M	0.700
Killarney	1957	High	$28M	0.680
Thompson	1958	High	$27M	0.740
Tupper	1958	Medium/Low	$28M	0.580
Vancouver Technical	1928	Seismic Upgrade 2008	$25M	0.450

Windermere	1961	High	$31M	0.760

Windermere Study Area

The Windermere Study Area is comprised of all schools that share boundaries with the Windermere catchment area.

FIGURE 10.11-17 – **The Windermere Study area.**

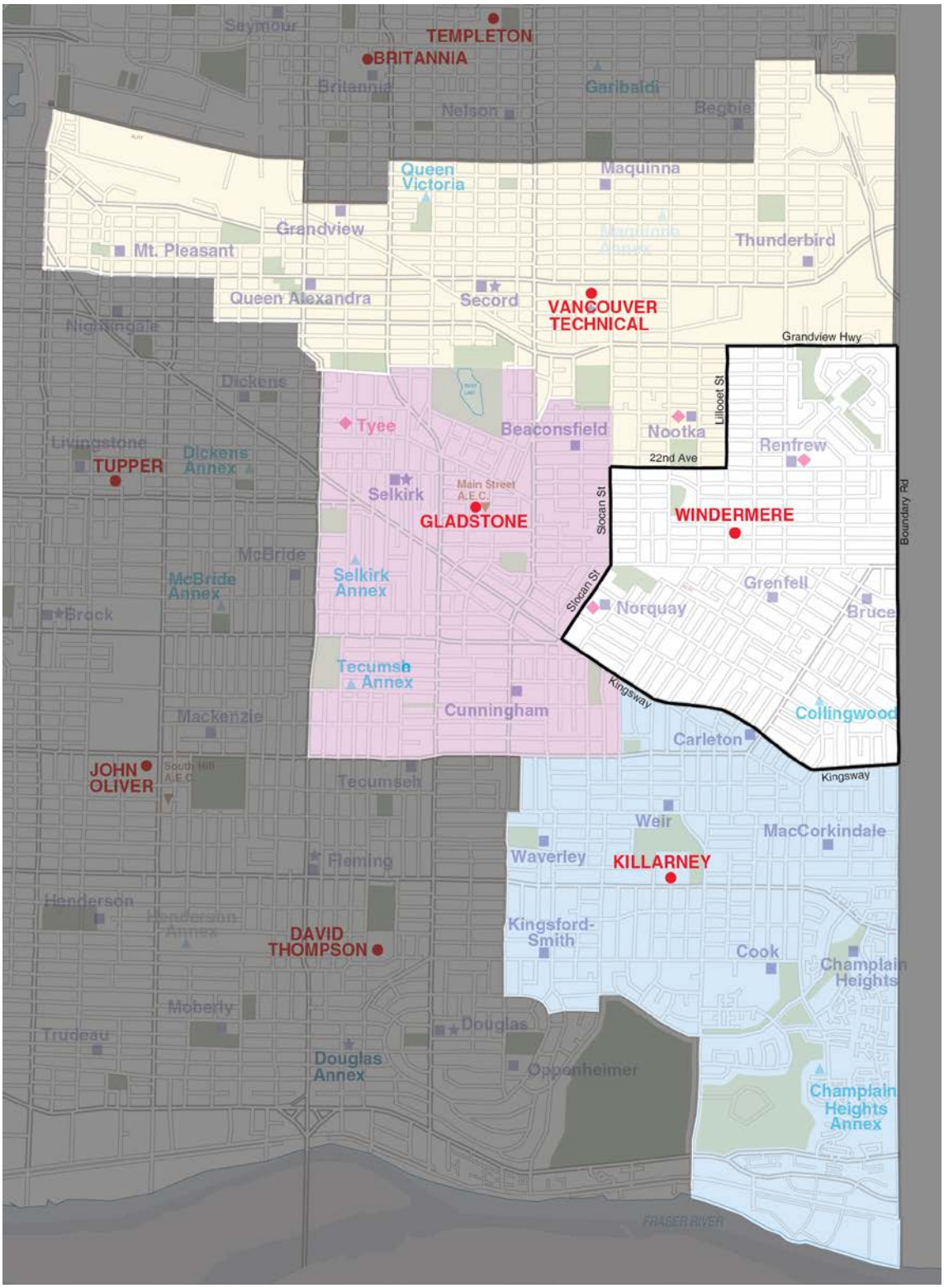


FIGURE 10.11-18 - **Schools in Windermere study area**

School	Operating Capacity	*Scheduling Capacity	2017 Capacity Utilization	Surplus Operating Capacity
Gladstone	1600	1760	60%	635
Killarney	2200	2420	86%	305
Vancouver Technical	1700	1870	97%	59
Windermere	1500	1650	67%	491

**Scheduling capacity is 110% of operating capacity. Most secondary schools can adequately accommodate the number of students indicated by the scheduling capacity of the school.*

FIGURE 10.11-19 - **current and forecast enrolment and space analysis for the Windermere study area.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Gladstone	1600	60%	965	914	635	765
Killarney	2200	86%	1895	1,753	305	502
Vancouver Technical	1700	97%	1641	1,626	59	157
Windermere	1500	67%	1009	856	491	678
Totals	**7000**	**75%**	**5510**	**5149**	**1490**	**1851**

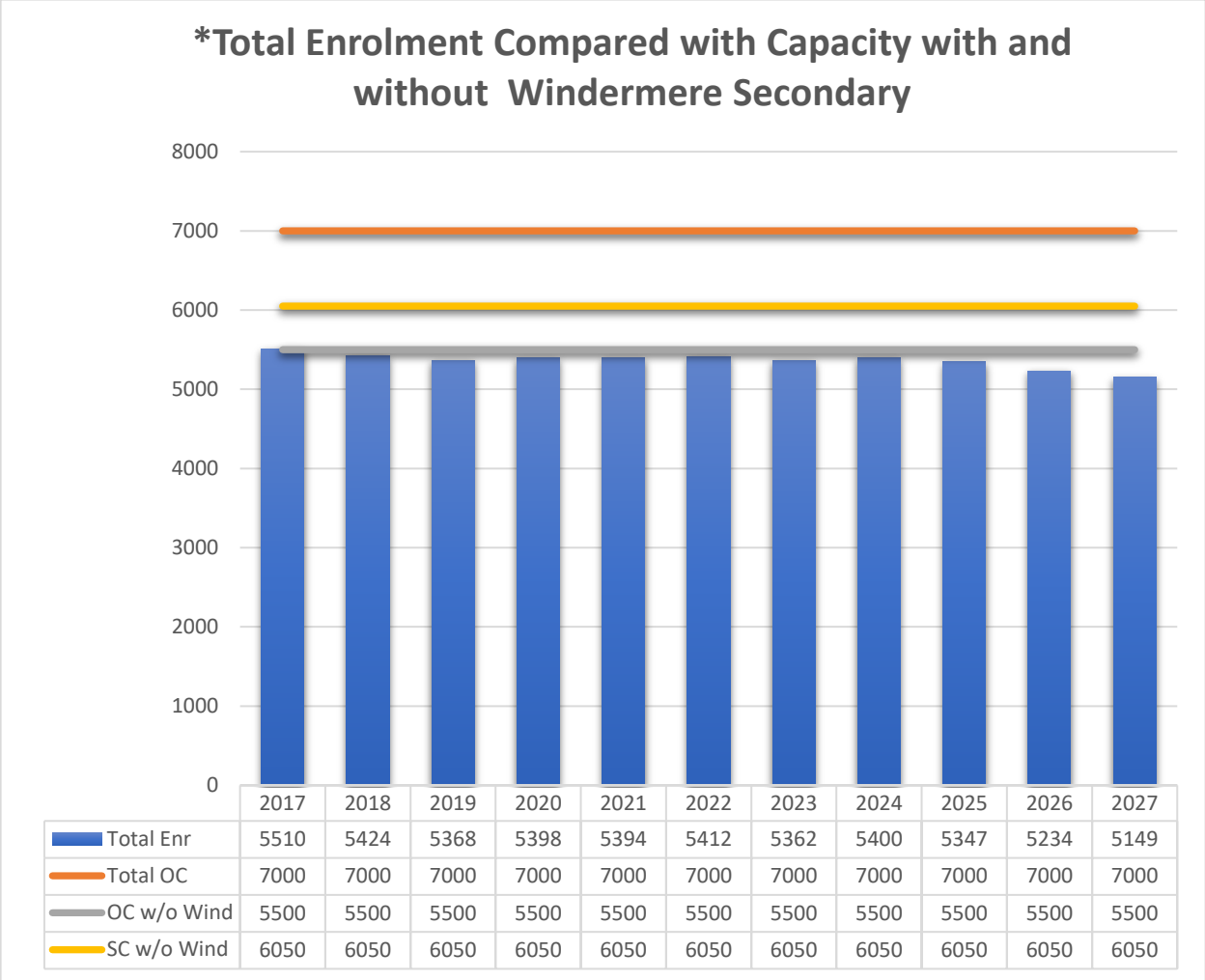
Enrolment forecast and analysis includes International Students

