



2

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Group

Camrose Schools Value Scoping

Group2

Architecture
Interior Design

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Battle River School Division
Camrose
Group2 Architecture Interior Design Ltd.

Group2

Architecture
Interior Design

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1.0 Executive Summary

Tours of all Battle River School Division's schools were completed in August of 2021 with the exception of the new Chester Ronning Replacement School which was under construction at the time. The tours were the basis of the Ten and Three Year Facility Plans developed by Group2 Architecture Interior Design Ltd.

It was suggested in the Ten-Year Facility Plan that Camrose Composite High School was not in need of immediate attention.

It was recommended in the Ten-Year Facility Plan that a further study be done of schools in the City of Camrose as their needs are intermingled. A study was completed in July 2024 recommending a Value Scoping Session to review the capital needs of K-8 school facilities in Camrose.

A Value Scoping Session for all Camrose Schools, with the exception of Camrose Composite High School and Chester Ronning School was conducted in Camrose January 8th and 9th, 2025 and included 22 participants from the school jurisdiction including school council, 2 representatives from the city, 4 representatives from the Government of Alberta and 7 consultants.

The objective of the Value Scoping Session was to explore all viable options for the accommodation of Camrose students in grades K-8 while addressing the many aging building components as well as functional upgrades to meet program requirements and 21st century teaching and learning styles.

The schools included in the Value Scoping Session were Charlie Killam School, Jack Stuart School, Sifton School and Sparling School. All of these schools are aging schools ranging in age from 42 years to 95 years. Consequently, these school facilities have building components that will require replacement in the near future. For the most part, they are not barrier free and should they undergo a modernization, they would not conform to current building code requirements. With the exception of Jack Stuart School and Sifton School, the front entrances of the other two schools do not allow for visibility of the school's main entrance by the administration staff, which is a safety concern for students and staff.

The schools built between 1930 and 1983, were designed in different eras and are not functional for accommodating 21st century teaching and learning styles.

Charlie Killam School, Jack Stuart School, Sifton School and Sparling School all have relatively high utilizations and enrollments that are not anticipated to decrease significantly in the future. Charlie Killam School has an adjusted enrollment for 2023/2024 of 526 students and is 86% utilized. Jack Stuart School has an adjusted enrollments for 2023/2024 of 320.5 students and is 82% utilized. Sifton School has an adjusted enrollments for 2023/2024 of 307.5 students and is 74% utilized. Sparling School has an adjusted enrollments for 2023/2024 of 236 students and is 99% utilized.

In the 2016 Census of Population conducted by Statistics Canada, the City of Camrose recorded a +8.4% change in population from its 2011 Census of Population. In the 2021 Census of Population, the City of Camrose had a change of + 0.2% from its 2016 population.

In 2022, residential growth was up \$26 million from \$11.6 million in 2021, and development permits were up from 360 to 385.

The school jurisdiction's enrollment projections align with this trend and are anticipated to remain steady and likely see some growth.

During the two-day session, participants worked through a facilitated process to discuss, formulate and identify options for the modernizations and/or replacements of the four schools.

The developed options were individually costed and compared to new replacement schools of the same grade configurations and capacities and then assessed according to the school jurisdiction's need, the criteria developed in the session, provincial criteria for high priority projects and school capital requirements for project approvability.

The information and discussions generated by this Value Scoping Session are intended to assist Battle River School Division in the development of its capital plan for 2025/2026 to 2027/2028.

2.0 Workshop Process

2.1 Value Scoping Session

A Value Scoping Session involves a number of phases that the Value Scoping participants work through:

The pre-workshop phase, involves the preparation and information gathering, including the physical tour of the existing buildings to determine the physical condition and functional challenges of the buildings, identify program requirements, code issues, site opportunities and review current and trending demographics.

The workshop phase is a facilitated, two-day session that includes context setting, functional analysis, identification of principles and the criteria for the evaluation of options, as well as, a creative brainstorming exercise for the development of potential options. Block schematic drawings and cost estimates are developed for each option, followed by an evaluation phase to identify the best option for achieving value for money and optimal program delivery for students.

The post-workshop phase involves the compilation of a final report for review by the government and the school board.

Participants in the Value Scoping Session include representatives of the school jurisdiction and stakeholders as identified by the school jurisdiction and may include; school trustees, jurisdiction administrators, school staff, students, parents, municipal officials, community partners as well as representatives from Alberta Education and Alberta Infrastructure and a team of professional consultants representing the school jurisdiction; facilitator, registered architect, educational planner, cost-consultant, recording assistant and a writer.

3.0 Background Information

Charlie Killam School	
Location	Camrose
Grades	6-8
Net Capacity	609
Adjusted Enrollment	526
Utilization	86%
Modulars / Portable	6

- Charlie Killam School accommodates students in grades 6-8.
- This 95 year old school was originally built in 1930 with several additions between 1941 and 2003, however; it is extremely dated, reflecting design features of previous eras of teaching and student learning styles.
- The aging building components are nearing the end of their life cycles, particularly architectural finishes and mechanical and electrical systems.
- The school washrooms and change rooms are not all accessible. Floors are at different elevations, connected by steep ramps, that would not meet current building code. The stage, the raised library platform, and upper admin areas, are also not accessible.
- The administration area is very small and dated with no visibility of the front entrance which is a safety concern for students.
- Overall, the school is very dated throughout.
- Although the school is over area it is short in the flexible spaces that allow for any multi-purpose space for 21st century learning which requires learning spaces to be flexible and adaptable to allow for interactive learning (examples are movable walls and maker spaces). Consequently, the school's dated functionality needs to be upgraded to deliver the required programming and enhance teaching and learning opportunities.

Jack Stuart School	
Location	Camrose
Grades	K-5
Net Capacity	391
Adjusted Enrollment	320.5
Utilization	82%
Modulars / Portables	4

- This 42 year old school although it is the newest of the elementary schools, with the exception of Chester Ronning School, is extremely dated and reflects design features of previous era of teaching and student learning styles.
- The aging building components are nearing the end of their life cycles, particularly the mechanical and electrical systems.
- The school washrooms and change rooms are not all accessible.
- Overall the school's dated functionality needs to be upgraded to deliver the required programming and enhance teaching and learning opportunities.
- There is minimal ancillary and flex space which does not allow for any multi-purpose space for 21st century learning which requires learning spaces to be flexible and adaptable to allow for interactive learning (examples are movable walls and maker spaces).

Sifton School	
Location	Camrose
Grades	K-5
Net Capacity	417
Adjusted Enrollment	307.5
Utilization	74%
Modulars	2

- This 72-year-old school has had two modernizations/additions over the years, however; the latest was 58 years ago in 1967. The school is dated and reflects design features of a previous era of teaching and student learning styles. The school was originally built as a county school.
- The aging building components are nearing the end of their life cycles, particularly architectural finishes and the mechanical and electrical systems.
- The administration area is very small.
- The school washrooms and change rooms are not accessible. While a lift has been provided, the lack of an elevator to the second floor inhibits accessibility and inclusivity for students of all needs.
- Overall the school's dated functionality needs to be upgraded to deliver the required programming and enhance teaching and learning opportunities.
- There is minimal ancillary and flex space which does not allow for any multi-purpose space for 21st century learning which requires learning spaces to be flexible and adaptable to allow for interactive learning (examples are movable walls and maker space).

Sparling School	
Location	Camrose
Grades	K-5
Net Capacity	239
Adjusted Enrollment	236
Utilization	99%
Modulars	2

- This 70-year-old school has had two modernizations over the years the latest being 58 years ago in 1967. The school is very dated and reflects design features of a previous era of teaching and student learning styles.
- The aging building components are nearing the end of their life cycles, particularly architectural finishes and mechanical and electrical systems.
- The administration area is very small and there is no visibility of the front entrance of the school which is a security concern.
- The school washrooms and change rooms are not accessible.
- Overall the school's dated functionality needs to be upgraded to deliver the required programming and enhance teaching and learning opportunities.

4.0 List of Participants

4.1 Battle River School Division

Participant	Title	Organization
Patrick McFeely	Board Chair, Trustee	City of Camrose
Lyle Albrecht	Trustee	Beaver County
Doug Algar	Board Vice-Chair, Trustee	City of Camrose
Karen Belich	Trustee	Camrose County
Rhae-Ann Holoien	Superintendent	Battle River School Division
Imogene Walsh	Secretary Treasurer	Battle River School Division
Brian Hogg	Director - Facilities	Battle River School Division
Todd Sieben	Principal, Jack Stuart School	Battle River School Division
Reid Lansing	Principal, Chester Ronning School	Battle River School Division
Andrea Gutmann	Principal, Ecole Charlie Killam School	Battle River School Division
Kathleen McLennan	Principal, Ecole Sifton School	Battle River School Division
Jonathon Skinner	Principal, Sparling School	Battle River School Division
Shane Gau	Principal, Ecole Camrose Composite High School	Battle River School Division
Graeme Thain	Teacher, Ecole Camrose Composite High School	Battle River School Division
Julie Mitchell	Teacher, Jack Stuart School	Battle River School Division
Daylan Wizniuk	Teacher, Ecole Charlie Killam School	Battle River School Division
Jessica Veale	Teacher, Sparling School	Battle River School Division
Jennifer Rostad	Teacher, Ecole Sifton School	Battle River School Division
Lindsay Doering	Teacher, Chester Ronning School	Battle River School Division
Pamela Boyson	Parent Council Representative	Battle River School Division
Trina McCarroll	Ecole Charlie Killam School Parent Council Representative	Battle River School Division

Participant	Title	Organization
Dawsyn Calhoon	Ecole Camrose Composite High School Student Council Representative	Battle River School Division (Wednesday PM only)
Justus Sveinbjornson	Ecole Camrose Composite High School Student Council Representative	Battle River School Division (Wednesday PM only)
PJ Stasko	Mayor	City of Camrose (Thursday only)
Malcolm Boyd	City Manager	City of Camrose (Thursday only)

4.2 Government Representatives

Participant	Title	Organization
Alison Matichuk	Manager	Alberta Education
Kenneth Wong	Facilities Technologist	Alberta Infrastructure
Mark Yanez	Capital Planning Project Analyst	Alberta Education
Terri - Lynn Mundorf	Field Services Manager	Alberta Education

4.3 Consultant Team

Participant	Organization
Chris Baker	Value Management Inc. (VMI)
Carroll Clarke	Value Management Inc. (VMI)
Kelly Parker	Tech Cost Consultants Ltd. (Tech Cost)
Olga Aquilar	Tech Cost Consultants Ltd. (Tech Cost)
Doug Ramsey	Group2 Architecture Interior Design Ltd. (Group2)
Charlene Karl	Group2 Architecture Interior Design Ltd. (Group2)
Laurel Udell	Educational Planner

5.0 Summary of the Process

The objective of the Camrose Schools Value Scoping Session was to develop a detailed scope definition and order of magnitude cost estimate for the preferred option(s) to form a school capital request for the modernization and/or replacement of four schools: Charlie Killam School, Jack Stuart School, Sifton School and Sparling School. The option(s) will identify both the capital costs and net present value of future operating costs of the preferred option(s). The focus of the session was on modernizing the four existing schools; however, a new replacement school building for each facility was used as the comparator.

