



October 15, 2018

The Honourable Rob Fleming, Minister of Education
Scott MacDonald, Deputy Minister
Reg Bawa, Assistant Deputy Minister, Resource Management

via email

Dear Sirs,

The Parent Advocacy Network (PAN) is pleased to present you with our brief calling for a review of the current BC Area Standards. PAN has conducted research on BC Area Standards over a number of years in response to concerns about the size and educational restrictions of new schools from parents, teachers and administrators. These include crowding due to lack of circulation space; loss of non-enrolling music rooms, art rooms and performance space; loss of spaces outside the classroom for reading assistance, project work and quiet areas for regulation; loss of space for programming flexibility; lack of storage; inability of new schools to accommodate all in-catchment students; and stress on new school facilities due to high density use.

As part of our research, PAN conducted a comparison of area standards policies across Canada. We discovered that BC is far below other provinces in both instructional and gross area per student. We also discovered that although BC is a world-leader in 21st century curriculum design, it is lagging behind other provinces and countries in aligning Area Standards with best practices for 21st century school design. This is concerning, given that Area Standards determine the physical limits of new school builds and set the boundaries for what is possible within that space.

BC's government is committing billions of taxpayer dollars over the next decade towards new school construction to address seismic safety, rapid population growth and aging infrastructure. It is imperative that government invest in buildings that support ministry mandates for student success and satisfaction and that are able to fully meet the teaching and learning needs of students in K-12 education both today and long into the future.

We believe that it is time for the BC government to show leadership and commitment to education transformation through an Area Standards review as per the education minister's announcement at the BCCPAC AGM and the BCSTA AGM this Spring. The following brief sets out the evidence and rationale for such a review.

We kindly request a meeting with Scott MacDonald to discuss the Ministry of Education's plans to update the BC Area Standards.

Sincerely,

PAN Steering Committee

cc:

Hon John Horgan, Premier, BC NDP

Hon Carole James, Minister of Finance and Deputy Premier

Hon Andrew Wilkinson, Leader of the Opposition, BC Liberal Leader

Hon Andrew Weaver, BC Green Leader

Hon Dan Davies, BC Liberal Spokesperson for Education

Hon Mary Polak, BC Liberal Spokesperson for Education

Hon Sonia Furstenau, BC Green Spokesperson for Education

Hon Bob D'Eith, Chair, Select Standing Committee on Finance & Government Services

Hon Dan Ashton, Deputy Chair, Select Standing Committee on Finance & Government Services

Andrea Sinclair, President, BCCPAC

Gordon Swan, President, BCSTA

Glen Hansman, President, BCTF

Tom Longridge, President, BCSSA

Kevin Reimer, President, BCPVP

Call For An AREA STANDARDS Review

Current Area Standards for new BC schools fall far below other provinces in per pupil space allowance and do not provide sufficient space to build schools that support 21st century teaching and learning and the goals of the redesigned BC curriculum.

EXECUTIVE SUMMARY

The Ministry of Education is mandated to make schools safer, to build and upgrade schools in every region of the province and to successfully implement BC's new curriculum.ⁱ These mandates are inter-related.

BC is a world leader in innovative curriculum design for 21st century learning. However, BC's Area Standards (2003), the official blueprint that sets out the physical parameters for learning environments in new school builds is based on an out-dated model of educational delivery.ⁱⁱ It is centred on the classroom as a self-contained unit for whole-group, teacher-driven content delivery.ⁱⁱⁱ In contrast, 21st century learning requires a range of flexible spaces in and beyond the classroom to support personalized learning, collaboration and experiential, hands-on learning.^{iv} Current Area Standards for new BC schools do not provide sufficient space allowances to build schools that support 21st century teaching and learning and the goals of the redesigned BC curriculum.

Research overwhelmingly shows that school size and design directly impact student learning outcomes.^v In comparison to other provinces across Canada that employ area standards for new school construction, BC has the lowest space allocation per pupil for both instructional space and gross floor area (Appendix A). Under the current standards, replacement schools are on average 30% smaller than existing schools for the same size population.^{vi} This has severely restricted non-enrolling spaces in elementary schools, eliminating spaces that support quality education in the arts.^{vii} It has also curtailed circulation space for movement and community gathering that are shown to significantly impact social wellbeing and sense of belonging for students within a school. Furthermore, BC Area Standards does not reflect increased space requirements arising from the restored contract language on class size and composition.

The Neighbourhood Learning Centre (NLC) policy (2008) grants schools an additional 15%

floor area if it can be shown to serve community needs.^{viii} Current government direction for NLC grants is for separate, self-contained areas within schools that are increasingly designed to support child-care and early childhood learning services. While the NLC creates cost effective space for the provision of much needed community services, it is the priority of the Minister of Education to ensure that schools have sufficient space to meet the educational needs of K-12 students first and foremost. The NLC creates the illusion of increased school space, without actually ameliorating the untenable space restrictions under BC Area Standards. NLC space intended primarily to serve community needs, should not be funded through the Ministry of Education's capital budget.

Government is committing billions in capital expenditure over the next decade to build new schools in areas of population growth and replace or update older schools across the province, including the 142 schools still awaiting seismic mitigation.^{ix} This is an opportunity to make wise investments in school infrastructure that align with ministry priorities on student outcomes, student satisfaction and are compatible with best practices in school design for 21st century learning.^x

Other provinces have led the way in updating area standards to align with 21st century school design principles. They have also adopted cost effective strategies to manage demographic fluctuations without compromising access to shared educational spaces.

If BC is to “modernize its education system”^{xi} and be a leader in 21st century teaching and learning, it is imperative that the Area Standards policy is updated to align with the redesigned BC curriculum. This will enable government to make smart and equitable investments in school facilities that optimize educational opportunities for all students both now and decades to come.