FIGURE 10.11-20 – **BC Resident and International student enrolment in the Windermere study area.**

School	Operating Capacity	2017 Total Enrolment	2017 BC Resident Enrolment	2017 International Enrolment
Gladstone	1600	965	926	39
Killarney	2200	1895	1780	115
Vancouver Technical	1700	1641	1572	69
Windermere	1500	1009	981	28
Total	**7000**	**5510**	**5259**	**251**

FIGURE 10.11-21 – **Enrolment and capacity analysis for the Windermere study area.**

Key OC = Operating Capacity. SC = Scheduling Capacity



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enr	5510	5424	5368	5398	5394	5412	5362	5400	5347	5234	5149
Total OC	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000
OC w/o Wind	5500	5500	5500	5500	5500	5500	5500	5500	5500	5500	5500
SC w/o Wind	6050	6050	6050	6050	6050	6050	6050	6050	6050	6050	6050

***** *Total Enrolment includes International Students*

FIGURE 10.11-21 shows the operating capacity (OC) and scheduling capacity (SC) in the Windermere study area. Current enrolment forecasts indicate that enrolment in this study area is declining. Sufficient space is available in nearby schools to adequately accommodate the current and forecast enrolment of Windermere Secondary School.

Facility Condition Analysis

FIGURE 10.11-22 – **Facility condition and deferred maintenance for schools in the Windermere study area.**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Gladstone	1950	High	$23M	0.740
Killarney	1957	High	$28M	0.680
Vancouver Technical	1928	Seismic Upgrade 2008	$25M	0.450
Windermere	1961	High	$31M	0.760

Point Grey Study Area

The Point Grey Study Area is comprised secondary schools that share boundaries with the Point Grey catchment area.

FIGURE 10.11-23 - **The Point Grey Study Area**

The following schools have been excluded from the current study:

- Byng is operating above 100% capacity utilization and cannot accommodate additional students at present.
- Hamber is in the design phase for its seismic project.
- University Hill Secondary is geographically isolated from Point Grey.

FIGURE 10.11-24 – **Schools in the Point Grey study area.**

School	Operating Capacity	*Scheduling Capacity	2017 Capacity Utilization	Surplus Operating Capactiy
Magee	1200	1320	91%	111
Point Grey	1050	1155	93%	75
Prince of Wales	1100	1210	95%	57

**Scheduling capacity is 110% of operating capacity. Most secondary schools can accommodate the number of students indicated by the scheduling capacity of the school.*

FIGURE 10.11-25 – **current and forecast enrolment and space analysis for the Point Grey study area.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Magee	1200	91%	1089	836	111	364
Point Grey	1050	93%	975	772	75	278
Prince of Wales	1100	95%	1043	905	57	195
Totals	**3350**	**93%**	**3107**	**2513**	**243**	**837**

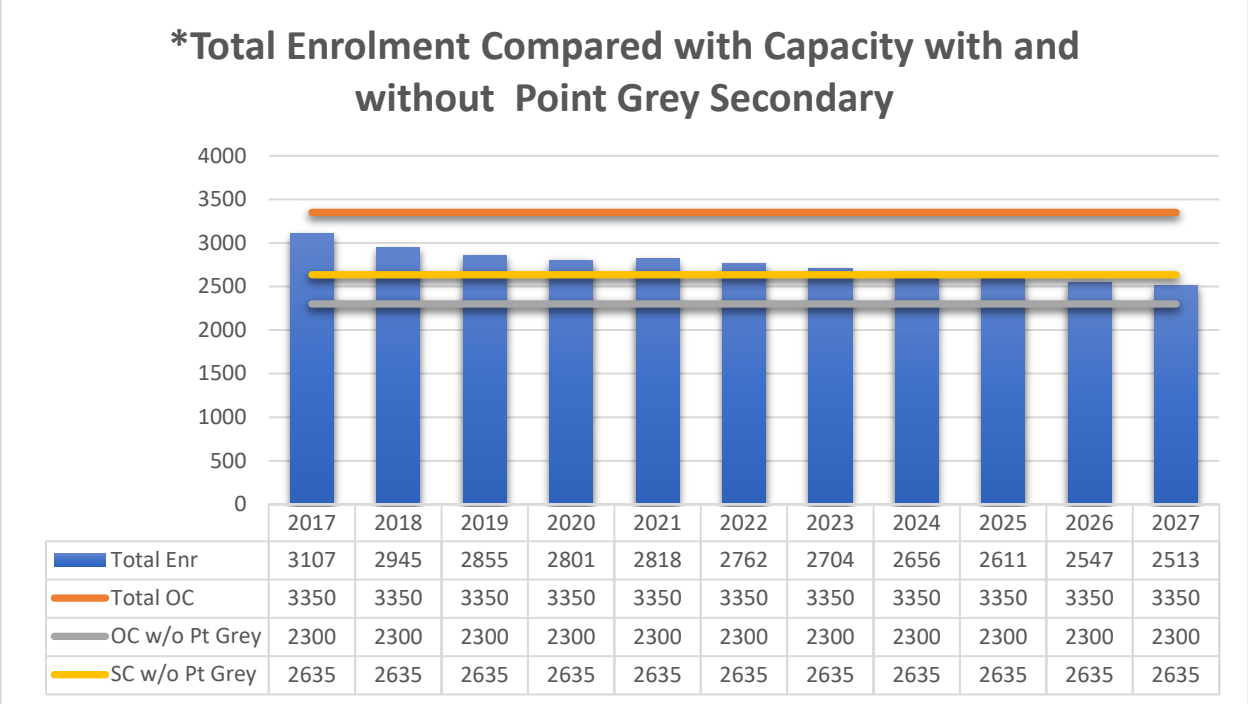
Enrolment forecast and analysis includes International Students