The final report will be available to Battle River School Division to use in preparing its Capital Plan Submission. Value Scoping Sessions demonstrate that school jurisdictions have done their homework, and the projects developed represent well thought out plans that provide value for money, justify the need and confirm the proposed project is the best of those considered, meeting the needs of the school jurisdiction, students and the community.

Agenda

Tuesday, January 7, 2025 Schools Tour by Consultant Team and School Jurisdiction Representatives

Day One

Wednesday, January 8, 2025

Workshop Introduction

- Welcome & Land Acknowledgement
- Meeting protocol and overview of the process
- Introduction of participants
- Workshop objectives
- Alberta Education and Alberta Infrastructure project objectives
- Identification of individual participant's project objectives

Planning Discussion

- Common criteria discussion
- Planning benchmarks including enrollment growth, demographics, programming requirements, unique project requirements
- Discussion of school tour including positive features and deficiencies, program restraints, site considerations, etc.
- Modernization/Replacement Considerations

Brainstorming Session

- Area comparator charts and site reviews (*See pages 20 - 23*)
- 'Art of the Possible'
- Reviews of brainstorming session outcomes
- Development of group planning scenarios
- Presentation back to entire group

Review of Next Day's Tasks**Day Two****Thursday, January 9, 2025**

- Review of the options
- Presentation of the Cost Benefit Analysis
- Presentation of architectural interpretation of the options
- Discussion of advantages, disadvantages and risks of the options
- K-9 School Discussion

Next Steps

- Preparation and review of final report as the basis for the Capital Request Submission

5.1 School Board's Project Objectives

The School Board Chair was given the opportunity to briefly outline the school jurisdiction's objectives and vision for the project. In summary:

- The value scoping exercise is designed to collaboratively help plan and prioritize the school board's future capital projects and solutions to address current and future need.
- The value scoping session will assist in gathering stakeholder insight and information.
- Government identifies value scoping exercise as a pre-planning funding activity to strategize Capital needs, explore practical options and ensure any projects are ready to move forward immediately (shovel ready).

5.2 Government of Alberta Workshop Objectives Summary - Alberta Education

- Capital plans are typically submitted by school boards on April 1 of each given year.
- Alberta Education's task is to analyze and evaluate each school board's capital plans and create a provincial capital plan that goes to Alberta Treasury.
 - It is a very competitive process as the 300 to 400 requests far out number the available funding.
 - Each step of the process whittles down the requests until it is refined to about 40 projects from across the province.
- School boards must ensure their requests are "watertight and defensible." They should ask themselves 3 questions:
 1. **Is there a need?**
 - Enrollment
 - Facility conditions
 2. **Is this the best way to meet the needs?**
 - Is it best for student? Facts must support the project.
 - The proposal must provide evidence of considered options, risks and enrollment.
 - Is it affordable?
 - Does it solve the problem for more than one school?
 3. **Is the project ready to proceed?**
 - The project must be ready to go – start tomorrow if it was approved today. Otherwise it could cause a delay and delays and inflation are expensive and mean tough choices when the budget isn't sufficient.
 - Does the modernization have a plan for decanting?
 - Is the municipality on board?
- Alberta Education makes recommendations not decisions and must answer any questions for Treasury Board's Business Cases. This is a rigorous process and therefore projects must be rock solid.
- The value scoping process provides a comprehensive report that demonstrates that the proposed project is the best solution.

5.3 Alberta Infrastructure

- Alberta Infrastructure supports Alberta Education in reviewing capital plans.
- Projects must demonstrate:
 1. Functionality
 2. Sustainability
 3. Flexibility
 4. Affordability
 5. Accessibility
- The lowest cost does not always support the best solution.
- All major modernizations and replacement schools must meet LEED Silver.
- Projects must optimize life cycles and building efficiency.
- Projects must support the flexibility to change.
- It is crucial to develop an economical solution not necessarily the cheapest solution. It must provide the best value for the Province, not just in construction costs but also in life cycle costs.
- Projects must consider accessibility, barrier-free access, inclusiveness, genders, religion and culture.
- Solutions should favour simple designs that meet and promote educational pedagogy.

5.4 Summary of Planning Discussion

- To provide context for the brainstorming exercise and discussion, the team participated in a brief review of and discussion on the benchmarks typically used in the capital planning process:
 - Current demographics, and enrollment trends and projections are used to establish the required capacity for a new replacement school or modernization/addition project.
 - Alberta Education's current Adjusted Enrollments are based on the annual September 30th head counts adjusted to reflect the number of severely coded students. School utilization rates are considered in developing options for new replacement schools and modernizations and for potential rightsizing and consolidation opportunities.
 - Area comparators are the comparison of the existing school area to that of an equivalent new school based on Alberta Education's guidelines, they are used to assess space deficiencies and requirements in an existing school, as well as, assist in developing the framework for the scope of a modernization and/or addition project.
 - Unique project requirements are also used to assist in the development of project scope.

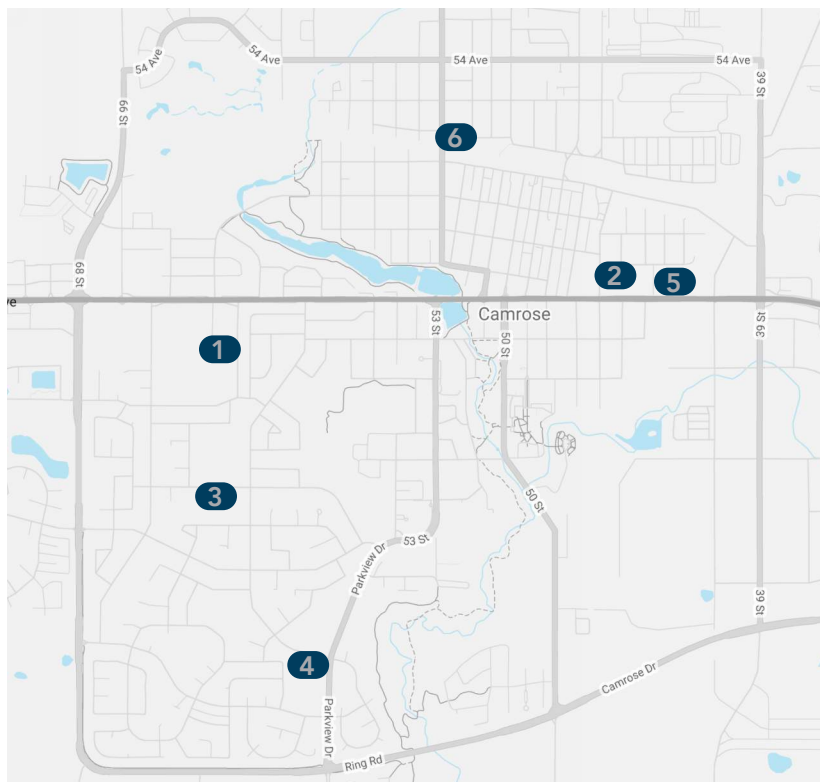
- The criteria used for establishing and demonstrating provincial capital project priorities and approvals are:
 - Health and safety
 - Building condition
 - Enrollment growth
 - Utilization rates
 - Programming requirements
 - Legal Rights.
- Additional information including opportunities for partnership/collaborations between one or more school jurisdictions and/or other partners, as well as supplementary information such as studies and delivery capacity.
- The province requires school jurisdictions to demonstrate that they have considered all options for accommodating students.
- Demographics may support a solution for an entire community as more cost efficient.
- The comparator, a “new replacement” school option, may come into play when the modernization of a school is 75% or more of the cost of building new.
- Construction of modernization projects typically take about 2-2 ½ years to complete where a new school or replacement school usually takes 18 months.
- The government does not provide funding for the decanting of students during a modernization project. The consultant and school administration staff must phase construction to provide minimal disruption to programming and students.

5.5 Summary of School Tours

There are many challenges with the existing facilities:

- All four schools are aging and require modernizations to meet building code, address building condition, replace building components and systems as well as meeting programming requirements and functionality.
- With today’s energy and building code requirements, a new building envelope is required in all four of the schools, should they undergo a modernization. Insulation and cladding would need to be added.
- All four schools are not accessible.
- Two of the four schools have front entrances that are a security concern as there is no visibility to monitor who is entering the school.
- All four of the schools are dated and not functional for delivering today’s educational programming and do not allow for 21 st century teaching and learning styles that require some flexible spaces which can adapt to different learning situations and activities.

- Any potential project(s) would likely not be complete until at least 2028 and components will be older yet.
- The city developed over the years with three schools on the north side of the city; Sparling School, Charlie Killam School and Sifton School and three in the southern side of the city; Camrose Composite High School, Chester Ronning Replacement School and Jack Stuart School.
- Today, most of the city's expansion is in the south which is where a new school would likely be built should it be required.



- How do we handle schools today and situate ourselves for the future?
 - We look at facilities from a building code perspective because codes have changed significantly over the years.
 - The four schools we are looking at are all well over 25 years of age and in fact any modernizations that have been done are over 25 years ago. The mechanical and electrical systems and other building components are considered to have reached their life cycle at 25 years and require replacement.
 - Battle River School Division's schools are well maintained but pedagogy has changed and these schools struggle to deliver modern programming and teaching and learning styles. How do we modify them to allow for today's pedagogy?

BEST FEATURES**Charlie Killam School**

- Finishes are well maintained.
- The school is sprinklered which provides a number of options revisions of the floor plan.
- The enclosed courtyard is used as student gathering space, lunch program area and physical activity.
- There is room on the site to accommodate a replacement school.
- Clean and well maintained.

Sifton School

- New modulars
- Clean and well maintained.
- Room on site for a replacement school.
- Admin office location.

Jack Stuart School

- Clean and well maintained.
- Admin office location.

Sparling School

- Two modulars, with the most recent added in 2022.
- Clean and well maintained.
- Room on site for replacement school.

CHALLENGES

Charlie Killam School

- The Desco wall finish contains hazardous materials and requires mitigation if a wall is modified or removed.
- The school is over area with no CTS space.
- Accessibility is an issue but also there are barriers for sound and sight.
- If the school were to be modernized, Building Code requirements would trigger a major modernization. Both mechanical systems and the building envelope (the cladding and windows) are required to meet updated energy efficiencies and this is very expensive.

Sifton School

- If the school were to be modernized, Building Code requirements would trigger a major modernization. Both mechanical systems and the building envelope (the cladding and windows) are required to meet updated energy efficiencies and this is very expensive.
- How do you integrate an elevator to meet accessibility requirements and ensure inclusivity?
- School is not sprinklered. Sprinklers reduce insurance costs and opens up options for modernization of the school to meet modern pedagogy.
- Gymnasium requires asbestos mitigation.
- The library is over-sized.