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Background and Context

“More than other building types, school facilities have a profound impact on their occupants and the functions of the building, namely teaching and learning.”^{xii} Whole Building Design Guide, Institute for Building Sciences

Facilities are a key area of concern for the Ministry of Education.^{xiii} The BC government is committed to providing safe and effective learning environments as part of their Ministry Service Plan.^{xiv} New schools are needed in areas of the province experiencing rapid population growth.^{xv} There are 142 schools across BC still awaiting approval for replacement or upgrading within the next ten years.^{xvi} In addition, deferred maintenance on school infrastructure throughout the province currently totals \$5 billion, with many older school facilities posing health risks.^{xvii}

All new schools within the province must comply with the BC Area Standards that defines the maximum space allowance for school construction.^{xviii} This document replaced the BC Facilities Manual in 2003, just prior to government commitment to the Seismic Mitigation Program in 2005.^{xix}

Under BC Area Standards, replacement schools are on average 30% smaller than existing schools for the same student population.^{xx} (Figure 1)

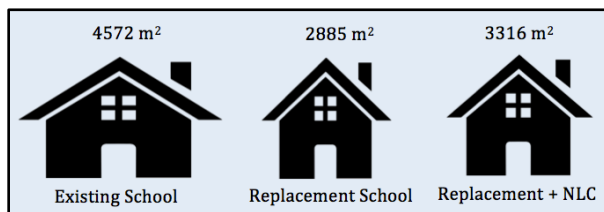


Figure 1. Bayview Elementary School, Vancouver: Relative size of existing and replacement schools under BC Area Standards

Even though individual classrooms remain of an equivalent size, non-enrolling educational spaces, operational and circulation spaces have all been severely reduced (Appendix B). BC Area Standards has limited or eliminated dedicated spaces for the arts, reduced the capacity to extend learning outside the classroom, and reduced

communal space. While the BC Area Standards may have created cost efficiencies in new school construction, it has done so at the expense of educational opportunity and student wellbeing.

QUICK FACTS: BC AREA STANDARDS

- has the lowest space allocation per student in both instructional and gross floor area when compared with other provinces
- does not allocate sufficient space for 21st century school design to support implementation of the redesigned BC curriculum.
- does not accommodate specialized hands-on learning spaces for art, science, music and/or performing arts in elementary schools.
- does not adjust space allocations for multipurpose and gym in schools to reflect increased school size and higher use needs.
- allocates only half the circulation space (hallways, walls, stairwells, community gathering spaces and entrance way) compared with Ontario and New Brunswick
- does not allocate space for a staff room or washrooms

Facts and statistics derived from a PAN comparative study of BC area standards in relation to educational specification guidelines in other provinces across Canada. (See table comparisons. Appendix A)

In 2008, the BC government introduced the Neighbourhood Learning Centre grant which increased gross area by an additional 15%, if that space would also serve a community function.^{xxi} This provision has enabled some schools in the past to augment non-enrolling spaces to better meet student needs. However, as of 2018, NLC space is increasingly dedicated to self-contained child care and early learning spaces. Additional NLC space provisions for community use does not

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compensate for and should not obscure the inadequacy of space provisions within BC Area Standards for K-12 education, which is the primary responsibility of the Minister of Education.

Space Matters

“It has to be recognized that the built-environment limits, to a greater or lesser extent, the scope of educational programmes and has an effect on the physical, mental and social welfare of the students.” UNESCO^{xxii}

Research shows that the physical environment of a school, both the size and design, has significant impact on mental wellbeing at school as well as student academic outcomes.^{xxiii} The spatial environment is often called the “third teacher”.^{xxiv}

BC Area Standards allocates the least amount of gross floor area to each student at 7.9 meters squared while Alberta allocates 9.0 m², Ontario 11.0 m², New Brunswick, 11.9 m² and Saskatchewan 13.7 m² respectively. While BC Area Standards is similar to other provinces in terms of enrolling classroom size, it is markedly deficient in all other aspects of space allocation. See Figure 2 and Appendix A.

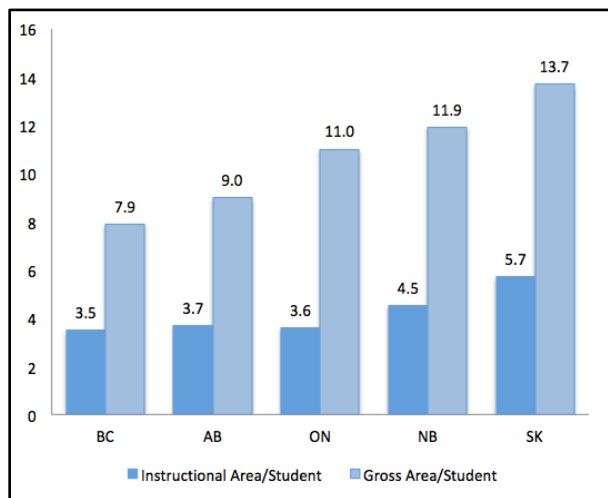


Figure 2. Comparison of total instructional space per student in meters squared across Canadian provinces.

Of further concern, is the lack of space allocated to circulation in BC schools.^{xxv} Circulation includes walls, hallways, stairwells, entrance areas and

non-enclosed gathering spaces.^{xxvi} BC Area Standards allocates only 530m² of circulation space for an elementary school of approximately 350 students, half the space allocated in Ontario or New Brunswick for the same number of students (Figure 3). More problematically, the space allocated to circulation in BC (or “design space” as it is euphemistically called in the BC Area Standards) must also absorb key operational spaces not accounted for such as a staff room and student washrooms.

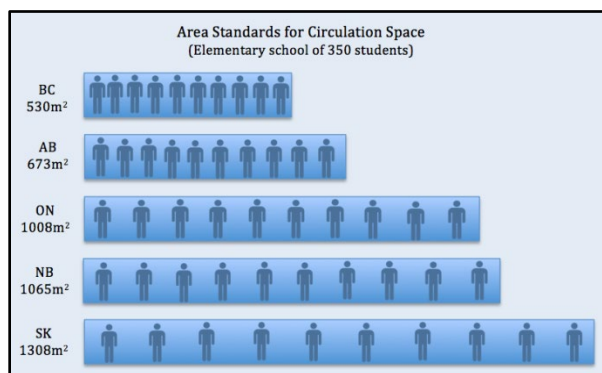


Figure 3. Cross Province comparison of Area Standards for circulation space for an elementary school of 350 students.