FIGURE 10.11-26 – **BC Resident and International student enrolment in the Point Grey study area.**

School	Operating Capacity	2017 Total Enrolment	BC Residents	International Students
Magee	1200	1089	967	122
Point Grey	1050	975	820	155
Prince of Wales	1100	1043	891	152
Totals	**3350**	**3107**	**2678**	**429**

FIGURE 10.11-27– **Enrolment and capacity analysis for the Point Grey study area.**

Key OC = Operating Capacity. SC = Scheduling Capacity



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enr	3107	2945	2855	2801	2818	2762	2704	2656	2611	2547	2513
Total OC	3350	3350	3350	3350	3350	3350	3350	3350	3350	3350	3350
OC w/o Pt Grey	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300
SC w/o Pt Grey	2635	2635	2635	2635	2635	2635	2635	2635	2635	2635	2635

** Total Enrolment includes 429 International Students*

FIGURE 10.11-27 - shows the operating capacity (OC) and scheduling capacity (SC) in the Point Grey study area. Current enrolment forecasts indicate that enrolment in this study area is declining.
In order to adequately accommodate students enrolled at Point Grey in nearby schools, enrolment management and/or facilities changes to add capacity to nearby schools may be required.

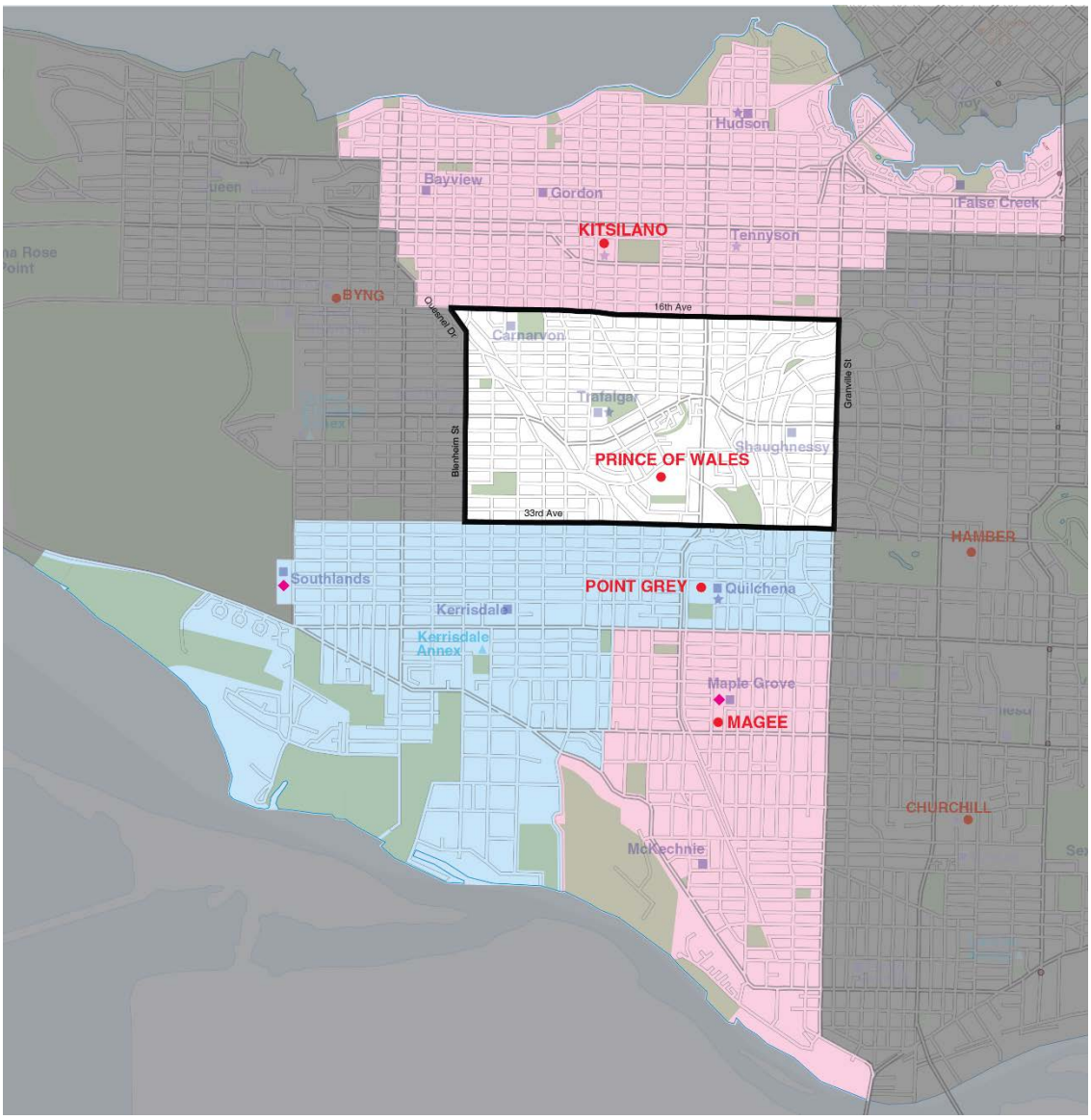
Facility Condition Analysis

FIGURE 10.11-28 – **Facility condition and deferred maintenance for schools in the Point Grey study area.**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Magee	1998	Completed Project	$8M	0.230
Point Grey	1929	High	$21M	0.720
Prince of Wales	1920	High	$24M	0.760

Prince of Wales Study Area

The Prince of Wales Study Area is comprised of the secondary schools that boundaries with the Prince of Wales catchment area.



The following schools have been excluded from the current study:

- Byng is operating above 100% capacity utilization and cannot accommodate additional students at present.
- Hamber is in the design phase for its seismic project.

Magee Secondary has been included in the Prince of Wales study are because of its proximity to Prince of Wales and the availability of surplus capacity at Magee.

FIGURE 10.11-29 – **schools in the Prince of Wales study area.**

School	Operating Capacity	*Scheduling Capacity	2017 Capacity Utilization	Surplus Operating Capacity
Kitsilano	1500	1650	91%	129
Magee	1200	1320	91%	111
Point Grey	1050	1155	93%	75
Prince of Wales	1100	1210	95%	57

**Scheduling capacity is 110% of operating capacity. Most secondary schools can adequately accommodate the number of students indicated by the scheduling capacity of the school.*

FIGURE 10.11-30 – **current and forecast enrolment and space analysis for the Prince of Wales study area.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Kitsilano	1500	91%	1371	1,462	129	80
Magee	1200	91%	1089	836	111	389
Point Grey	1050	93%	975	772	75	313
Prince of Wales	1100	95%	1043	905	57	223
Totals	**4850**	**92%**	**4478**	**3975**	**372**	**875**