Jack Stuart School

- Most of the site belongs to the city. The site would have to be negotiated in order to accommodate a replacement school. It would not be shovel ready.
- Mechanical system is 41 years old.
- If the school were to be modernized, Building Code requirements would trigger a major modernization. Both mechanical systems and the building envelope (the cladding and windows) are required to meet updated energy efficiencies and this is very expensive.
- No accessible washrooms.
- Gymnasium requires asbestos mitigation.
- The library is over-sized.

Sparling School

- If the school were to be modernized, Building Code requirements would trigger a major modernization. Both mechanical systems and the building envelope (the cladding and windows) are required to meet updated energy efficiencies and this is very expensive.
- Small site which would make accommodating a new replacement school a challenge.

5.6 Area Comparator Chart

CHARLIE KILLAM SCHOOL

GRADES 6-8

5 to 9 SCHOOL - Core School Capital Manual m2			
Student Capacity	625		
Instructional Area			
Classrooms	14 @	80	1,120
Science	3 @	120	360
Ancillary	1 @	130	130
Ancillary	3 @	90	270
Info Services	2 @	115	230
Gym			595
Gym Storage			60
Library			246
Subtotal			3,011
Non Instructional Area			
Admin/Staff			307
Wrap-Around Services			30
Mechanical & Meter Rooms			189
Recycle Room (LEED)			11
Phys Ed.			130
Circ.			824
Wall Area			395
Storage			115
Washrooms			74
Accessible Washroom			12
Flexible Space			148
Wiring Network			40
Subtotal			2,275
Required Area			5,286
	per student		8.46
CTS Suite	2 @	142	284
Less One Classroom			
Area for CTS Suite			284
Required Area			5,286
Total Required			5,570

CHARLIE KILLAM SCHOOL m2			
Student Capacity	609		
Adjusted Enrol.	548		
Instructional Area			
Classrooms	20		1,316.5
Science	3		261.1
Ancillary	2		367.3
Ancillary	2		581.0
Info Services	X		
Gym			598.6
Gym Storage			50.7
Library			406.8
Subtotal			3582.0
Non Instructional Area			
Admin/Staff			233.2
Wrap Around & Collaboration			43.9
Mechanical & Meter Rooms			140.5
Recycle Room (LEED)			
Phys Ed.			86.2
Circ.	(approx)		800.0
Wall Area	(approx)		382.0
Storage/Janitor			170.4
Washrooms			209.5
Accessible Washroom			7.8
Flexible Space			
Wiring Network			
Subtotal			2073.6
Area			5,655.5
	per student		10.3
CTS Suites			
Total CTS			0.0
Area			5,655.5
Total Area			5,656

Differences m2	
Student Capacity	Capital Manual vs Existing
Instructional Area	
Classrooms	196
Science	-99
Ancillary	237
Ancillary	311
Info Services	-230
Gym	4
Gym Storage	-9
Library	161
Subtotal	571
Non Instructional Area	
Admin/Staff	-74
Wrap-Around Services	14
Mechanical & Meter Rooms	-48
Recycle Room (LEED)	-11
Phys Ed.	-44
Circ.	-24
Wall Area	-13
Storage	55
Washrooms	136
Accessible Washroom	-4
Flexible Space	-148
Wiring Network	-40
Subtotal	-201
Area Difference	370
CTS Suites	
Difference	-284
Area	370
Total Required	86

(+) denotes a surplus in current school area compared to Alberta Education guidelines
 (-) denotes a deficit in current school area compared to Alberta Education guidelines

JACK STUART SCHOOL

GRADES K-5

ELEMENTARY - Core School Capital Manual				m2
Student Capacity		400		
Instructional Area				
Classrooms	11 @	80	880	
Science	2 @	95	190	
Ancillary	1 @	130	130	
Ancillary	2 @	90	180	
Gym			430	
Gym Storage			43	
Library			160	
Subtotal			2,013	
Non Instructional Area				
Admin/Staff			227	
Wrap-Around Services			20	
Mechanical & Meter Rooms			108	
Recycle Room (LEED)			11	
Phys Ed.			70	
Circ.			503	
Wall Area			242	
Storage			70	
Washrooms			48	
Accessible Washroom			12	
Flexible Space			96	
Wiring Network			30	
Subtotal			1437	
Required Area			3,450	
			per student	8.63
Total Required			3,450	

JACK STUART SCHOOL		m2
Student Capacity	391	
Adjusted Enrol.	284	
Instructional Area		
Classrooms	8	581.8
Science	1	93.1
Ancillary	1	199.9
Ancillary	1	93.3
Gym		576.9
Gym Storage		19.3
Library		288.5
Subtotal		1852.8
Non Instructional Area		
Admin/Staff		251.7
Wrap Around & Collaboration		15.6
Mechanical & Meter Rooms		74.7
Recycle Room (LEED)		
Phys Ed.		72.0
Circ.	(approx)	439.0
Wall Area	(approx)	223.1
Storage/Janitor		117.7
Washrooms		106.5
Accessible Washroom		
Flexible Space		
Wiring Network		
Subtotal		1300.3
Area		3,153.1
	per student	11.1
Total Area		3,153

Differences		m2
Student Capacity		Capital Manual vs Existing
Instructional Area		
Classrooms		-298
Science		-97
Ancillary		70
Ancillary		-87
Gym		147
Gym Storage		-24
Library		129
Subtotal		-160
Non Instructional Area		
Admin/Staff		25
Wrap-Around Services		-4
Mechanical & Meter Rooms		-33
Recycle Room (LEED)		-11
Phys Ed.		2
Circ.		-64
Wall Area		-19
Storage		48
Washrooms		59
Accessible Washroom		-12
Flexible Space		-96
Wiring Network		-30
Subtotal		-137
Area Difference		-297
Total Required		-297

(+) denotes a surplus in current school area compared to Alberta Education guidelines
 (-) denotes a deficit in current school area compared to Alberta Education guidelines

SIFTON SCHOOL

GRADES K-5

ELEMENTARY - Core School Capital Manual m2			
Student Capacity	345		
Instructional Area			
Classrooms	10 @	80	800
Science	1 @	95	95
Ancillary	1 @	130	130
Ancillary	2 @	90	180
Gym			430
Gym Storage			43
Library			140
Subtotal			1,818
Non Instructional Area			
Admin/Staff			227
Wrap-Around Services			20
Mechanical & Meter Rooms			108
Recycle Room (LEED)			11
Phys Ed.			70
Circ.			455
Wall Area			218
Storage			64
Washrooms			42
Accessible Washroom			12
Flexible Space			84
Wiring Network			30
Subtotal			1341
Required Area			3,159
	per student		9.16
Total Required			3,159

SIFTON SCHOOL m2			
Student Capacity	417		
Adjusted Enrol.	300		
Instructional Area			
Classrooms	11		821.1
Science	1		113.4
Ancillary	1		102.2
Ancillary	2		167.9
Gym			302.0
Gym Storage			15.7
Library			83.8
Subtotal			1606.1
Non Instructional Area			
Admin/Staff			124.5
Wrap Around & Collaboration			
Mechanical & Meter Rooms			76.1
Recycle Room (LEED)			
Phys Ed.			
Circ.	(approx)		580.0
Wall Area	(approx)		259.4
Storage/Janitor			60.1
Washrooms			96.0
Accessible Washroom			
Flexible Space			
Wiring Network			
Subtotal			1196.1
Area			2,802.2
	per student		9.3
Total Area			2,802

Differences m2	
Student Capacity	Capital Manual vs Existing
Instructional Area	
Classrooms	21
Science	18
Ancillary	-28
Ancillary	-12
Gym	-128
Gym Storage	-27
Library	-56
Subtotal	-212
Non Instructional Area	
Admin/Staff	-103
Wrap-Around Services	-20
Mechanical & Meter Rooms	-32
Recycle Room (LEED)	-11
Phys Ed.	-70
Circ.	125
Wall Area	41
Storage	-4
Washrooms	54
Accessible Washroom	-12
Flexible Space	-84
Wiring Network	-30
Subtotal	-145
Area Difference	-357
Total Required	-357

(+) denotes a surplus in current school area compared to Alberta Education guidelines
 (-) denotes a deficit in current school area compared to Alberta Education guidelines

SPARLING SCHOOL

GRADES K-5

ELEMENTARY - Core School Capital Manual m2			
Student Capacity	250		
Instructional Area			
Classrooms	6 @	80	480
Science	1 @	95	95
Ancillary	1 @	130	130
Ancillary	2 @	90	180
Gym			430
Gym Storage			43
Library			100
Subtotal			1,458
Non Instructional Area			
Admin/Staff			227
Wrap-Around Services			20
Mechanical & Meter Rooms			108
Recycle Room (LEED)			11
Phys Ed.			50
Circ.			365
Wall Area			175
Storage			51
Washrooms			30
Accessible Washroom			12
Flexible Space			60
Wiring Network			30
Subtotal			1,139
Required Area			2,597
	per student		10.39
Total Required			2,597

SPARLING SCHOOL m2			
Student Capacity	239		
Adjusted Enrol.	179		
Instructional Area			
Classrooms	8		651.0
Science	1		96.0
Ancillary	1		91.2
Ancillary	0		
Gym			408.7
Gym Storage			45.6
Library			155.4
Subtotal			1,447.9
Non Instructional Area			
Admin/Staff			291.7
Wrap Around & Collaboration			
Mechanical & Meter Rooms			50.7
Recycle Room (LEED)			
Phys Ed.			74.0
Circ.	(approx)		365.0
Wall Area	(approx)		167.1
Storage/Janitor			51.1
Washrooms			106.4
Accessible Washroom			
Flexible Space			
Wiring Network			
Subtotal			1,106.0
Area			2,553.9
	per student		14.3
Total Area			2,554

Differences m2	
Student Capacity	Capital Manual vs Existing
Instructional Area	
Classrooms	171
Science	1
Ancillary	-39
Ancillary	-180
Gym	-21
Gym Storage	3
Library	55
Subtotal	-10
Non Instructional Area	
Admin/Staff	65
Wrap-Around Services	-20
Mechanical & Meter Rooms	-57
Recycle Room (LEED)	-11
Phys Ed.	24
Circ.	0
Wall Area	-8
Storage	0
Washrooms	76
Accessible Washroom	-12
Flexible Space	-60
Wiring Network	-30
Subtotal	-33
Area Difference	-43
Total Required	-43

(+) denotes a surplus in current school area compared to Alberta Education guidelines
 (-) denotes a deficit in current school area compared to Alberta Education guidelines

5.7 Discussion of Comparators

As compared to Alberta Education design guidelines and standards:

Charlie Killam School

- Instructional space is over by 387m².
- Classrooms are over area by 196m². It is recommended a school this size have 14 regular classrooms and there are currently 20.
- There is no information services space of 230m².
- Administration area is short by 74 m².
- Phys Ed space is short by 44m².
- Flex space is short by 144m². Consequently, the lack of flex space does not allow for any multi-purpose space for 21st century learning. This type of learning requires spaces that are flexible and adaptable to allow for interactive learning (examples are movable walls and maker spaces). Schools built before 1995 typically do not have flex space.
- The courtyard is not ideally located for flex space due to its far proximity from administration and the gym. Typically, flex space is closer to administration and gym areas so it may be more easily supervised and also usable for other school and community events.