Studies link overcrowding and high-density school environments to increased aggression and psychological stress in students.^{xxvii} Conversely, schools with more spacious and flexible environments report increased teacher and student satisfaction, a greater sense of belonging and improved academic performance.^{xxviii} Studies identify ease of movement between spaces and access to both quiet and communal gathering spaces as key factors.^{xxix} The need for adequate circulation is particularly acute for children with special needs including access to quiet, safe, recovery spaces outside the classroom.^{xxx} The lack of space allocated to circulation in BC Area Standards therefore has serious implications for student satisfaction and mental health, two of the primary areas of concern for the current Ministry of Education.^{xxxi}

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World Leading Curriculum Design, Outdated Area Standards

“There is a growing belief amongst policymakers, architects, educators, parents, and students that traditional models of school design are not conducive to teaching and learning the skills necessary for success in the 21st century.” Hanover Research^{xxxii}

BC has designed a world-leading curriculum to transform education in BC for 21st century learning.^{xxxiii} However, current BC Area Standards are based on an outdated, industrialized model of education delivery that is centred on the enclosed classroom as a container for teacher-directed content delivery to a uniform group of learners.^{xxxiv} In contrast, 21st century learning design requires flexible use of space both inside and outside the classroom that allows for personalized learning, student and teacher collaboration as well as opportunities for a range of specialized and experiential learning modalities.^{xxxv} There is evidence to show that access to a variety of learning spaces outside the classroom contributes to increased student engagement.^{xxxvi}

Current BC Area Standards does not allocate space to support learning outside the enrolling classroom to accommodate the kind of personalized, collaborative and hands-on learning envisioned in the revised BC curriculum.^{xxxvii} Although Alberta (2007, updated 2015) and Ontario (2010), also conform to a traditional classroom-based model of space allocation, their Area Standards have significantly more space flexibility for creating learning spaces outside enrolling classrooms. (Appendix A)

New Brunswick (2016) and Saskatchewan (2017 draft) stand apart in updating space allocation within area standards to explicitly reflect 21st century learning and design principles.^{xxxviii} This has meant an increase in per pupil instructional space to accommodate break out spaces, project work areas, learning commons and specialized non-enrolling instructional space.^{xxxix} Whereas BC Area Standards allocates only 3.5 square meters of

instructional space per student for an elementary school of 350 students, New Brunswick has 22% more instructional space with 4.53 m² per pupil and Saskatchewan has 39% more at 5.7 m² per pupil (Figure 2).

Principles for 21st century learning and the redesigned BC curriculum emphasize the need for more experiential, hands-on learning to “engage students in authentic tasks.” The BC curriculum states “Deeper learning is better achieved through ‘doing’ than through passive listening or reading.”^{xl} This requires dedicated specialized spaces in elementary schools for science and art such as a wet area, da Vinci studio or maker space, and a soundproofed room for learning in music and/or performance.^{xli} Hands-on learning experiences in science and the arts are crucial for developing the creative, critical and communicative competencies needed to meet the demands of the 21st century and are central to BC’s redesigned curriculum^{xlii} (Appendix C).

BC is the only province that does not recognize the importance of providing unique learning environments for the arts.^{xliii} If BC Area Standards are not amended, the ability of BC elementary schools to offer quality education in the arts will be severely impacted for all future generations. This has serious implications for equitable access to an education that will “prepare all children for success in whatever life path they choose.”^{xliv}

Other high OECD performing countries are adjusting area standards to reflect best practices in school architectural design for 21st Century learning. For example, New Zealand government has done extensive research on the relationship between curriculum implementation and design environment.^{xlv} New Zealand has not only adjusted school design guidelines to reflect 21st century teaching and learning practices, they have also incorporated indigenous understanding and practices of space into school design to increase the sense of belonging and success for Indigenous students.^{xlvi}

The current BC Area Standards is at cross purposes to the principles of 21st century learning and the successful implementation of the redesigned BC curriculum. It is also deficient in

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enabling school districts to build learning environments that promote equitable access to educational opportunities for students across BC.

Community Use and Neighbourhood Learning Centre Grants

Like many provinces across Canada, BC is taking advantage of new school construction to incorporate much needed child care and preschool spaces into elementary school buildings and opening schools up for community access after-hours. However, in all provinces (except BC) the guidelines around space for community use are very clear; that community use should not compromise the primary mandate of schools, the effective delivery of K-12 education.^{xlvii}

The Neighbourhood Learning Centre grant, instituted in BC in 2008, enabled new and replacement schools to increase their gross space area by 15% if that space was shown to also serve community needs. In Vancouver, for example, it has enabled schools to share a multiuse space for before/after school care and a lunch room. In a few cases it has enabled a school to have a music room that can be opened up for community groups.^{xlviii}

It must be understood, that while some schools receive a peripheral benefit from shared access, NLC space is determined by community needs first. A multipurpose room for example is a tear down space to accommodate childcare, and is not appropriate for quality programming in art/science or music. In many districts, NLC spaces are separate, locked community use spaces annexed to a school with no school access during the day. This is increasingly the case, with governments' commitment to expanding available childcare spaces.

Every school should be granted the same access to a quality education with the full range of educational opportunities they are entitled to within the redesigned BC Curriculum. Every elementary school should have a dedicated music room, wet area for art and science as well as a multipurpose space for lunch and/or performing arts as a minimum standard within a redesigned BC Area Standards.

If NLC space does not primarily serve the Ministry of Education's mandate for supporting K-12 education, it should not be funded through the Ministry of Education's capital budget. This is diverting money needed to replace high risk schools and provide new schools in areas of rapid population growth.^{xlix}

Cost efficiencies

Government is responsible for ensuring that the education system provides students with infrastructure that supports a quality education in a cost-effective manner. Facilities and finance are a top area of concern.ⁱ The current Ministry service plan allocates \$483 million, \$621 million and \$651 million, respectively, over the next three years to capital spending in K-12 education.ⁱⁱ While the current BC Area Standards appears to offer cost efficiencies through extreme space constraints, it is neither a smart nor equitable investment.

Space restrictions in the BC Area Standards are such that schools cannot create the flexibility of space required for successful 21st century building design compatible with the implementation of the revised curriculum, nor equitable access to the full educational opportunities BC students are entitled to. Furthermore, high density usage not only creates psychological stress on students, it creates stress on infrastructure, increasing maintenance costs over the long run. According to the Minnesota Department of Children, Families and Learning, the key to cost effective school facilities is adequate square footage that allows for flexible and adaptable spaces including spaces for program expansion.ⁱⁱⁱ

Small Capacity Schools

Population decline in some urban areas and sharp increases in others have led to a push for closure and amalgamation of neighbouring schools or the expansion of existing structures to create mega schools for efficiencies of scale.^{liii} Research on school size consistently show that larger capacity schools do not reflect best practices for student success or graduation rates. Smaller capacity schools are shown to increase a sense of belonging, community and participation that leads

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to better student outcomes. This is particularly true for disadvantaged student populations.