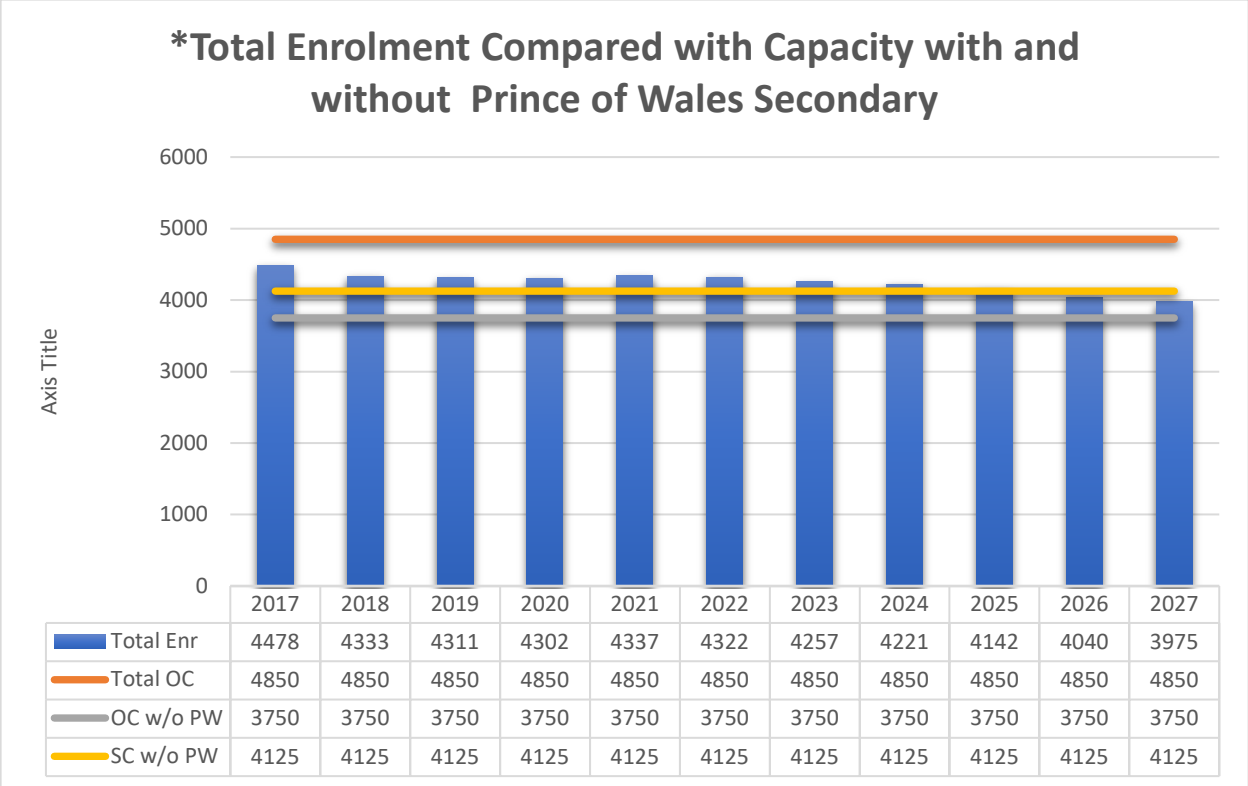
Enrolment forecast and analysis includes International Students

FIGURE 10.11-31 – **BC Resident and International student enrolment in the Prince of Wales study area.**

School	Operating Capacity	2017 Enrolment	BC Residents	International Students
Kitsilano	1500	1371	1233	138
Magee	1200	1089	967	122
Point Grey	1050	975	820	155
Prince of Wales	1100	1043	891	152
Totals	**4850**	**4478**	**3911**	**567**

FIGURE 10.11-32 – **Enrolment and capacity analysis for the Prince of Wales study area.**

Key OC = Operating Capacity. SC = Scheduling Capacity



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enr	4478	4333	4311	4302	4337	4322	4257	4221	4142	4040	3975
Total OC	4850	4850	4850	4850	4850	4850	4850	4850	4850	4850	4850
OC w/o PW	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750
SC w/o PW	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125

***** *Total Enrolment includes 567 International Students*

FIGURE 10.11-32 - shows the operating capacity (OC) and scheduling capacity (SC) in the Prince of Wales study area. Current enrolment forecasts indicate that enrolment in this study area is declining.
In order to adequately accommodate students enrolled at Prince of Wales in nearby schools, enrolment management and/or facilities changes to add capacity to nearby schools may be required.

Facility Condition Analysis

FIGURE 10.11-33 – **Facility condition and deferred maintenance for schools in the Prince of Wales study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Kitsilano	1919	Replacement School 2018	$29M	0.740
Magee	1998	Completed Project	$8M	0.230
Point Grey	1929	High	$21M	0.720
Prince of Wales	1920	High	$24M	0.760

10.12 Annex Consolidation Study Areas

In 2017 the district operated 13 annexes with a combined operating capacity of 1779 and an enrolment of 1441 students.

In recent years, with the support of the district, parents have elected to enrol their children in the main elementary school where enrolment was particularly low at the annex.

The following annexes have now been officially closed through the District school closure process.

- Laurier Annex
- Maquinna Annex
- Henderson Annex

These three annexes are currently leased to the Conseil Scolaire Francophone. In addition, the 2017-2018 school year was the last year that students enrolled at Garibaldi Annex. The Annex has not been officially closed despite there are no students enrolled in the 2018-19 school year.

FIGURE 10.12-1 - **Annexes in areas of low enrolment or enrolment decline that meet the following criteria:**

- New building
- Medium/Low seismic risk rating

Annex	Year First Opened	Seismic Risk	Seismic Status
Champlain Heights Annex	1986	MEDIUM (M) / LOW (L)	MEDIUM/LOW RISK Lower Priority
*Collingwood Annex	2002	Completed Project	NEW SCHOOL
Tecumseh Annex	1959	MEDIUM (M) / LOW (L)	MEDIUM/LOW RISK Lower Priority

**Collingwood is in the Bruce Elementary catchment*

FIGURE 10.12-2 - **Annexes in areas of low enrolment or enrolment decline that meet the following criteria**

- Have not been seismically upgraded
- Have not yet been supported in the SMP process

Annex	Year First Opened	Seismic Risk	Seismic Status
McBride Annex	1963	High 3 (H3)	Not Upgraded
***Tillicum Annex**	1964	High 1 (H1)/ High 2 (H2)	Not Upgraded