Jack Stuart School

- Overall, space in the school is short overall by 297m².
- Instructional space is under by 160 m².
- Library and gymnasium spaces are over by 129m² and 147 m² respectively.

Sifton School

- Overall, space in the school is short overall by 357m².
- The library is over by 76m².
- Gymnasium is short by 128 m².
- The administration area is short by 103m².
- No accessible washroom.

Sparling School

- Overall, classroom space is over by 171 m² or two classrooms.
- The major shortage is reflected in ancillary by 201m². Consequently, there is no flex or student gathering space which does not allow for any multi-purpose space for 21st century learning. This type of learning requires spaces that are flexible and adaptable to allow for interactive learning (examples are movable walls and maker spaces). Schools built before 1995 typically do not have flex space.

6.0 Brainstorming Exercise

Summary of “The the Art of Possibilities; Food for Thought” – Presented by Group2

- The new education pedagogy requires new kinds of space.
- Dual purpose spaces allow for the flexibility of space and a means to achieve more for students and staff. We need to think about spaces and how they can be used for more than one function.
- Visibility is a key for supervision in break-out spaces and flex spaces.
- There can be informal spaces (21st century learning) to support classrooms distributed throughout the school:
 - Student gathering
 - Presentation stairs
 - Learning commons
 - Break out spaces.
- Lots of opportunities for the improved supervision of students working individually or in groups.
- Science labs (for grades 6-12) are specialty spaces to support science learning. They are larger than regular classrooms.
- Di Vinci space is a combination space for both art and science and has replaced traditional space as we know it.
- Gymnasium space can be shared with community.
- Retractable walls can be incorporated between classrooms and into flex and breakout spaces.
- Spaces for programs that require dedicated specialty equipment:
 - Performing Arts
 - Visual Arts
 - Practical Arts
 - Industrial Arts.



Example of a student gathering / presentation stair area.



Example of a learning commons.

- The Foods program can be part of the lunch program.
- Positioning of administration space, staff room, work room, storage can be optimal and not directly connected to learning.
- Servery, student washrooms and recycling spaces can be positioned where they are not directly connected to learning.

The value scoping participants were divided into four teams to discuss and develop options for meeting the objectives of the proposed modernization project.

Working with the existing school floor plans and site layout, the teams discussed, identified and explored educational, functional and program requirements that are deficient in the existing school facility.

The teams also determined the best uses and locations for re-purposing and reconfiguring the existing space to meet the project objectives and strategic directions established earlier in the Value Scoping Session.

The teams were instructed to remain cognizant of the established area and space guidelines which must be maintained:

- New gymnasium space is held to the maximum area approved.
- Wrap-around space, accessible washroom space and gender-neutral washrooms are mandatory and these areas, as set out, cannot be altered.
- Areas prescribed for instructional space vs non-instructional space cannot be shifted from one to the other; however, the areas within each of these classifications may be modified.
- Portables can be added if necessary.
- Consider renovations that include additions.
- Three of the four schools have adequate sites for additions and new replacement schools.
- Modernization projects typically take about 2-2 ½ years to complete where a new school or replacement school usually takes 18 months.
- The government does not provide funding for the decanting of students during a modernization project. The consultant and school administration staff must phase construction to provide minimal disruption to students and programming.



Example of Practical Arts space.



Example of dual purpose Visual / Practical Arts spaces.

7.0 Recommended Ranking of Proposed Capital Projects

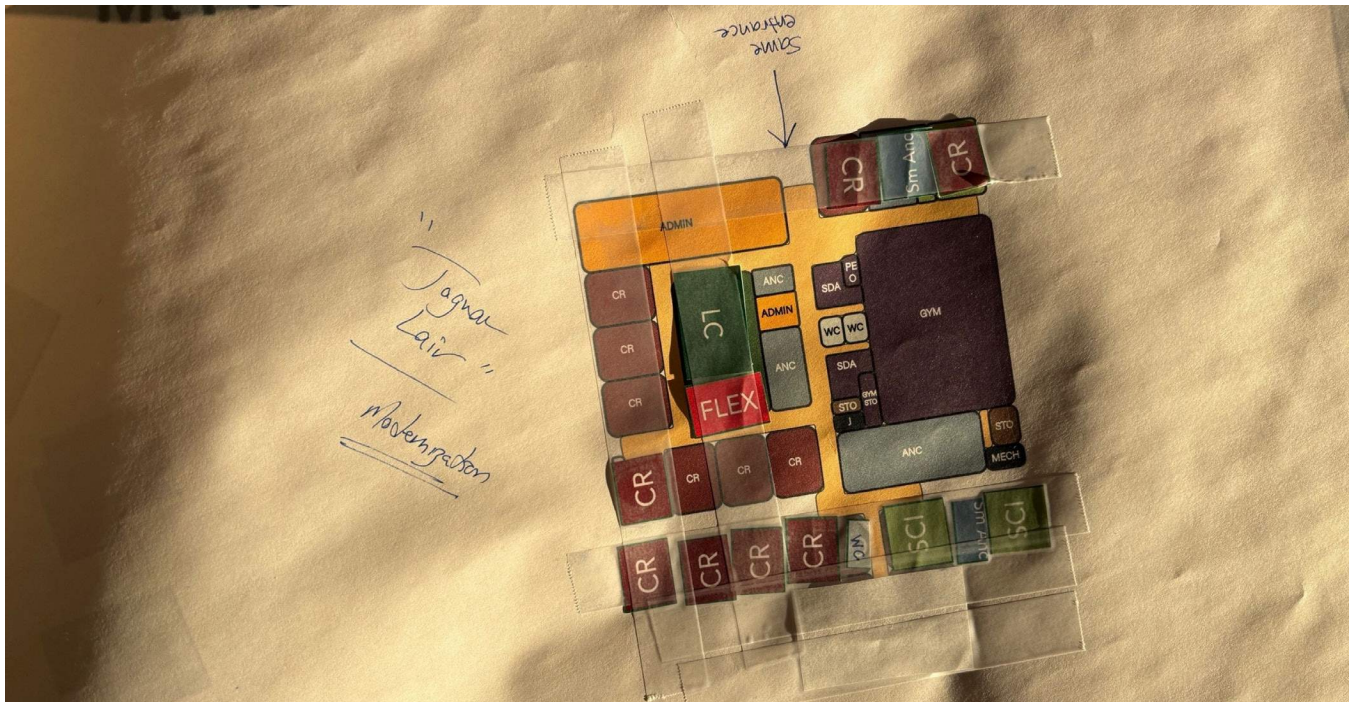
In exploring and identifying the major building components to be addressed through the modernizations, as well as the educational functional requirements that are deficient in the existing school facilities, four options one option for each school and one “replacement schools” option - were developed and presented back to the larger group including all of the participants.

7.1 Summary of Group Presentations



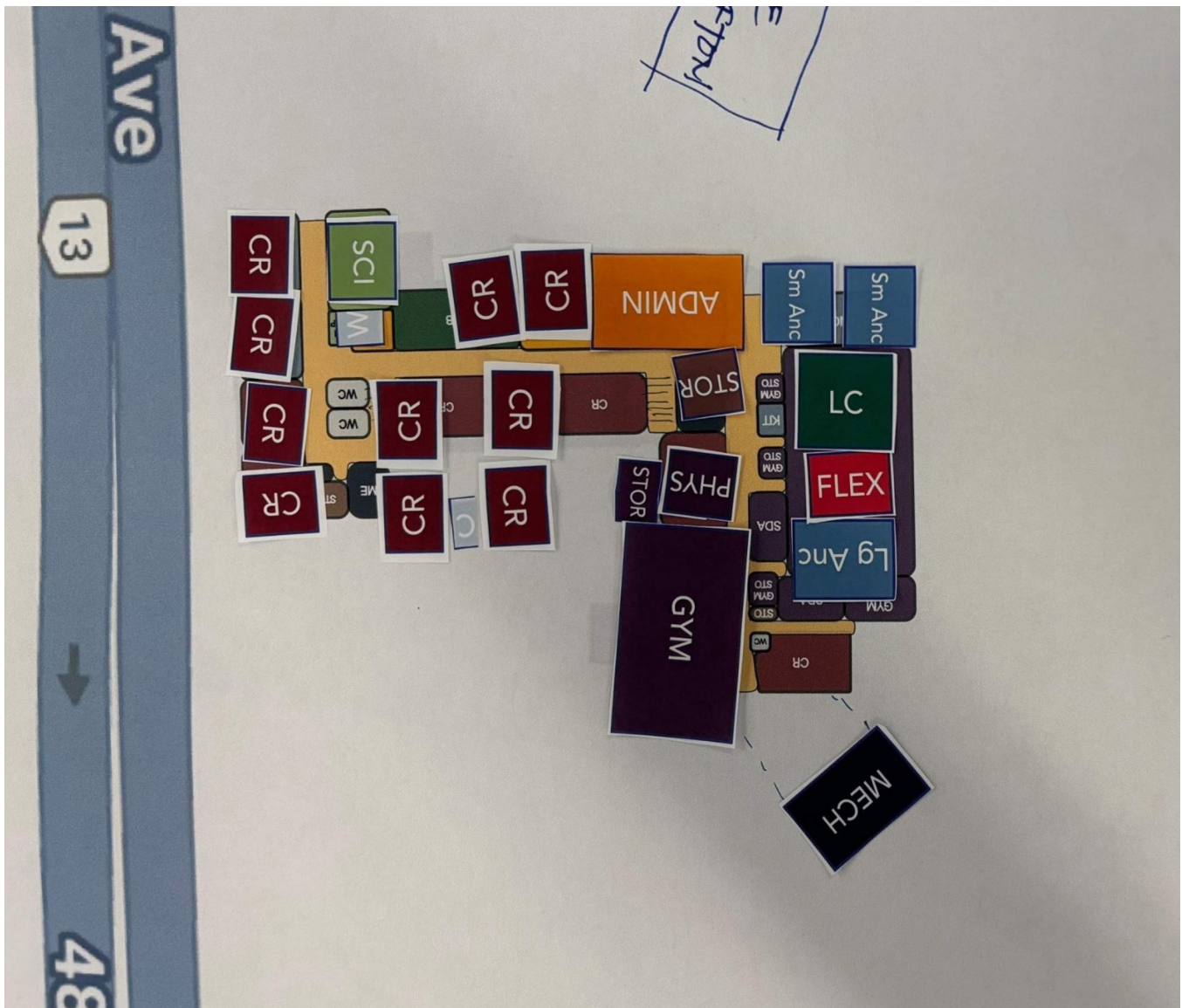
Group 1 Option- "Ecole Goots Hoots Middle School"

- Charlie Killam School modernized and remains configured for grades 6-8.
- Pods of classrooms with ancillary space in the middle.
- Moved the main entrance to be located right next to gymnasium.
- The middle section is information services and learning commons and are an open area concept with pods of classrooms distributed around the open area.
- Old gymnasium is demolished because the ceiling is too low and a new gymnasium and music room with flex space are located close to the main entrance.