Research shows that optimal school sizes for socio-economically disadvantaged neighbourhoods should be limited to 300 students for elementary school and 600 students for high schools. For more advantaged or socioeconomically mixed communities, schools should be limited to 500 students for elementary and 1000 students for high schools.^{iv}

Relocatable Classrooms: Options for Flexibility

Modular classrooms offer a solution for managing changing dynamics in student populations of urban and resource-based areas whilst still ensuring all students have access to safe and effective learning environments. In Alberta, Saskatchewan and New Brunswick, new schools consist of a core school with a modular component of individual or cluster of classrooms that can be removed and/or relocated.^{iv}

This solution allows schools to respond to changing demographics without negatively impacting neighbourhoods through school closure or reducing the effectiveness of a school by impacting core shared educational functions.

It also creates cost effective and equitable method to replace dilapidated infrastructure even in areas of population decline.

CONCLUSION

BC Area Standards is an outdated and restrictive document for school construction that limits educational opportunity for students and the kind of teaching and learning practices that are embedded in the new revised BC curriculum. The government is committing billions of dollars to replace and upgrade schools across the province. In order to make smart and equitable investments that make best use of taxpayers' dollars, it is imperative that the government invest money in school buildings that are consistent with current teaching and learning needs. Updating the Area Standards to reflect best practices in 21st century school building design would contribute to the Ministry of Education's goals for increasing student success and student satisfaction. The government has a unique opportunity and responsibility to direct capital investment towards furthering these goals and leaving a lasting foundation for a strong K-12 educational system that will prepare students for citizenship and economic participation in BC for generations to come.

It is recommended that government:

1. Conduct a comprehensive review of the area standards in consultation with the Ministry of Education Programs Division and key public education stakeholders, to align Area Standards with evidence-based school design to maximize student success and reflect the principles of 21st century learning outlined in the redesigned curriculum.
2. Immediately increase space allocations in BC Area Standards for new K-12 public school facilities by at least 10% as a minimal first step towards ensuring schools currently in project definition or design phases are able to create inclusive learning environments that align with universal design and the goals of the redesigned curriculum to give equitable access to the full range of educational opportunities for all students. This should include non-enrolling space for music and art/science within elementary schools.
3. Ensure that NLC space for community use is not funded through the Ministry of Education capital budget unless it is designed primarily to serve K-12 student educational needs

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APPENDIX A

TABLE COMPARISON OF AREA STANDARDS ACROSS 5 PROVINCES

The following findings are based on provincial area specifications for a public elementary school of approximately 350 students in BC, Alberta, Ontario, New Brunswick and Saskatchewan. All numbers are in meters squared.

Table 1. Comparison of Area Standards in meters squared across 5 provinces.

	Enrolling Instructional	Total Instructional	Instructional area / student	Operational	Circulation	Gross area	Gross area / student
BC Area Standards	1220	1220	3.5	1125	530*	2875	7.9
Bayview (BC Area Standards plus NLC)	1220	1220	3.5	1135 (1566)	530	2885 (3316**)	7.9 (9.1)
Alberta	1205	1289	3.7	1271	673	3158	9.0
Ontario	1184.4	1254.1	3.6	1593.9	1008.5	3856.4	11.0
New Brunswick	1260	1585	4.5	1497.2	1065	4169.8	11.9
Saskatchewan	1330	1985	5.7	2266.6	1308	4802	13.7

Explanation of Terms

- **Enrolling Instructional:** enrolling classroom space plus attached breakout spaces
- **Total Instructional:** enrolling classrooms and non-enrolling instructional and learning spaces such as music room, wet area for art/science, break out spaces, project work rooms, learning commons etc.
- **Operational:** Other areas of school where space is allocated including gym, library, special education, resource and lunch room
- **Circulation space:** circulation includes walls, hallways, entryways, student commons and stairwells.

It should be noted that numbers in BC represent a 325 plus 40 school capacity because BC separates kindergarten from Grade 1-7 enrollment. All other provinces show space calculations for a school population of 350 inclusive of kindergarten and elementary grades.

*BC Area Standards calls this ‘**design space**’. The circulation space for BC is to accommodate all circulation spaces plus spaces such as a staff room and student washrooms that are not given space allocations elsewhere.

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**Recent example of BC Area Standards application is Bayview Elementary School in Vancouver that serves a nominal population of 365 students. Bayview was granted a NLC grant, which brings the total gross area up to 3323m², commensurate with Alberta. However, it should be noted that additional square footage at Bayview is being used to increase the multipurpose room to tender a double capacity before and after school care and a licensed pre-school rather than primarily serve an educational function within the school.

Blue highlight denotes the comparable difference between areas standards derived from 21st century learning principles and specifications drawn from traditional school design concepts.

Sources:

- BC Ministry of Education, *Area Standards*, (2003) 2015.
<https://www2.gov.bc.ca/assets/gov/education/administration/resource-management/capital-planning/areastandards.pdf>
- Alberta Education, *School Capital Manual*, (2007) 2015.
<https://education.alberta.ca/media/1477148/school-capital-manual-march-2015.pdf>
- Ontario: A Report from the Expert Panel on Capital Standards, *Building Our Schools, Building Our Future*, 2010. This document is now used as an area standard for new schools.
https://efis.fma.csc.gov.on.ca/faab/Capital%20Programs%20Branch/Report%20of%20Expert%20Panel%20-%20Building%20Our%20Schools_Building%20Our%20Future%20-%20ENG.pdf
- New Brunswick Ministry of Early Childhood and Education, *Planning Guidelines for Educational Facilities* (2009) 2015.
<http://web1.nbed.nb.ca/sites/ASD-E/Salisbury2017/Documents/EECD%20Planning%20Guidelines%20.pdf>
- Saskatchewan Ministry of Education, *Space Measurement Standards*, 2016 draft.
[http://publications.gov.sk.ca/documents/11/87250-Space%20Measurement%20Standards%20-%20Edited%20January%202016%20\(2\).pdf](http://publications.gov.sk.ca/documents/11/87250-Space%20Measurement%20Standards%20-%20Edited%20January%202016%20(2).pdf) and for space measurements see
[http://saskbuilds.ca/projects/Schools%20Project/Project%201/4.0%20SJUSP1%20SCHEDULE%203%20DESIGN%20AND%20CONSTRUCTION%20SPECIFICATIONS%20\(includes%20Appendices%203C,%203D%20and%203E\).PDF](http://saskbuilds.ca/projects/Schools%20Project/Project%201/4.0%20SJUSP1%20SCHEDULE%203%20DESIGN%20AND%20CONSTRUCTION%20SPECIFICATIONS%20(includes%20Appendices%203C,%203D%20and%203E).PDF)

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APPENDIX B:

BAYVIEW ELEMENTARY SCHOOL: COMPARISON OF SPACE ALLOCATIONS FOR EXISTING SCHOOL AND REPLACEMENT SCHOOL.