**Tillicum is in the Hastings Elementary catchment*

Champlain Heights Catchment Study Area

FIGURE 10.12-3 CHAMPLAIN HEIGHTS STUDY AREA

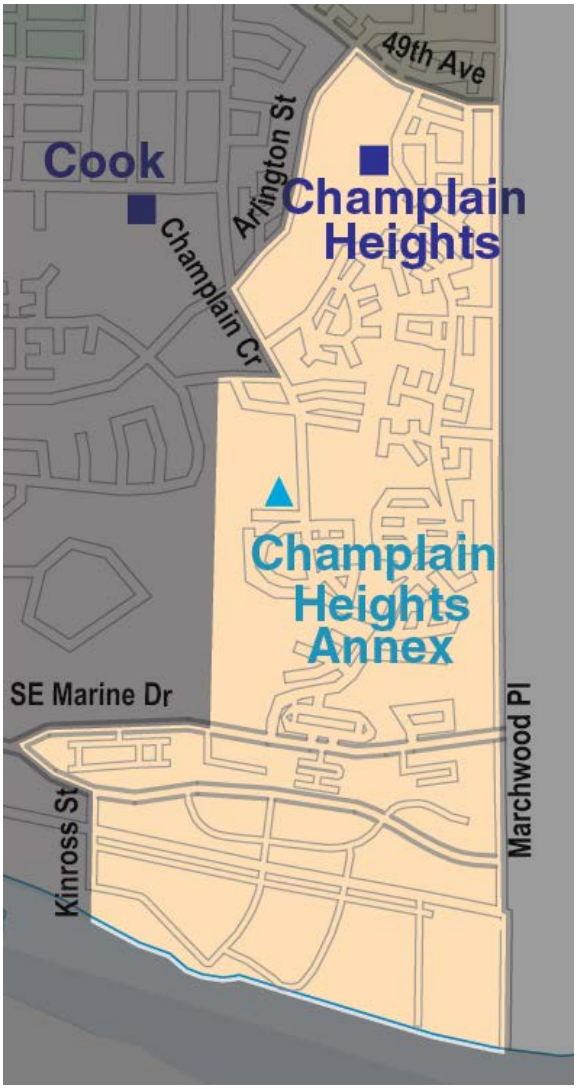
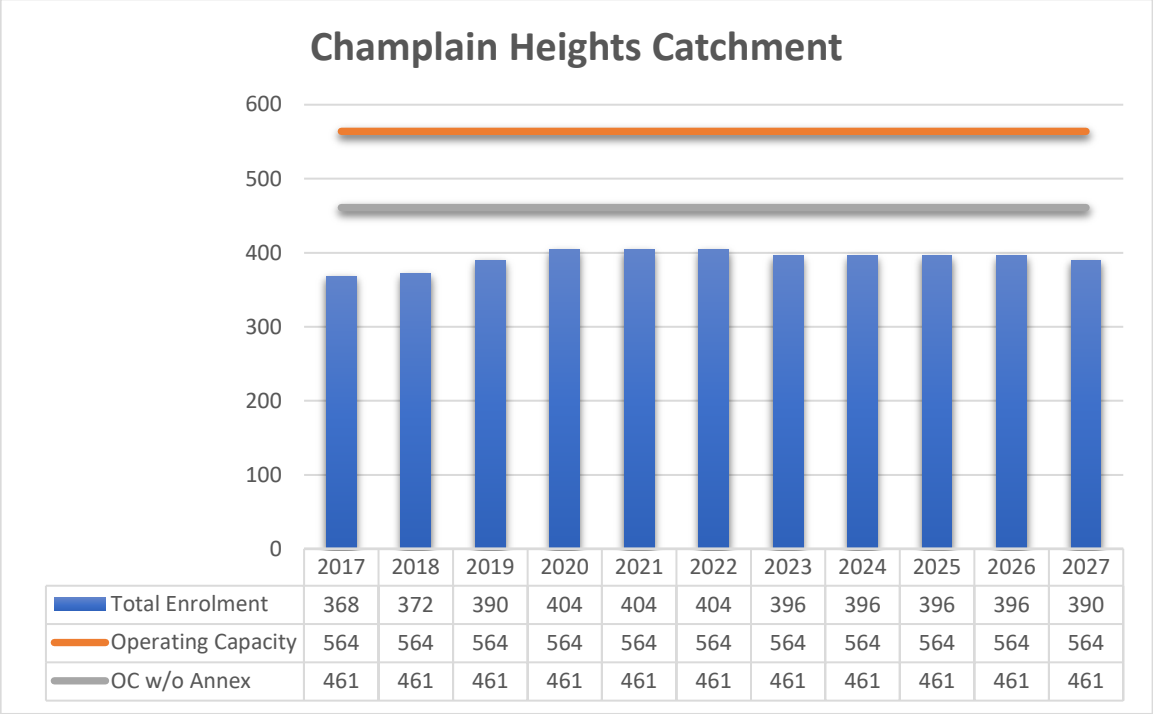


FIGURE 10.12-4 – **Current and forecast enrolment and space analysis for Champlain Heights catchment.**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Champlain Heights	461	55%	255	273	206	188
Champlain Heights Annex	103	110%	113	117	-10	-14
Catchment	564	65%	368	390	196	174

FIGURE 10.12-5 – **Enrolment and space analysis for the Champlain Heights catchment.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enrolment	368	372	390	404	404	404	396	396	396	396	390
Operating Capacity	564	564	564	564	564	564	564	564	564	564	564
OC w/o Annex	461	461	461	461	461	461	461	461	461	461	461

Figure 10.12-5 shows the operating capacity (OC) in the Champlain Heights study area with and without Champlain Heights Annex. Current enrolment forecasts indicate that total enrollment in this study area will be stable and that sufficient capacity exists to accommodate the Annex students at Champlain Heights Elementary.

Facility Condition Analysis

FIGURE 10.12-6 – **Facility condition and deferred maintenance for facilities in Champlain Heights catchment study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Champlain Heights	1973	High	$6M	0.530
Champlain Heights Annex	1986	Medium/Low	$2M	0.610

Bruce Catchment Study Area

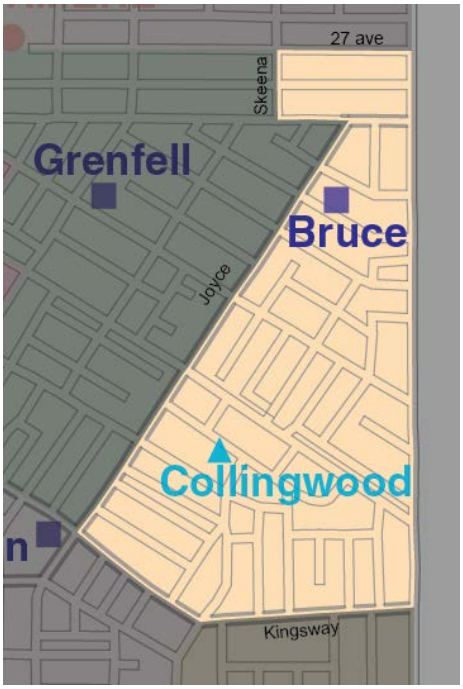
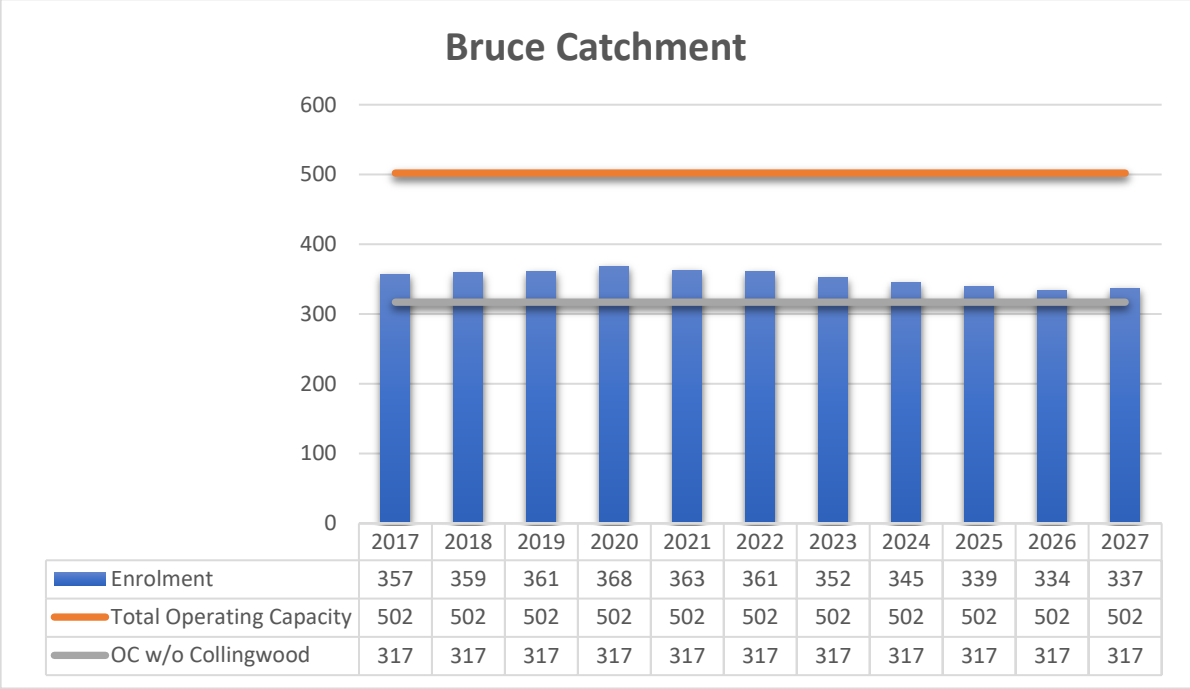