Group 2 Option - "Jaguar Lair" (K-5)

- Modernize Jack Stuart School.
- All classrooms to have exterior doors and better access to natural light.
- The youngest students would be at the front of the school (pre-kindergarten and kindergarten) and have laundry and storage areas.
- Grades 1, 2 and 3 would be in an area separate from kindergarten and grades 4 and 5 in another separate area.
- Learning commons would remain part of the existing learning commons space with moveable doors. (The existing learning commons is currently too large.)
- The old stick built/ wooden portables at the south end of the school would be replaced with permanent classrooms.
- One side of school is division I students, other side of school is division II students.



Group 3 Option "The Sifton" (K-5)

- Modernization of Sifton School.
- Administration remains in the same space but popped out a bit to be more noticeable.
- Remove the aging bi-level wing to increase accessibility and improve maintenance costs.
- Includes addition of new gymnasium.
- A new mechanical room is built above gymnasium storage.
- Existing gymnasium becomes common flex and ancillary area.



Group 4 Option "Sparling School" (K-5)

- Modernization moves the administration area to the relocated front entrance on 53 street and closest to the early learning and special needs students.
- Storage is located adjacent to administration.
- More privacy provided in the office for counselling, speech and language pathologists.
- Great sight lines for supervision would be created with the new configuration.
- More open concept for learning commons and washrooms.
- Connecting classrooms makes sense rather than how isolated they are now.

7.2 Discussion of Advantages and Risks

PLUS	DELTA
ALL	
More 21st century learning opportunities.	Scheduling is a challenge during modernization.
	Is this the best way to meet the needs?
	Is this the best option?
	Does it meet the needs of more than one school?
	Four new schools would also be expensive and may not be approved by government as a solution. It would take years to fund and complete all four projects resulting in further escalation of costs.
CHARLIE KILLAM SCHOOL	
Administration located at front of school.	
New gymnasium added.	
SIFTON SCHOOL	
Eliminating the old two story wing reduces infrastructure maintenance by providing new school space that meet current energy requirements.	
School becomes accessible and does not require an elevator.	
New gymnasium added.	
Existing gymnasium becomes ancillary space.	
SPARLING SCHOOL	
Improved sight lines from the administration office.	

8.0 Cost Benefit Analysis

The costing process identifies the area(s) of new construction and area(s) to be demolished and modernized by breaking the existing school into zones to identify the intensity or level of modernization, as well as, the approximate construction schedule and duration. Location is also factored into the support price.

Alberta Infrastructure has a set Construction Rate determined by previous school projects tendered and completed that are used to forecast project budgets.

In establishing the costs for modernization projects, the school is broken down into components; foundations, finishes, substructure, shell (roof, windows and doors), stairs, elevators and services; heating, ventilation, plumbing, electrical and air conditioning where warranted by the Province.

The components of the modernization projects are broken into groups by intensity for pricing:

- **Major modernizations:** most complex and may include full mechanical upgrades, structural changes, slab-on-grade, the raising of ceilings, roof alignment and changes to corridors.
- **Medium modernization:** does require some structural work but has no changes to load bearing walls.
- **Minor modernization:** involves no structural change or upgrades and basically involves a coat of paint and new fixtures. "The walls stay in place."

The estimated costs for hazardous materials abatement, and soft costs are also factored into a project budget for design fees, site work as well as furniture and equipment.

The school construction costs used in this exercise range from \$5,300/m² for a 1 storey medium sized school to \$6,000/m² for a single storey small school. The major modernization rate used is \$4,800 m². All options assume demolition of area or schools being replaced and include LEED Silver, envelope and mechanical and electrical upgrades. New construction support rates are factor in with a 20 % location factor for school construction in Camrose.

The School Capital Manual outlines the additional costs funded in a school capital project; fees, furniture and equipment, etc. and differentiates between grade configurations.

Finally, where the modernization of a school is more than 75% of the cost of constructing a new replacement school with the same capacity, the Province would look at funding the replacement school over modernizing the existing school.

9.0 Evaluation of Options and Identification of the Solution

9.1 Discussion

In Day Two of the session, Tech-Cost consultants presented the costing of the modernization options developed in the brainstorming session as well as the costing for each options replacement school comparator for discussion:

Charlie Killam School Grades 6-8

Option 1a:

- Replacement School (grades 6-8)
- Capacity - 625
- Single storey

Estimated Capital Cost \$61,290,043

Option 1b:

- "Goots Hoots" Middle School Modernization

Estimated Capital Cost - \$55,662,458

Jack Stuart School Grades K-5

Option 2a:

- Replacement School (grades K-5)
- Capacity - 400
- Single storey

Estimated Capital Cost \$37,494,019

Option 2b:

- "Jaguar Lair" School Modernization

Estimated Capital Cost - \$33,564,537

Ecole Sifton Grades K-5

Option 3a:

- Replacement School (grades K-5)
- Capacity - 345
- Single storey

Estimated Capital Cost \$34,258,381

Option 3b:

- "The Shifton" School Modernization

Estimated Capital Cost - \$41,477,112

Sparling School Grades K-5

Option 4a:

- Replacement School (grades K-5)
- Capacity - 250
- Single storey

Estimated Capital Cost \$28,378,948

Option 4b:

- "The L" Modernization

Estimated Capital Cost - \$25,001,237

Total Cost of four Replacement School Projects \$161,421,391

Total cost of four Modernization Projects \$155,705,344

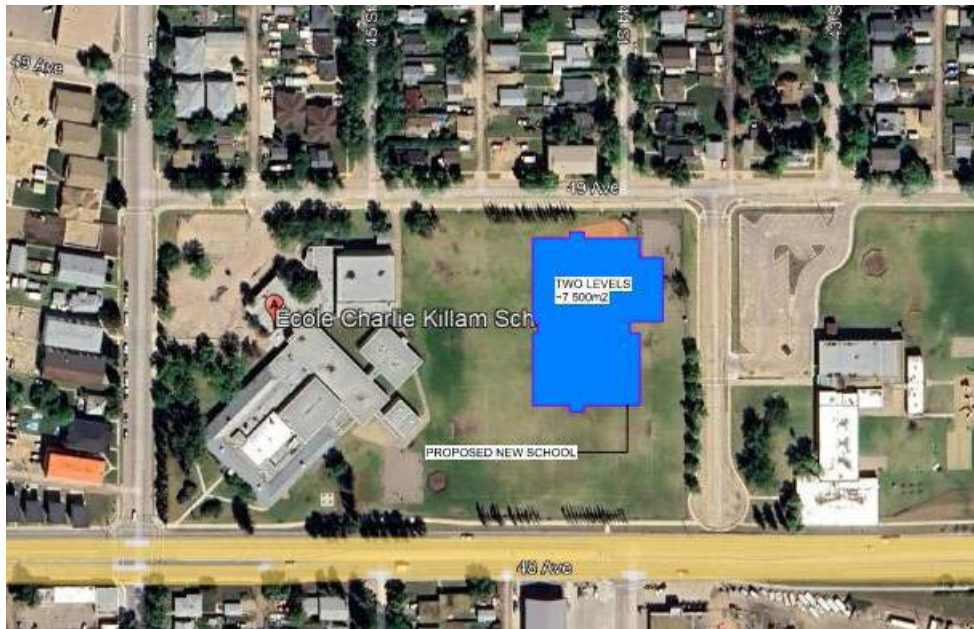
Summary of Discussion:

- Participants were reminded that the school division's dilemma in planning for future capital requirements is that all four of the schools are between 42 and 95 years of age and all require replacement due to aging building components and life cycle requirements, the lack of modern programming spaces, accessibility requirements and security concerns with front entrance among other issues.
- Camrose Composite High School which has had several modernizations and has no immediate concerns or requirements at this time and Chester Ronning School was replaced in 2022.
- The replacement of four schools is expensive (\$161,421,391) and it would take years for all four schools to receive provincial capital funding from the province.
- Discussion continued around how the school division could realistically address these aging facilities that while meticulously well maintained, were built in different eras and are in need of replacement or major modernization to replace original building components that are beyond or approaching their life expectancy, as well as, to provide functional upgrades to meet 21st century learning program requirements.
- A solution to address the immediate needs of the school jurisdiction for the City of Camrose needs to be realistic and attainable. It must reduce the number of capital requirements and the project cost overall while providing a solution for dealing with the aging school infrastructure and enhancing student programming and achievement opportunities for the future.