Retrieved from Ministry of Education Space Standards, prepared for VSB Advocacy Committee, 2018.
https://www.vsb.bc.ca/District/Board-of-Education/Meeting_Minutes/Documents/agendas-files/18_10Oct03_Open%20Policy%20and%20Governance%20Agenda.pdf

- Existing School Area 4,577 m²
 - Area Standard for new school 2,885 m²
 - (table 2.5.1 Elementary Core Areas)
- Replacement School 63% of existing school area
 - Eligible for up to 15% NLC space
 - Additional 431 m² for total of 3,316 m²
- Replacement School 73% of existing school area

Table 2. Comparison of existing school space allocations and Area Standards space allocations for Bayview Elementary

	Existing School areas (m²)	Area Standards (m²)
Admin/Health	194	100
Instruction	1217	1220
Storage	119	70
Gym	303	380
Gym Ancillary	143	65
Media Library	213	180
Multipurpose	237	100
Special Ed	151	160
Mech	242	80
Design Space	1656	530
Other	102	(431 NLC)
Total	4577	2885 (3316)

It should be noted that Bayview is currently overcapacity, so music and art rooms have already been eliminated as non-enrolling instructional spaces to accommodate additional classroom needs. As spaces in the existing schools are now defined according to Area Standards space allocations that do not recognize non-enrolling spaces, the loss of arts-based spaces is overlooked.

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APPENDIX C

SUPPORTING EVIDENCE FOR THE VALUE OF ARTS EDUCATION

Source: *Letter to MoE* signed by Arts educators, organizations, practitioners and professionals across BC.
<http://www.panvancouver.ca/news>

Arts Education is essential for building a healthy, pluralistic and democratic society:

Arts Education develops aesthetic and imaginative capacities for human fulfillment

- The right to engage in cultural production and to enjoy the arts is a fundamental human right. *Universal Declaration of Human Rights*, Article 27, 1949.
<http://www.un.org/en/universal-declaration-human-rights/>
- The arts are an intrinsic part of our human social and emotional experience. Dewey, John. *Art as Experience*. Perigree Books, (1934) 1980; Dessanyake, Ellen. *Homo Aestheticus: Where Art Comes from and Why*. University of Washington Press, 1992.
- The Capability Approach identifies “imagination, thought and senses” as well as “play” as one of the 10 capabilities that are the conditions for and indicators for human flourishing in terms of justice and freedom in societies. Kleist, Chad. “Global Ethics: Capabilities Approach.” *Internet Encyclopedia of Philosophy*. <http://www.iep.utm.edu/ge-capab/>

Arts education supports democratic citizenship and promotes intercultural understanding

- Cultivating imagination opens up the empathic, aesthetic, and generative capacity for social transformation. Greene, Maxine. *Releasing the Imagination: Essays on Education, the Arts and Social Change*. Jossey-Bass, 2000.

- Arts education fosters “Imaginative Understanding”, one of the 3 capabilities alongside critical thinking and world citizenship identified by Nussbaum as central to the “cultivation of humanity in today’s interlocking world.” [Maguire](#), Cindy. “The Capabilities Approach and Citizenship Education: What the Arts Have to Offer.” *Prospero: A Journal of New Thinking in the Philosophy of Education* Vol 14, 2008.
- UNESCO has highlighted the important role of arts education in promoting intercultural understanding in a rapidly changing world. *Seoul Agenda: Goals for the Development of Art Education from the Second World Conference on Art Education*, UNESCO, (2010)
- Freedom and opportunity to practice art and culture is a right of Indigenous People. *United Nations Declaration on the Rights of Indigenous People*, Article 11.
http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf
- Art and cultural practices are integral to indigenous ways of knowing; they constitute a foundational literacy through which history, community, spirituality and cultural regeneration is expressed. Access to culturally appropriate curriculum is an educational mandate of the Canadian Truth and Reconciliation Commission. *Truth and Reconciliation Commission Calls to Action*, Item 10.3, 2016.
http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf

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- Neuroscientists link arts engagement and the attention to other perspectives as key to developing the capacity for empathy in the brain. Bazalgette, Peter. *The Empathy Instinct: How to Create a More Civil Society*. John Murray Publishers, 2017; Bazalgette, [Arts, Culture and Empathy lecture](#), January 2017; James Catteral, “A Neuroscience of Art and Human Empathy”, (draft) 2011. www.croc-lab.org/uploads/7/9/9/8/7998314/neuroscience-art-empathy.docx
- Arts education promotes mental health and well-being**
- Mental health issues in young people are on the rise and are a growing concern amongst educators and policy makers. Chai, Carmen. “[Why more Canadians than ever are at risk of mental health issues.](#)”, *Global News*, May 2017) <https://globalnews.ca/news/3417600/why-more-canadian-millennials-than-ever-are-at-high-risk-of-mental-health-issues/>
 - Engagement in the arts are shown to promote mental well-being. Rogers, Natalie. *The Creative Connection: Expressive Arts as Healing*. Palo Alto, Calif: Science & Behaviour Books, 2000; “Everything we know about how and whether the arts Improve our lives”, *Create Equity*, 2011 <http://createequity.com/2016/12/everything-we-know-about-whether-and-how-the-arts-improve-lives/>; “Part of your World: Art and Wellbeing”, *Create Equity*, 2015 <http://createequity.com/2015/08/part-of-your-world-on-the-arts-and-wellbeing/>
 - Quality arts education increases the expressive capacities and emotional regulation of children who have experienced trauma. *Heart: Healing and education through the arts*. Save the Children.org <http://www.savethechildren.org/atf/cf/%7B9de-f2ebe-10ae-432c-9bd0-df91d2eba74a%7D/HEART.PDF>
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Arts Education is essential for building a prosperous and sustainable economy:

Creativity is a key skill for the 21st century economy

- Creativity is widely recognized by business and educational leaders as the primary skillset needed for the 21st century economy. *Creativity Unleashed: Taking Creativity out of the Laboratory and into the Labour Force*, 2011-2012 Action Canada Task Force Report, 2012 <http://www.actioncanada.ca/wp-content/uploads/2014/04/AC-TF3-Creativity-Report-EN-web.pdf>; *Ready to Innovate*, Conference Board, 2008 <https://www.americansforthearts.org/sites/default/files/ReadytoInnovateFull.pdf>; *Policy Research Group, The Creative economy: Concepts and Literature Review Highlights*, May 2013 https://cch.novascotia.ca/sites/default/files/inline/documents/creative-economy-synthesis_201305.pdf
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- Canada's global competitiveness is compromised by declining innovation capacity according to recent World Economic Forum results. "Poor Innovation Ranking Dims the Light on Canada's Competitiveness and Prosperity," *Conference Board of Canada*, 2012 http://www.conferenceboard.ca/press/newsrelease/12-09-27/Poor_Innovation_Ranking_Dims_the_Lights_on_Canada_s_Competitiveness_and_Prosp erity.aspx?AspxAutoDetectCookieSupport=1
- Canada ranks 24 out of 28 countries and well behind the OECD average for compulsory arts as a percentage of instructional time for 9-11 year-olds. Winner and Vincent-Pancrin, *Art for Arts Sake? The Impact of Arts Education*, OECD, 2013 <http://www.oecd.org/education/cei/arts.htm>
- PISA is redesigning its international test to reflect the need for assessing creativity, Romer, Christy. "Creativity in Schools to be Compared across the World." *Arts Professional* Jan. 2018) <https://www.artsprofessional.co.uk/news/creativity-schools-be-compared-across-world>

Arts education is key for developing the skillset for creativity and innovation

- Fine Arts and Communications graduates are most likely to possess the divergent thinking skills needed for creativity and innovation. Conference Board, 2008; Policy Research Group, 2013.

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- Preliminary results from STEM education initiatives in North America have not demonstrated improvement in creativity or divergent thinking. Integrating the arts stimulates innovation and creativity. Sousa, David and Tom Pilecki. *From STEM to STEAM: Using Brain-Compatible Strategies to Integrate the Arts*. Corwin 2013.
 - Companies that integrate arts with sciences outperform companies that do not, in both innovation and growth. Cultural Learning Alliance. *STEAM: Why STEM can take us only so far*. Briefing Paper, 2013. <https://culturallearningalliance.org.uk/wp-content/uploads/2017/10/CD405-CLA-STEAM-Briefing-Teachers-Notes-08.pdf>
 - Participation in the arts develops creative habits of mind. Hetland, Winner, Veenema and Sheridan, *Studio Thinking 2: The Real Benefits of Visual Arts Education*, Harvard U P, 2013; Winner and Vincent Pancrin, *Art for arts sake? The Impact of Arts Education*, OECD, 2013; *Neuroeducation: Learning, Arts and the Brain: Findings and Challenges for Educators and Researchers from the 2009 John Hopkins University Summit*, Dana Foundation, 2009. https://www.giarts.org/sites/default/files/Neuroeducation_Learning-Arts-and-the-Brain.pdf
 - The arts act as a catalyst for innovative thinking across all economic sectors.
 - Neuroscientists are linking increased emphasis on technology to the decrease in right brain capacities that include creativity, empathy and big picture thinking. McGilchrist, Iain. *The Master and his Emissary: The Divided Brain and the Making of the Western World*. Yale University Press, 2009.
 - *The Select Standing Committee Report on the Budget 2018 Consultations* recommends that government make an investment in K-12 education in the arts to support BC's creative economy. https://www.leg.bc.ca/content/CommitteeDocuments/41st-parliament/2nd-session/FGS/Budget2018Consultation/FGS_2017-11-15_Budget2018Consultation_Report.pdf
- Arts education is relevant for critical engagement in today's public communication sphere**
- Multimedia technologies have transformed the sphere of public communications and engagement in today's world. Scott McMaster, *Visual Literacy and Art Education: A Review of the Literature*, 2015 https://www.researchgate.net/publication/280319601_Visual_Literacy_and_Art_Education_Review_of_the_Literature
 - As early as 1987, an estimated 85% of the information absorbed on a daily basis is visual rather than textual. McMaster, 2015.
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The arts and culture sector is an important and growing part of BC's economy

- The United Nations has identified the creative economy as one of the world's fastest growing sectors for income generation, job creation and export earnings. Government of British Columbia, *Factsheet: Arts, Culture and the Creative Economy* 2018.
<https://news.gov.bc.ca/factsheets/arts-culture-and-the-creative-economy>
- Arts and culture are an important indicator of economic competitiveness and growth in leading economies. *Otis Report on the Creative Economy*. Los Angeles Economic Development Corporation, 2017.
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- Investment in the arts yields positive returns of up to ten times when accounting for direct, indirect and induced benefits. *A Strategic and economic business case for investment in the arts*, Business for the Arts, 2009
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ENDNOTES

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ⁱⁱⁱ Geoff Johnson, “20th Century School Design Doesn’t Complement 21st Century Education”, *Times Colonist*, July 8, 2018.

<https://www.timescolonist.com/opinion/columnists/geoff-johnson-20th-century-school-design-doesn-t-complement-21st-century-education-1.23359427>

^{iv} Vancouver School Board, *21st Century Learning and School Design*. No longer available on line. Information taken from **Prakash Nair**, Randall Fielding, Jeffery Lackney, *The Language of School Design: Design Patterns for 21st Century Learning*, Minneapolis, DesignShare.Com Publishing, 2009.

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^{vi} Noel Herron, *Is Your Old School About to be Demolished? Lessons to be learned from Charles Dickens Elementary in Vancouver*, BCTF, April 2009. <https://bctf.ca/publications/NewsmagArticle.aspx?id=18250>. For a current example see project design for Bayview Elementary. Replacement school under Area Standards is 37% smaller at 2,885 m² compared to the existing school gross area of 4577 m². With the NLC

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^{vii} There are no provisions for music, art or performing space under Area Standard guidelines. Because the Area Standards is also used to calculate the capacity of existing schools, dedicated art or music rooms are seen as ‘surplus space’.

^{viii} BC Government, *Neighbourhood Learning Centres*, 2018. Agreement on shared use is currently under review. <https://www2.gov.bc.ca/gov/content/education-training/administration/community-partnerships/neighbourhood-learning-centres>

^{ix} BC Government, *Service Plan*, p. 13

^x *Service Plan*, Goal 1-3, p.7-9

^{xi} BC Government, *New Curriculum*.