FIGURE 10.12-7 – **current and forecast enrolment and space analysis for the Bruce catchment**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Bruce	317	74%	233	219	84	98
Collingwood Annex	185	67%	124	118	61	67
Catchment	502	71%	357	337	145	165

FIGURE 10.12-8 – **Enrolment and space analysis for the Bruce catchment.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Enrolment	357	359	361	368	363	361	352	345	339	334	337
Total Operating Capacity	502	502	502	502	502	502	502	502	502	502	502
OC w/o Collingwood	317	317	317	317	317	317	317	317	317	317	317

Figure 9.12-8 shows the operating capacity (OC) in the Bruce study area with and without Collingwood Annex. Current enrolment forecasts indicate that total enrollment in this study area is in a slight decline. To accommodate the student enrolment of Collinwood Annex at Bruce Elementary, enrolment management and/or facilities changes to add capacity to Bruce Elementary may be required.

Facility Condition Analysis

FIGURE 10.12-9 – **Facility condition and deferred maintenance for facilities in Bruce catchment study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Bruce	1964	High	$6M	0.720
Collingwood	2002	New School 2002	$1M	0.180

Tecumseh Catchment Study Area

FIGURE 10.12-10 – **Tecumseh Catchment Study Area**

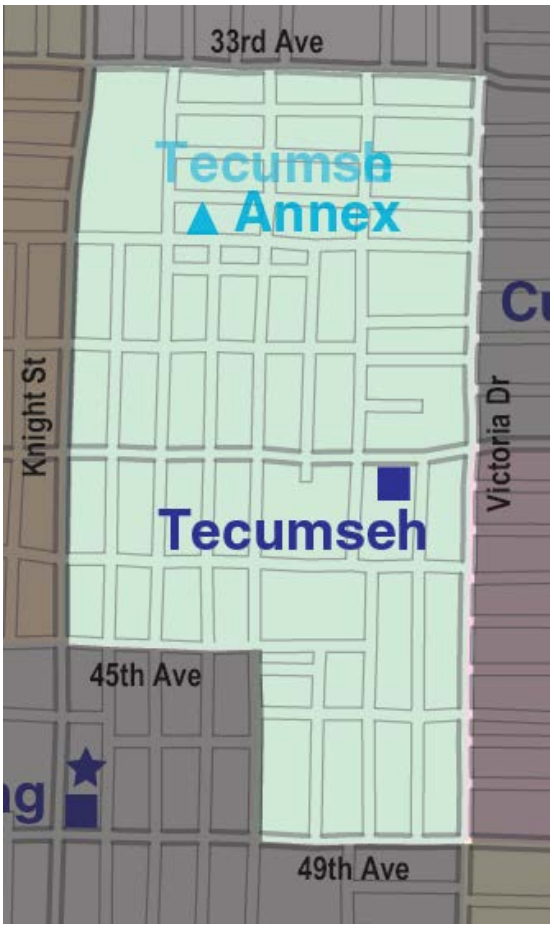
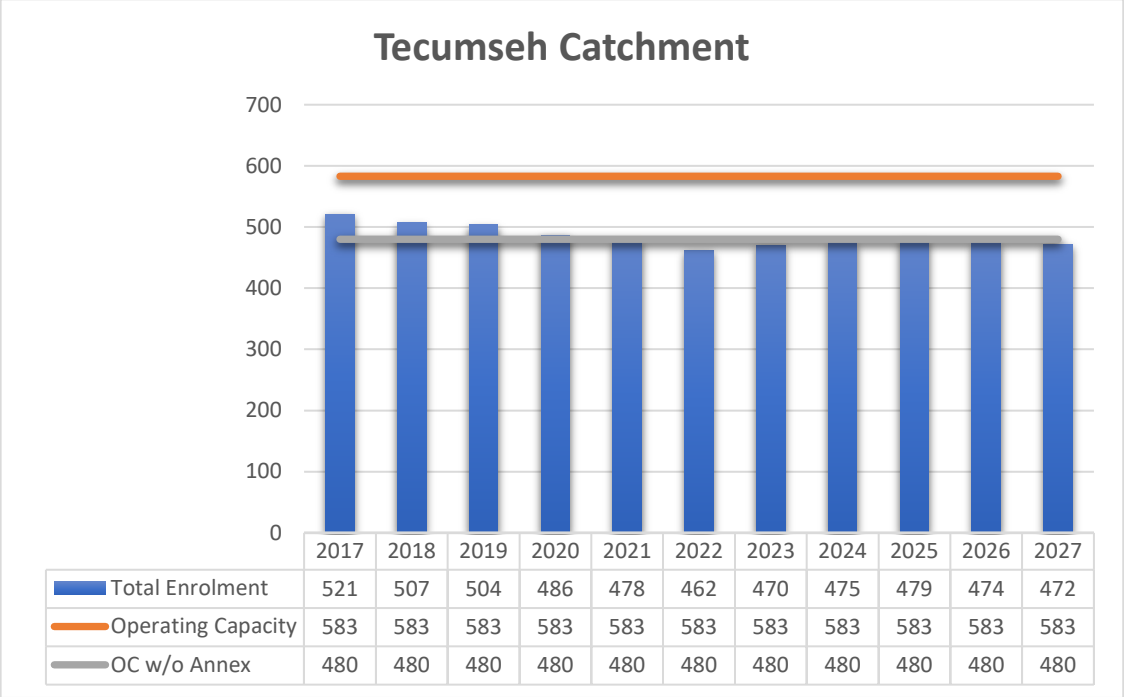


FIGURE 10.12-11 – **current and forecast enrolment and space analysis for the Tecumseh catchment**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Tecumseh	480	94%	449	403	31	77
Tecumseh Annex	103	70%	72	69	31	34
Catchment	583	89%	521	472	62	111

FIGURE 10.12-12 – **Enrolment and space analysis for the Tecumseh catchment.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enrolment	521	507	504	486	478	462	470	475	479	474	472
Operating Capacity	583	583	583	583	583	583	583	583	583	583	583
OC w/o Annex	480	480	480	480	480	480	480	480	480	480	480

Figure 9.12-12 shows the operating capacity (OC) in the Tecumseh study area with and without Tecumseh Annex. Current enrolment forecasts indicate that total enrollment in this study area will decline slightly until 2020 and then be stable. At that time, sufficient capacity will exist to accommodate the Annex students at Tecumseh Elementary.