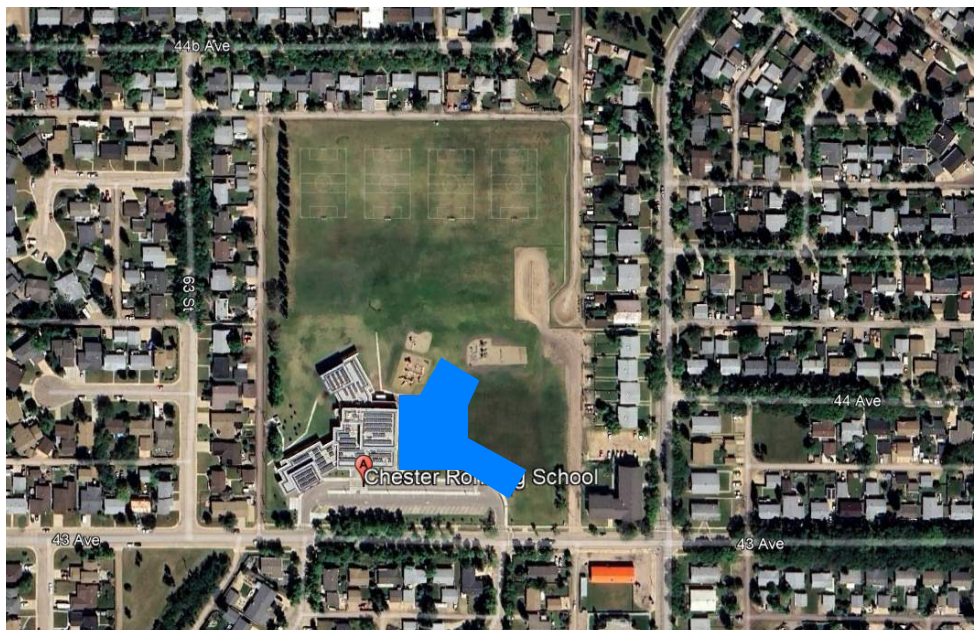
- A provincial priority for the government is a solution that provides project justification and supportability, demonstrates overall planning and management, communicates local priorities, provides project definitions for budget and scope development and demonstrates that all options for the accommodation of students has been explored and considered: adjusting grade configurations and looking at more efficient ways to utilize existing space in a school(s) within a community.
- It was proposed that a strategy Battle River School Division could consider is to adjust its grade configurations in the schools in Camrose. Adopting a plan to reconfigure grades from K-5, 6-8 and 9-12 to K-9 and 10-12 provides a more realistic and achievable capital solution for Camrose.
- Today several Alberta school jurisdictions across the province are opting to build 900 capacity K-9 school campuses.
- K-9 schools combine students ranging in age from four to fifteen and students must be grouped efficiently to maximize the benefit of this age range. It allows younger students the opportunity to interact and learn from older students. The younger students get exposed earlier to older kids and to bigger groups of kids. Vice versa, it allows for interaction for the older students in a role modeling or leadership role for younger students.
- Being in one school for ten years provides additional years for students to build and be part of a strong school community. It provides opportunities for staff and student collaboration. It provides more opportunities for younger students to participate in more robust music and sports programs and as mentioned also provides for more leadership opportunities.
- K-9 school facilities provides more opportunities for planning and designing in that there are an increases in the variety of program of spaces; ancillary, CTS, larger gymnasiums and libraries/learning commons, etc. which can be used by the whole school that would not be part of a typical elementary or middle school. K-9 school advantages:
- There is an opportunity to determine CTS programs that are best suited to the community.
- Keeps siblings together.
- No need for decanting space in order to modernize existing schools.
- Can utilize existing sites to build replacement schools.
- A brand new school attracts and retains students and teachers.
- There is a challenge in maintaining more facilities as opposed to fewer.
- Community engagement increases in one school community.
- Easier for families for drop off and celebrations.
- Stronger capital request of one school serving the communities.

9.2 Potential Solution

Replacing one middle school and three elementary schools with one new 900 capacity school and adding a large addition of 4,403m² to the existing new replacement school, Chester Ronning School, with an opening capacity to accommodate actual enrollment numbers (600 to 900) would accommodate all the K-9 students in Camrose well into the future and is much more economically feasible and potentially approvable by government.



New K-9 900 capacity school site test fit at one possible location.



Test fit of new addition to existing Chester Ronning School, as a possible location.

Area Comparator Chart

CHESTER RONNING SCHOOL

GRADES K-5

K to 9 SCHOOL - Core School Capital Manual m2			
Student Capacity	905		
Instructional Area			
Classrooms	24 @	80	1,920
Science	2 @	120	240
Elementary Science	2 @	95	190
Ancillary	2 @	130	260
Ancillary	4 @	90	360
Info Services	2 @	115	230
Gym			705
Gym Storage			71
Library			368
Subtotal			4,344
Non Instructional Area			
Admin/Staff			472
Wrap-Around Services			50
Mechanical & Meter Rooms			216
Recycle Room (LEED)			22
Phys Ed.			130
Circ.			1121
Wall Area			538
Storage			157
Washrooms			110
Accessible Washroom			24
Flexible Space			221
Wiring Network			40
Subtotal			3101
Required Area			7,445
	per student		8.23
CTS Suite	1 @	142	142
Less One Classroom			
Area for CTS Suite			142
Required Area			7,445
Total Required			7,587

CHESTER RONNING SCHOOL m2			
Student Capacity	352		
Adjusted Enrol.	307		
Instructional Area			
Classrooms	11		809.2
Science			0.0
Elementary Science			0.0
Ancillary	1		128.1
Ancillary	2		141.2
Info Services			0.0
Gym			433.5
Gym Storage			43.4
Library			158.8
Subtotal			1714.1
Non Instructional Area			
Admin/Staff			213.5
Wrap Around & Collaboration			21.5
Mechanical & Meter Rooms			106.9
Recycle Room (LEED)			7.5
Phys Ed.			47.5
Circ.	(approx)		563.7
Wall Area	(approx)		226.0
Storage/Janitor			74.6
Washrooms			115.4
Accessible Washroom			10.2
Flexible Space			118.0
Wiring Network			31.3
Subtotal			1536.2
Area			3,250.3
	per student		10.6
CTS Suites			
Total CTS			0.0
Area			3,250.3
Total Area			3,250

Differences m2	
Student Capacity	Capital Manual vs Existing
Instructional Area	
Classrooms	-1111
Science	-240
Elementary Science	-190
Ancillary	-132
Ancillary	-219
Info Services	-230
Gym	-272
Gym Storage	-28
Library	-209
Subtotal	-2630
Non Instructional Area	
Admin/Staff	-259
Wrap-Around Services	-28
Mechanical & Meter Rooms	-109
Recycle Room (LEED)	-14
Phys Ed.	-82
Circ.	-557
Wall Area	-312
Storage	-82
Washrooms	5
Accessible Washroom	-14
Flexible Space	-103
Wiring Network	-9
Subtotal	-1565
Area Difference	-4,195
CTS Suites	-142
Difference	-142
Area	-4,195
Total Required	-4,337

(+) denotes a surplus in current school area compared to Alberta Education guidelines
 (-) denotes a deficit in current school area compared to Alberta Education guidelines

The proposed solution of building one new K-9 school and an addition at Chester Ronning School to reconfigure it to a K-9 indicates to government that Battle River School Division has reviewed all of the options available for delivering education in the community and considered all of the planning benchmarks in developing a plan for the entire city that considers all of the existing aging facilities, the current and projected enrollments and demographics and the functional and programming requirements necessary to provide students and teachers with 21st century learning and teaching opportunities. The proposed solution supports the capital drivers of high provincial priority projects:

- A solution for an entire community.
- Fiscal integrity.
- The age and condition of existing facilities.
- Current and projected enrollment growth.
- Functional and programming requirements necessary to meet current standards for delivering education.

Chester Ronning School and Camrose Composite High School are located in the southwest quadrant and it is suggested that the new K-9 replacement school be located at the current Charlie Killam site. The existing sites for Charlie Killam School and Sifton School can be considered and assessed to determine if they are large enough to accommodate a larger school and the required playground/green space. A high level “fit” test on these existing sites was done to show the sites could potentially accommodate a school with the required area (refer to page 36).

The proposed future addition and replacement school projects would include the demolition of the four existing schools as part of the total project.

Option 5:

- Addition to existing Chester Ronning School to convert to a K-9 school
- Capacity - 900

Estimated Capital Cost \$38,072,584

Option 6:

- New K-9 school
- Capacity - 900

Estimated Capital Cost - \$79,464,680

9.0. Evaluation of Options and Identification of the Solution

OPTIONS											
	Option 1a - Replacement for Charlie Killam 6-8 School	Option 1b - Modernization for Charlie Killam 6-8 School - Goots Hoots Middle School	Option 2a - Jack Stuart Replacement K-5 School	Option 2b - Jack Stuart Modernization K-5 School - Jaguar Lair	Option 3a - Replacement for Sifton K-5 School	Option 3b - Modernization for Sifton K-5 School - The Shifton	Option 4a - Replacement for Sparling K-5 School	Option 4b - Modernization for Sparling K-5 School - The "L"	Option 5 - Addition to Chester Ronning to re-grade to K-9	Option 6 - New K-9 School	
Area (m²)	5,570	5,570	3,450	3,450	3,159	3,159	2,597	2,597	7,587	7,587	
CAPITAL COSTS											
Hard Construction Cost	\$40,691,714	\$36,494,433	\$25,016,018	\$22,305,913	\$22,860,320	\$22,164,305	\$18,927,818	\$16,356,548	\$26,022,889	\$52,632,424	
Soft / Other Construction Cost	\$7,117,591	\$6,404,054	\$4,252,723	\$3,792,005	\$3,886,254	\$3,767,932	\$3,217,729	\$2,780,613	\$4,523,891	\$9,047,512	
GST - Non Refundable	\$764,949	\$686,376	\$468,300	\$417,567	\$427,945	\$414,916	\$354,329	\$306,195	\$488,748	\$986,879	
Escalation	\$12,715,789	\$12,077,596	\$7,756,977	\$7,049,052	\$7,083,862	\$15,129,959	\$5,879,073	\$5,557,882	\$7,037,055	\$16,797,865	
TOTAL CAPITAL COSTS	\$61,290,043	\$55,662,458	\$37,494,018	\$33,564,537	\$34,258,381	\$41,477,112	\$28,378,948	\$25,001,237	\$38,072,584	\$79,464,680	
Modernization as a %age of Replacement		91%		90%		121%		88%			
K-9 as a %age of Replacement of Separate Schools									24%	49%	
TOTAL CAPITAL COSTS (Solution Cost)	\$61,290,043	\$55,662,458	\$37,494,018	\$33,564,537	\$34,258,381	\$41,477,112	\$28,378,948	\$25,001,237	\$38,072,584	\$79,464,680	
CUMULATIVE OPERATIONS & MAINTENANCE COSTS											
Community	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Receipts/Income	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Facility Systems Maintenance	\$5,799,193	\$5,799,193	\$3,591,960	\$3,591,960	\$3,288,986	\$3,288,986	\$2,703,861	\$2,703,861	\$7,899,188	\$7,899,188	
Facility Operations - Utilities	\$4,583,930	\$4,583,930	\$2,839,238	\$2,839,238	\$2,599,755	\$2,599,755	\$2,137,247	\$2,137,247	\$6,243,856	\$6,243,856	
Facility Operations - Expenses	\$7,828,910	\$7,828,910	\$4,849,145	\$4,849,145	\$4,440,131	\$4,440,131	\$3,650,212	\$3,650,212	\$10,663,903	\$10,663,903	
CAPITAL / CYCLICAL RENEWAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Future Costs	\$79,502,076	\$73,874,491	\$48,774,362	\$44,844,880	\$44,587,252	\$51,805,983	\$36,870,268	\$33,492,557	\$62,879,531	\$104,271,626	
Total Net Present Value (nPV)	\$70,136,442	\$64,508,857	\$42,973,385	\$39,043,904	\$39,275,576	\$46,494,306	\$32,503,562	\$29,125,851	\$50,122,428	\$91,514,523	

9.3 Cost Summary Recap

	Four modernizations	Four replacement schools	Chester Ronning School addition	New K-9 school
			\$38,072,584	\$79,464,680
Total	\$155,705,344	\$161,421,391 (modernizations are 96% of new construction)	\$117,537,264	

10.0 Next Steps

The Value Scoping Session developed and provided costing models for the four options for the modernizations of Charlie Killam School, Jack Stuart School, Sifton School and Sparling School. All of the options for modernization reflect a scope of work, identified in the costing report (Appendix D), that needs to be undertaken, the areas of the schools that need attention, and the level of investment that will be required (Refer to chart on page 19).