<https://curriculum.gov.bc.ca/curriculum-updates>

^{xii} National Institute for Building Sciences, *Whole Building Design Guide*, March 29, 2017.

<https://www.wbdg.org/building-types/education-facilities/elementary-school>

^{xiii} *Statement of Education Policy Order*

^{xiv} *Service Plan*, p. 6

^{xv} <https://globalnews.ca/news/3703683/public-school-enrollment-rising-in-british-columbia/>

^{xvi} Under the Seismic Mitigation Program, of the 347 schools identified as high risk for structural collapse, 173 are completed, 14 are under construction, 18 are proceeding to construction, 38 have yet to be approved and 104 have not even been considered.

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Government commits to completing all upgrades in BC by 2025 and by 2030 in Vancouver. Katie Hyslop, “Ministry Announces Largest Vancouver School Upgrade Yet”, *The Tyee*, June 20,

2018. <https://thetyee.ca/News/2018/06/20/Ministry-Announces-Largest-Vancouver-School-Seismic-Upgrade/>

Changes to National building codes may extend seismic mitigation and require more upgrades. <https://www.timescolonist.com/news/local/more-seismic-work-in-store-for-schools-as-standards-raised-1.23352911>

^{xvii} Katie Hyslop, “A \$5 Billion dollar mess: BC’s School maintenance bills pile up,” July 18, 2017.

<https://thetyee.ca/News/2017/07/18/BC-School-Maintenance-Bills/> For example, Vancouver district

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^{xxviii} BC Government, *Area Standards* (2003) 2015. The BC Area Standards is also used to determine capacity in existing school. As a result, non-enrolling spaces used for educational programming such as art and music are declared “surplus space”.

^{xix} News Release, “Province announces \$1.5 billion dollar seismic mitigation program”, March 7, 2005. <https://arsohive.news.gov.bc.ca/releases/archive/2001-2005/2005BCED0028-000245.htm> Auditor general’s report

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^{xx} Herron, *BCTF*

<https://bctf.ca/publications/NewsMagArticle.aspx?id=18250>

^{xxi} BC Government, *Neighbourhood Learning Centres for Administrators*

<https://www2.gov.bc.ca/gov/content/education-training/administration/community-partnerships/neighbourhood-learning-centres>

^{xxii} UNESCO, *Norms and Standards of Educational Facilities*, 1985.

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^{xxiii} Natural light, good air quality and acoustic control are also shown to positively impact student mental health and wellbeing. One study in the UK links improved physical environment to a 16% increase in overall student performance. Peter Barret, Fay Davies, Yufan Zhang and Lucinda Barrett, “The Impact of Classroom Design on pupils’ learning: Final results of a holistic, multilevel analysis”, *Building and Environment* 89, July 2015 (118-133)

<https://www.sciencedirect.com/science/article/pii/S0360132315000700>

^{xxiv} BC Government, *New Curriculum*

^{xxv} Circulation is used here to indicate the primary function of this space even though it includes walls. In other provincial standards, this is called gross up – of which circulation is a part – and in BC it is called Design space, which includes circulation, walls as well as other operational space. BC *Area Standards*

^{xxvi} While each province defines the scope of circulation space differently, we are using the broad understanding of circulation to include walls as well as the stairwells, entrance ways and non-enclosed gathering spaces

within a school to accurately compare space allocations across provinces. It should be noted, that in BC, because washrooms and staffrooms are not given space allocations within the operational space, they must come out of circulation space allocation or “design space” as it is referred to in the Area Standards. If we take an average space allocation of 150 m² in other provinces for washrooms and staff space, we are left with only 380 m² for circulation.

^{xxvii} POE (Post Occupancy Evaluation) study in the UK conducted to show evidence for the need to review Area Standards in the UK links narrow circulation spaces and too few and too small toilets to increased misbehaviour. Noise also becomes a factor when circulation space is inadequate. Royal Institute of British Architects, *Better Spaces for Learning*, May 2016, p. 45. Lorraine E. Maxwell, “Home and School Density Effects on Elementary School Children”, *Sage Journals*, Vol 35.4 (2003)

<http://journals.sagepub.com/doi/abs/10.1177/0013916503035004007> Gary W. Evans, “Child Development and the Physical Environment”, *Annual Reviews*, 2006.

<https://www.architecture.com/-/media/gathercontent/better-spaces-for-learning/additional-documents/ribabetterspacesforlearningpdf.pdf>

^{xxviii} Mark Garibaldi and Liza Joias, “Designing Schools to Support Socialization Process of Children”, *Procedia Manufacturing* 3 (2015) 1587-1594.

<https://www.sciencedirect.com/science/article/pii/S2351978915004473>

^{xxix} For a detailed summary of the positive impacts of sufficient circulation space and the negative impacts of too little see New Zealand Ministry of Education, *The impact of Physical Design on Student Outcomes*, 2016.

<https://www.education.govt.nz/assets/Documents/Primary-Secondary/Property/School-property-design/Flexible-learning-spaces/FLS-The-impact-of-physical-design-on-student-outcomes.pdf> Ellen Rose,

“What is Effective School Design,” *EdCan Network*, 2015.

<file:///Users/margaret/Desktop/What%20is%20Effective%20School%20Design%3F%20%7C%20EdCan%20Network.webarchive> Non-statutory guidelines for school design accommodations for special needs

identifies ample circulation space as crucial for inclusive environments. Department for Children, schools and families, Designing for disabled children and children with special educational needs: Guidance for mainstream and special schools, *Building Bulletin* 102.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/276698/Build

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[ing Bulletin 102 designing for disabled children and children with SEN.pdf](#)

^{xxx} Discussion on the pioneering work of Magda Mostafa on school design and autism. Alex Bozиков, “‘Design empathy’ builds inclusive spaces for people with autism,” *Globe and Mail*, April 15, 2015.

<https://www.theglobeandmail.com/life/home-and-garden/design/design-empathy-builds-inclusive-spaces-for-people-with-autism/article23966012/>

^{xxxii} BC Government, *Service Plan*, p.6 and 8.