Facility Condition Analysis

FIGURE 10.12-13 – **Facility condition and deferred maintenance for facilities in the Tecumseh catchment study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Tecumseh	1910	Medium/Low	$7M	0.670
Tecumseh Annex	1959	Medium/Low	$2M	0.380

McBride Catchment Study Area

FIGURE 10.12-14 – **current and forecast enrolment and space analysis for McBride catchment**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
McBride	410	87%	357	404	53	6
McBride Annex	124	61%	76	70	48	54
Catchment	534	81%	433	474	101	68

FIGURE 10.12-15 –**Enrolment and space analysis for the McBride catchment.**

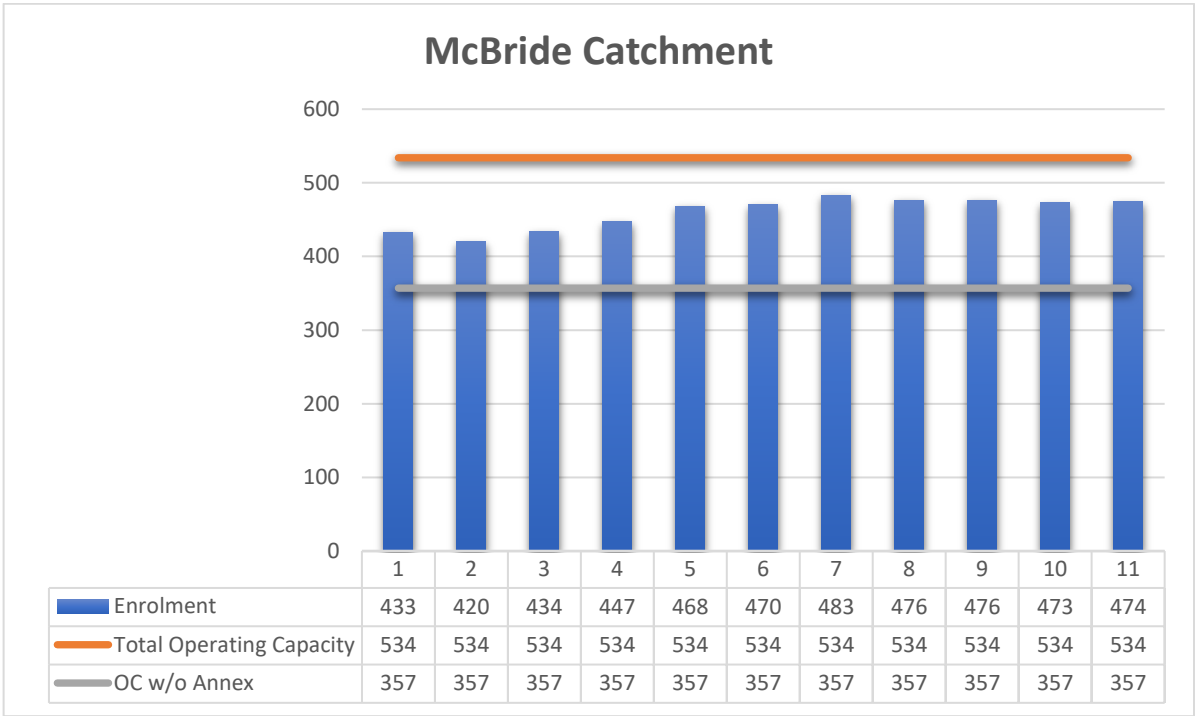


Figure 9.12-15 shows the operating capacity (OC) in the McBride study area with and without McBride Annex. Current enrolment forecasts indicate that total enrollment in this study area will increase. To accommodate the student enrolment of McBride Annex at McBride Elementary, enrolment management and/or facilities changes to add capacity to McBride Elementary would be required.

Facility Condition Analysis

FIGURE 10.12-16 – **Facility condition and deferred maintenance for facilities in McBride catchment study area**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
McBride	1910	Seismic Upgrade 2009	$6M	0.740
McBride Annex	1963	High	$2M	0.510