Additionally, two alternate options were developed for replacing one middle school and three elementary schools with one new 900 capacity schools and adding a large addition of 4,403m² to the existing new replacement school, Chester Ronning School, with an opening capacity of 600 to 900 to accommodate all the K-9 students in Camrose.

The scope of the addition and the design of a replacement school would be developed after the project(s) approval.

Alberta Infrastructure's guideline is to consider and evaluate a replacement building when the cost of a modernization exceeds 75% of the replacement school cost. The school board should consider the replacement school option over modernization of schools in its planning and decision-making process.

The information and discussions generated by this Value Scoping Session are intended to assist Battle River School Division's Board of Trustees in the development of its capital plan. The school division may choose to include any, a combination, or none of these options in their capital plan

11.0 School Board Chair's Closing Remarks

Going into this Value Scoping process there were no preconceived ideas of the outcome.

Education is changing today. Schools are different today even from what they were like 15 years ago.

This session has brought together a good number of participants with different backgrounds and a variety of experience. This experience has reinforced the perspectives from a variety of backgrounds ensures that more than one point of view is heard, and that ownership does not get in the way.

After the report, the Board will provide messaging on the next steps.

Appendix A: Floor Plans of Existing Schools

Charlie Killam School



Jack Stuart School



Ecole Sifton School



Sparling School



Appendix B: Area Capacity and Utilization (2023-2024)

School Name	School Code	Grade Configuration	Instructional Area m2	Instructional Area per Student	CTS Cap	GYM/ PAR Cap	Lib Cap	Total Capacity	Exempt Instructional Area m2	Net Capacity	EC S	Gr.1-12	ECS Sp. Ed. Severe	Gr.1-12 Sp. Ed. Severe	* Adj Total Enrol	Utiliz. %
Bashaw School	4502	K-12	1150.6	3.69	20	0	0	332	0	332	19	227	1	11	259.5	0.78
Bawlf School	4503	K-12	1453.9	3.69	40	0	0	434	0	434	22	284	4	10	319	0.74
C W Sears Elementary School	3509	K-4	1403.7	3.47	0	0	0	405	0	405	76	211	16	11	287	0.71
Camrose Composite High School	4545	9-12	3201	3.65	260	95	25	1256	210.3	1199	0	758	0	30	818	0.68
Central High School Sedgewick	4710	1-12	1937.5	3.69	80	20	0	625	0	625	0	353	0	8	369	0.59
Charlie Killam School	4541	6-8	2126.1	3.61	0	20	0	608	0	609	0	480	0	23	526	0.86
Chester Ronning School	4542	K-5	1220.13	3.47	0	0	0	351	0	352	55	255	10	7	306.5	0.87
Daysland School	4702	K-12	1689.5	3.69	60	20	0	538	72.5	518	38	195	3	4	225	0.43
Forestburg School	4703	K-12	1473.8	3.69	40	20	0	459	72	440	15	186	3	3	202.5	0.46
Hay Lakes School	4507	1-12	1472.3	3.69	0	0	0	399	65.5	381	0	233	0	13	259	0.68
Jack Stuart School	4543	K-5	1357.6	3.47	0	0	0	391	0	391	59	241	12	19	320.5	0.82
Killam Public School	4707	K-9	1035	3.61	0	20	0	307	0	307	63	140	6	5	187.5	0.61
New Norway School	4510	K-12	1207.8	3.69	40	20	0	387	0	387	14	182	2	4	199	0.51
Round Hill School	4512	K-9	830.9	3.61	0	0	0	230	0	230	9	94	2	2	104.5	0.45
Ryley School	3506	K-9	760.1	3.61	80	0	0	291	0	291	6	99	0	3	108	0.37
Sifton School	4513	K-5	1448	3.47	0	0	0	417	0	417	77	248	13	4	307.5	0.74
Sparling School	4549	K-5	830.8	3.47	0	0	0	239	0	239	44	158	18	19	236	0.99
Tofield School	3508	5-12	2223.7	3.69	40	0	0	643	0	643	0	451	0	34	519	0.81
Viking School	3510	K-12	1938.8	3.69	40	20	0	585	0	585	15	222	4	11	255.5	0.44

Appendix C: Enrollment Projections

SCHOOL	GRADES	CAPACITY	2017/2018 ENROLL. ¹	2020/2021 ENROLL. ²	2035 PROJ. ENROLL. ³	2020/2021 UTILIZATION ²	2035 PROJ. UTIL. ³
Bashaw School	K-12	332	229	226	217	72%	70%
Bawlf School	K-12	434	328	287	312	67%	71%
Camrose Composite High School	9-12	1,257	686	642	683	56%	58%
Charlie Killam School	6-8	609	447	510	486	90%	86%
Chester Ronning School	K-5	350	294	261	281	52%	80%
Jack Stuart School	K-5	391	266	264	252	73%	69%
Sifton School	K-5	417	323	297	306	72%	78%
Sparling School	K-5	239	166	166	171	75%	87%
Daysland School	K-12	518	230	203	229	40%	45%
Forestburg School	K-12	440	238	182	152	42%	35%
Hay Lakes School	1-12	381	247	202	241	57%	67%
Killam Public School	K-9	307	169	170	149	55%	52%
New Norway School	K-12	387	246	213	191	56%	52%
Round Hill School	K-9	230	68	93	85	38%	37%
Ryley School	K-9	286	98	140	99	55%	42%
Central High Sedgewick Public School	1-12	625	419	384	340	67%	60%
CW Sears Elementary School	K-4	405	330	297	256	73%	68%
Tofield School	5-12	641	358	402	329	72%	59%
Viking School	K-12	585	270	254	213	45%	39%

Red - indicates a reduction in enrollment and utilization

Sources: 1. Alberta Education Area Capacity and Utilization Report (2017/2018), 2. Alberta Education Area Capacity and Utilization Report (2020/2021), 3. Battle River School Division Capacities and Projected Enrolments.

Appendix D: Costing Analysis

Quantity Surveyor's
CAPITAL COST ANALYSIS
January 08 & 09, 2025

**Camrose Elementary and Middle Schools
Value Scoping Session
Battle River School Division**
Camrose, AB



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1. PREAMBLE

This report is intended to demonstrate the capital cost analysis (CCA) solutions developed during the Value Scoping Session held on January 08 and 09, 2025. These analyses are used to compare cost estimates for the qualitative concepts presented, with reasonable budgets forecast in planning for the long-term facility planning. The quantitative value recommendations for improvements ensuring proper occupational safety, operation and supply of quality learning are addressed in other sections of this report.

Options compared are listed below:

École Charlie Killam 6-8 School

Option 1a – Replacement 6-8 625 capacity single-storey school, demolish existing school

• Demolished	
○ Building demolition – Charlie Killam	5,656 m ²
• New Replacement School, Single Storey	
○ 6-8 Schedule “A”	5,570 m ²
○ Sub-Total	5,570 m ²
○ Option Total	5,570 m ²

Option 1b (Goots Hoots Middle School) – Modernize existing 6-8 School. Envelope, M&E renewal to LEED, demo gym and stick built modulars, program area updates and add new gym.

• Demolished	
○ Building demolition (gym)	1,073 m ²
○ Selective demolition	4,583 m ²
• Modernization / Addition	
○ Modernization	4,583 m ²
○ Addition	987 m ²
○ Sub-Total	5,570 m ²
○ Option Total	5,570 m ²

Jack Stuart K-5 School

Option 2a – Replacement K-5 400 capacity single-storey school, demolish existing school

• Demolished	
○ Building demolition – Jack Stuart	3,153 m ²
• New Replacement School, Single Storey	
○ K-5 Schedule “A”	3,450 m ²
○ Sub-Total	3,450 m ²
○ Option Total	3,450 m ²

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• Demolished	
○ Building demolition (modulars)	247 m ²
○ Selective demolition	2,906 m ²
• Modernization / Addition	
○ Modernization	2,906 m ²
○ Addition	544 m ²
○ Sub-Total	3,450 m ²
○ Option Total	3,450 m ²

École Sifton K-5 School

Option 3a – Replacement K-5 345 capacity single-storey school, demolish existing school

• Demolished	
○ Building demolition – Ecole Sifton	2,802 m ²
• New Replacement School, Single Storey	
○ K-5 Schedule “A”	3,159 m ²
○ Sub-Total	3,159 m ²
○ Option Total	3,159 m ²

Option 3b (The Shifton) – Modernize existing K-5 School. Envelope, M&E renewal to LEED, demo two level portion, program area updates including re-utilize gym and add new single storey and gym.

• Demolished	
○ Building demolition (two storey)	1,331 m ²
○ Selective demolition	1,471 m ²
• Modernization / Addition	
○ Modernization	1,471 m ²
○ Addition	1,688 m ²
○ Sub-Total	3,159 m ²
○ Option Total	3,159 m ²

Sparling K-5 School

Option 4a – Replacement K-5 250 capacity single-storey school, demolish existing school

• Demolished	
○ Building demolition – Sparling	2,554 m ²
• New Replacement School, Single Storey	
○ K-5 Schedule “A”	2,597 m ²
○ Sub-Total	2,597 m ²

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Option 4b (The “L”) – Modernize existing K-5 School. Envelope, M&E renewal to LEED, program area updates and add new area.

• Demolished	
○ Building demolition	nil m ²
○ Selective demolition	2,554 m ²
• Modernization / Addition	
○ Modernization	2,554 m ²
○ Addition	43 m ²
○ Sub-Total	2,597 m ²
○ Option Total	2,597 m ²

Addition to Chester Ronning School and re-grade to K-9

Option 5 – Addition to existing K-5 School. Existing school does not require modernization as recent new build. Add area to extend school to 905 capacity single storey school.

• Demolished	
○ Building demolition	nil m ²
○ Selective demolition	nil m ²
• Modernization / Addition	
○ Modernization	3,250 m ²
○ Addition	4,337 m ²
○ Sub-Total	7,587 m ²
○ Option Total	7,587 m ²

New K-9 School

Option 6 – Replacement K-9 905 capacity single-storey school, demolish existing schools (4 number).

• Demolished	
○ Building demolition – 4 no. Schools	14,165 m ²
• New Replacement School, Single Storey	
○ K-9 Schedule “A”	7,587 m ²
○ Sub-Total	7,587 m ²
○ Option Total	7,587 m ²

2. METHODOLOGY

Facility-Life Cost Planning

Facility-Life-Cost Planning applies to the long-term acquisition and ownership of assets. This report reviews options over a 25-year study period and can be used to compare the effect of costs over each facility life from different economic perspectives, enabling the Owner to understand the effects of Capital, Operating and Cyclical influences.