^{xxxiii} Schools that support 21st century learning Design

^{xxxiii} BC Government, *Curriculum overview: Education for the 21st Century*, 2018 <https://curriculum.gov.bc.ca>

^{xxxiv} Geoff Johnson, “Geoff Johnson: 20th century school design doesn’t compliment 21st century learning”, *Times Colonist*, July 8, 2018. <https://www.timescolonist.com/opinion/columnists/geoff-johnson-20th-century-school-design-doesn-t-complement-21st-century-education-1.23359427>

^{xxxv} Hanover Research, *School Structures that Support 21st Century Learning*, March 2011. Bob Pearlman, “Designing new Learning Environments to support 21st Century Skills”, *How People Learn: Brain, Mind, Experience and School*, National Academy of Sciences, 2000

^{xxxvi} Royal Institute of British Architects, *Better Spaces for Learning*, May 2016. <https://www.architecture.com/-/media/gathercontent/better-spaces-for-learning/additional-documents/ribabeterspacesforlearningpdf.pdf>

^{xxxvii} Although many new facilities try to incorporate some elements of 21st century learning design into schools, such as break out spaces or learning commons, it requires ‘stealing’ space from other areas or crowding spaces together, resulting in unintended negative consequences such as noise disruption.

^{xxxviii} New Brunswick and Saskatchewan explicitly reference 21st century learning design in their updated area standards. New Brunswick states that area standards should reflect learning spaces outside the traditional classroom, inclusion policies, multi-use and flex spaces, safety, feeling of community within school and connections to community. New Brunswick Ministry of Early Childhood and Education, *Planning Guidelines for Educational Facilities*, (2009) 2016. Saskatchewan espouses the following 21st century design principles; “Flexible learning environments for versatile instruction and size, inter-disciplinary, project based and inquiry-based teaching and learning; A technology-rich environment that anticipates changes in educational delivery; Teacher collaboration and support spaces integrated into learning communities; and School commons space that allows students of all ages to gather and connect.” SaskBuilds, *Design and*

Construction Specifications, Joint Use Schools Project, 2017.

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^{xxxix} For example, EE and K architects review on the educational impact of space allocation recommends that “elementary schools look towards less density or between 4.18 and 4.65 square meters per student for instructional space.” Sean O’Donnell, *The Design of Elementary Schools*, EE&K Community Website, 2018.

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^{xl} BC Government, *Curriculum Overview*

^{xli} Both New Brunswick and Saskatchewan allocate dedicated space for specialized in art and science (a da Vinci studio) and dedicated rooms for music and performing arts. New Brunswick Ministry of Early Childhood and Education, *Planning Guidelines* and Saskatchewan Ministry of Education, *Space Measurement Standards*.

^{xlii} BC Government, *Core Competencies*.

<https://curriculum.gov.bc.ca/competencies> For extensive research on the importance of the arts for developing both the creative and critical competencies and empathic capacities needed for our current context see Appendix C.

^{xliii} Alberta allocates additional space for two classrooms to cater to the visual arts and science for intermediate students. These spaces are enrolling spaces, but accessible to other classes through team teaching/platooning. In Ontario, science and art are also accommodated through larger enrolling classrooms for specialist platooning and music is taught in a separate non-enrolling teaching space. In BC, the loss of recognition of specialist teacher subject area for elementary schools in those subjects would not make this an effective model in BC.

^{xliv} Stated objective within the redesigned BC Curriculum.

^{xlv} “The Education Infrastructure Design Guidance Document forms the critical link between National curriculum and the design environments that support the learning outcomes to which the National Curriculum aspires.” Ministry of Education, *Designing Schools in New Zealand: Requirements and Guidelines*, October 2015.

<https://www.education.govt.nz/assets/Documents/Primary-Secondary/Property/School-property-design/Design-guidance/DSNZ-version-1-0-20151014.pdf>

^{xlvi} Dr. Gabrielle Wall, “Māui whakakau, kura whakakau: The Impact of Physical Design on Maori

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<http://www.education.govt.nz/assets/Documents/Primary-Secondary/Property/School-property-design/Flexible-learning-spaces/FLS-Maui-whakakau-kura-whakakau.pdf>

^{xlvi} For example, New Brunswick *Planning Guidelines for Educational Facilities* states “[Community use] is a secondary function of the facility. The facility should be planned to accommodate the community without compromising its effectiveness to deliver education to the student.”

^{xlviii} VSB, *21st Century Learning Design*, derived from Prakash Nair, Randall Fielding and Jeffery Lackney, *Design Patterns for 21st Century Schools*, 2009.

^{xliv} In other provinces, where child care and early childhood provisions are incorporated into school plans they are either jointly funded partnerships (Saskatchewan, Ontario and Alberta) or services consistent with Ministry mandate (Such as Ministry of Early Childhood and Education, New Brunswick). For an example of joint use schools that do not compromise educational space see Natascia Lypny, “Saskatchewan Government unveils joint-use school designs,” Feb. 23, 2016. <https://leaderpost.com/news/local-news/province-unveils-joint-use-school-designs>

ⁱ *Statement of Education Policy*, 1989

ⁱⁱ BC Government, *Ministry of Education Service Plan 2018/9 -2020/21*, February 2018, p.13.

<https://www.bcbudget.gov.bc.ca/2018/sp/pdf/ministry/educ.pdf>

ⁱⁱⁱ Minnesota Department of Children, Families and Learning, *Guide for Planning School Construction Projects in Minnesota*, January 2003, p. 66.

^{liii} Andrea Wood, “Vancouver board names 12 schools up for possible closure”, June 20, 2016.

<https://www.theglobeandmail.com/news/british-columbia/vancouver-board-names-12-schools-up-for-potential-closure/article30532264/> Maggie Milne

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^{liv} Kenneth Leithwood and Doris Jantzen, *Review of Empirical Evidence about School Size Effects: A Policy Perspective*, for the Board of Education for the Regina School Board, 2009.

<https://www.google.com/search?client=safari&rls=en&q=review+of+Empirical+Evidence+about+School+Size&ie=UTF-8&oe=UTF-8>

^{lv} For information on Alberta’s Modular Classroom Program see Government of Alberta, About Infrastructure accessed October 9, 2018.

<http://www.infrastructure.alberta.ca/636.htm> For

Saskatchewan Relocatable Classroom Program see Government of Saskatchewan, Relocatable Classroom Program Guidelines.

<http://www.publications.gov.sk.ca/details.cfm?p=83026> and Re-locatable classroom wings in New Brunswick for replacement schools in areas with declining enrolment. New Brunswick Department of Education and Early Childhood, *Planning Guide for Educational Facilities*, February 2016.

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