Hastings Catchment Study Area

FIGURE 10.12-17

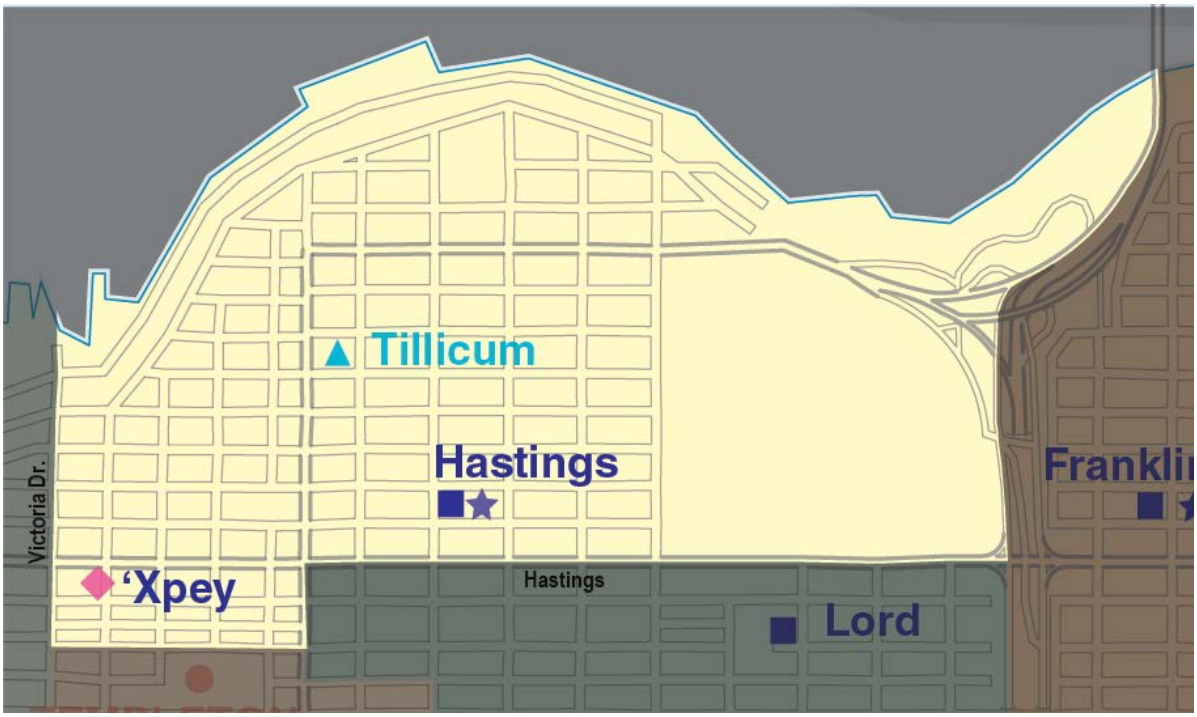
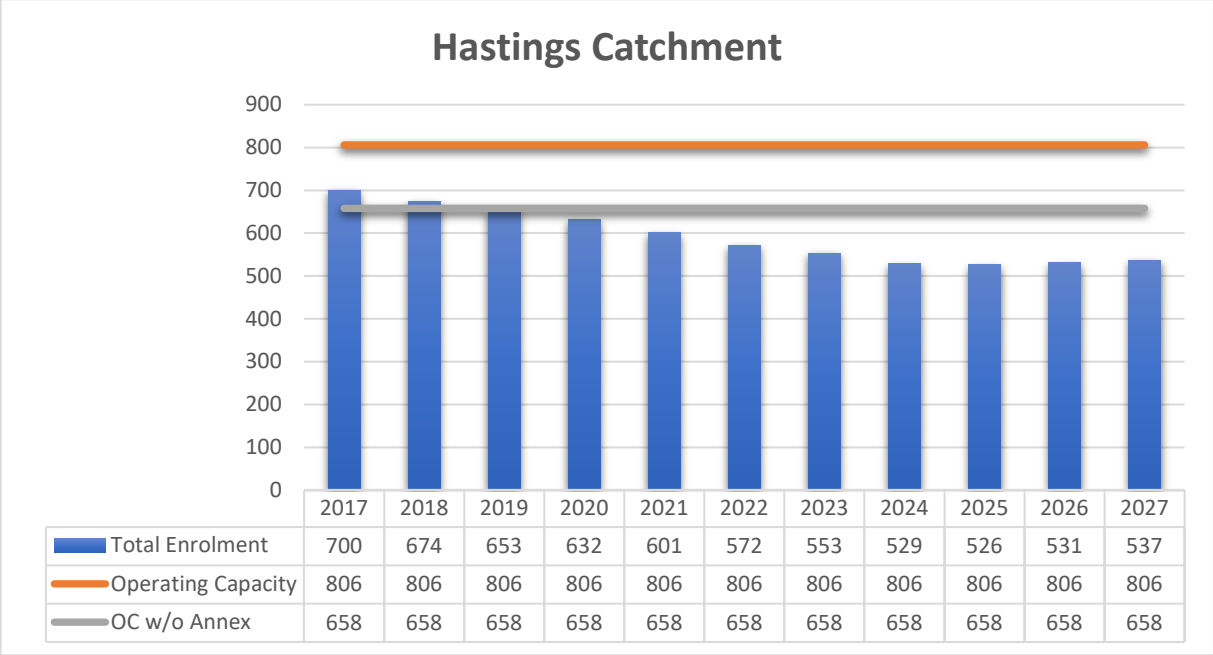


FIGURE 10.12-18 – **current and forecast enrolment and space analysis for Hastings catchment**

School	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Hastings	658	91%	601	430	57	228
Tillicum Annex	148	67%	99	107	49	41
Catchment	806	87%	700	537	106	269

FIGURE 10.12-19 – **enrolment and space analysis for the Hastings catchment.**



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Enrolment	700	674	653	632	601	572	553	529	526	531	537
Operating Capacity	806	806	806	806	806	806	806	806	806	806	806
OC w/o Annex	658	658	658	658	658	658	658	658	658	658	658

Figure 10.12-8 shows the operating capacity (OC) in the Hastings study area with and without Tillicum Annex. Current enrolment forecasts indicate that total enrollment in this study area will decline at such a rate that sufficient capacity would exist to accommodate the Tillicum Annex students at Hastings Elementary starting in 2020.

Facility Condition Analysis

FIGURE 10.12-20 – **Facility condition and deferred maintenance for facilities in the Hastings catchment study area.**

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Hastings	1912	Seismic Upgrade 2003	$4M	0.360
Tillicum	1964	High	$3M	0.640

10.13 Reducing Surplus Capacity by Relocating District Choice Programs

Four District Choice programs are currently located in stand-alone facilities. Relocation of one or more of these programs to a school facility with surplus capacity is another option to reduce surplus capacity.

FIGURE 10.13-1

Program Name	Affiliated School	Program Location	Program Type	Program Detail
Ideal Mini School	Churchill	Building on Laurier Elementary Site	District Choice	Grade 8-12 Off site mini school program
Queen Elizabeth Annex Early French Immersion	Jules Quesnel	Queen Elizabeth Annex	District Choice	Grade K-3 Early French Immersion Program
Tyee Montessori	n/a	Tyee Elementary School	District Choice	Grade K-7 Montessori Program
Indigenous Focus School	n/a	Xpey' Elementary School	District Choice	Grade K-7 Indigenous Focus School

Figure 10.13-2

School/Program	Operating Capacity	2017 Capacity Utilization	2017 Enrolment	2027 Enrolment	2017 Surplus	2027 Surplus
Ideal Mini	120	0.95	114	125	6	-5
Xpey'	247	36%	90	109	157	138
Queen Elizabeth Annex	103	79%	81	77	22	26
Tyee	135	135%	182	163	-47	-28

Figure 10.13-3

School	Year First Opened	Seismic Status	Deferred Maintenance	FCI
Ideal Mini	1949	Partial Seismic Upgrade 2008	$2M	0.7
Queen Elizabeth Annex	1964	High	$2M	0.590
Tyee	1988	Medium/Low	$1M	0.420
Xpey'	1905	High	$5M	0.520

10.14 Consequences of Not Reducing Surplus Capacity

The School Consolidation analysis above is a comprehensive study of opportunities to reduce surplus capacity in the VSB. As stated previously, the School Consolidation Feasibility Analysis is not intended to identity schools for possible closure. However, based on the conclusions in this analysis, should the District identifies schools for consideration for closure, there is every likelihood that the prospect of school closure will be contentious, and that the deep concern in communities where schools have been identified for consideration for closure will be represented in many ways. The districts obligation is to engage and consult with stakeholders in a transparent, timely, and thoughtful way to ensure that in the event of a school closure the educational needs of the community are still being met.

The VSB has a broader obligation to fulfill. The district has the responsibility, in collaboration with the ministry of education, to ensure that our students are educated in seismically safe schools. Should the VSB decide to continue operating its current inventory of schools in the context of past and ongoing enrolment decline, the district will arrive at a time when many thousands of our students attend unsafe schools while many of our seismically safe schools are operating well below optimal utilization levels.

The Ministry of Education is committed to providing enough safe seats in the District to ensure that all VSB students are able to attend a seismically safe school. In the context of broader provincial requirements and demands for capital funding the Ministry of Education will be challenged by the expectation that all existing facilities in the VSB should be seismically upgraded or replaced with new schools as that would require funding capital projects for facilities with low capacity utilization in a District with up to 12,500 seats of surplus capacity by 2027.

Type of School	Average Operating Capacity	Surplus Capacity Estimate in 2027	Estimated Number of Schools
Elementary	414	5700	14
Secondary	1395	6300	5

Based on the average operating capacity of elementary and secondary schools and the forecast surplus capacity for the District in 2027, the number of elementary and secondary schools that may not be upgraded to current seismic safety standards has been estimated. The surplus capacity forecast does not include additional operating capacity that may be available to the district if requests for new schools and expansions in the current capital plan are approved.