The purpose of life-cost planning is to use discounted cash flow analysis to determine the total costs of a building over a specified time frame in order to objectively assess the performance of the design in terms of durability, quality, energy usage and the like. Life-cost planning also establishes estimated target costs for the capital and running costs of a building or its elements. These targets provide a constraint and a useful measure against which selected design solutions can be later compared or evaluated. For this project, the various categories of capital and operating expenses shown are summarized as follows:

Capital cost

- Land costs (not applicable)
- Construction costs
- Soft Costs

The basic capital dollars are expressed in current **January 2025** dollars, that is, as if the project were tendered in **January 2025**.

Where possible, elements have been assessed or measured, then priced at rates considered competitive for a project of this type. This report is developed using standardized methods and techniques. Formatting of the report in accordance with the following documents:

Canadian Institute of Quantity Surveyors. "Elemental Cost Analysis-Method of Measurement and Pricing" (Toronto ON, Canada: Canadian Institute of Quantity Surveyors, 1990).

Construction Specifications Institute. "UniFormat™: A Uniform Classification of Construction Systems and Assemblies"(Alexandria, VA, USA: The Construction Specifications Institute, 2010 Edition).

Construction Specifications Institute. "MasterFormat 2010™" (Alexandria VA, USA: The Construction Specifications Institute, 2010 Edition).

Costing for the estimated areas of work is developed using the historical data of similar projects. Consideration is made to include for project complexity, geographic location and current market pricing.

Allowances / Contingencies:

As this project is currently at functional scoping development the following allowances have been included:

a. Design Allowance / Contingency

- An allowance for design changes during the development of the design. The allowance is to cover unforeseen items during the design phase that do not change the project scope. The allowance, which is included in the primary stages, is ultimately absorbed into the design and

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quantified work as more detailed information becomes available and is therefore normally reduced to zero at tender stage

b. Phasing Allowance / Contingency

- An allowance for increased requirements for projects being executed in multiple phases. This restriction leads to increased costs due to increased temporary protection requirements, etc.

c. Construction Allowance / Contingency

- An allowance for changes to the contract price during construction. The allowance is to cover unforeseen items during the construction period which will result in change orders

d. Location Allowance / Contingency

- Location factors are applied to baseline unit costs, to allow for the higher costs of construction in locations that are further away from the main centers of operations, notably Edmonton and Calgary. Initially, these factors are calculated by assessing the extra costs of supplying skilled labour and delivering materials from either of the two main city centers to those remote locations, and incorporating the relative risks involved in doing business there.

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3. FINANCIAL OVERVIEWS

3.1 Summary of Costs

The capital cost comparison is summarized in following tables for the options. Totals are represented in current January 2025 dollars for comparison purposes.

Overall Summary:

	OPTIONS									
	Option 1a - Replacement for Charlie Kilam E-S School	Option 1b - Modernization for Charlie Kilam E-S School - Grade 6/8 Middle School	Option 2a - Jack Stuart Replacement K-8 School	Option 2b - Jack Stuart Modernization K-8 School - Jaguar Lair	Option 3a - Replacement for Sifton K-8 School	Option 3b - Modernization for Sifton K-8 School - The Shiftan	Option 4a - Replacement for Sparring K-8 School	Option 4b - Modernization for Sparring K-8 School - The "L"	Option 5 - Addition to Chester Manning to re-grade to K-9	Option 6 - New K-9 School
Area (m ²)	5,570	5,570	3,450	3,450	3,159	3,159	2,597	2,597	7,587	7,587
CAPITAL COSTS										
Hard Construction Cost	\$40,891,714	\$36,494,433	\$25,016,018	\$22,305,913	\$22,860,320	\$22,164,305	\$18,927,818	\$16,356,548	\$26,022,889	\$52,832,424
Soft / Other Construction Cost	\$7,117,591	\$6,404,054	\$4,252,723	\$3,792,005	\$3,886,254	\$3,767,932	\$3,217,729	\$2,790,613	\$4,523,891	\$9,047,512
GST - Non Refundable	\$764,049	\$696,376	\$468,300	\$417,567	\$427,945	\$414,916	\$354,329	\$306,195	\$488,748	\$986,879
Escalation	\$12,715,789	\$12,077,596	\$7,756,977	\$7,049,052	\$7,083,862	\$15,129,959	\$5,879,073	\$5,557,862	\$7,037,055	\$16,767,865
TOTAL CAPITAL COSTS	\$61,290,043	\$55,662,458	\$37,494,018	\$33,564,537	\$34,258,381	\$41,477,112	\$28,378,948	\$25,091,237	\$38,072,584	\$79,464,680
Modernization as a %age of Replacement		91%		90%		121%		88%		
K-9 as a %age of Replacement of Separate Schools									24%	49%
TOTAL CAPITAL COSTS (Solution Cost)	\$61,290,043	\$55,662,458	\$37,494,018	\$33,564,537	\$34,258,381	\$41,477,112	\$28,378,948	\$25,091,237	\$38,072,584	\$79,464,680
CUMULATIVE OPERATIONS & MAINTENANCE COSTS										
Community	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Receipts/Income	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Facility Systems Maintenance	\$5,799,193	\$5,799,193	\$3,591,960	\$3,591,960	\$3,288,996	\$3,288,996	\$2,703,861	\$2,703,861	\$7,899,188	\$7,899,188
Facility Operations - Utilities	\$4,583,930	\$4,583,930	\$2,839,238	\$2,839,238	\$2,599,755	\$2,599,755	\$2,137,247	\$2,137,247	\$6,243,856	\$6,243,856
Facility Operations - Expenses	\$7,828,910	\$7,828,910	\$4,849,145	\$4,849,145	\$4,440,131	\$4,440,131	\$3,650,212	\$3,650,212	\$10,663,903	\$10,663,903
CAPITAL / CYCLICAL RENEWAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Future Costs	\$79,502,076	\$73,874,491	\$48,774,362	\$44,844,880	\$44,587,252	\$51,805,983	\$36,870,268	\$33,492,557	\$62,879,531	\$104,271,626
Total Net Present Value (NPV)	\$70,136,442	\$64,988,857	\$42,973,385	\$39,043,904	\$39,275,576	\$46,494,306	\$32,993,962	\$29,126,891	\$50,122,428	\$91,514,523

3.2 Analysis

The capital cost has been generated by the varying levels complexity in the facilities' size and form. The values range from a 1-storey medium size school of \$5,300/m² to a single-storey small school of \$6,000/m². All options assume demolition of the schools being replaced. Major modernization rate (\$4,800/m²) includes the assumption of LEED silver, Envelope and M&E upgrades. Also taken into consideration is a 10% location factor.

These construction rates have been applied to the affected facility components identified in the workshop to produce the capital cost investment.

3.3 Assumptions

The life cycle cost analysis uses the following key assumptions.

- 1) All construction capital costs **include** future escalation.
 - a. 6.0% - 2025
 - b. 6.0% - 2026 onward
- 2) O&M annual cost are **included** for:
 - a. Facility Operations - utilities
 - b. Facility Operations – maintenance
 - c. Facility Operations - expenses
- 3) Decanting is **excluded**.
- 4) Phasing is **included**.
- 5) Cyclical renewal costs are **excluded**.
- 6) Residual values are **excluded**.

3.4 Exclusions

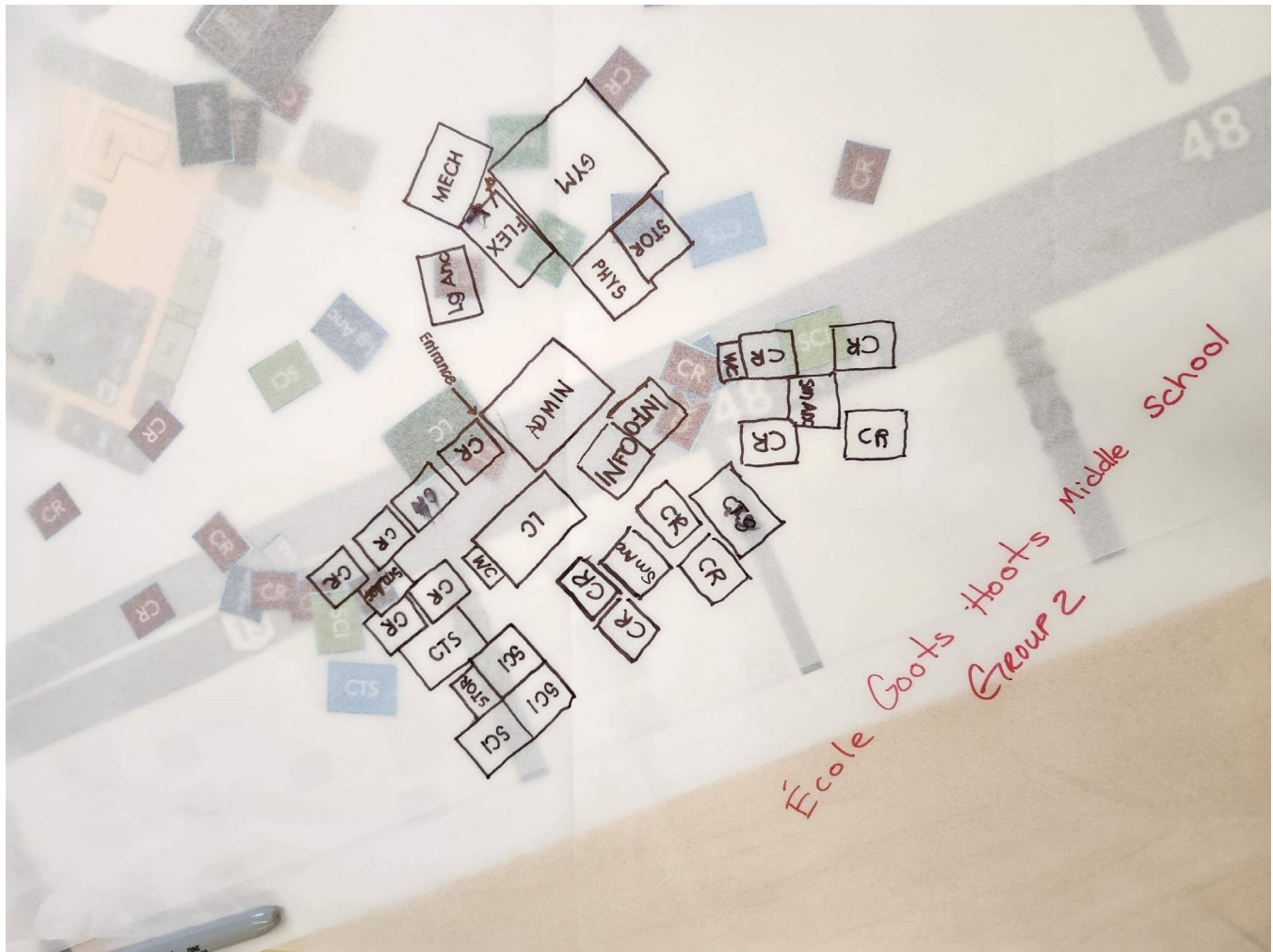
This is a comparative exercise only and the following items that may affect these projects have been excluded from the calculations compared in the options presented:

1. IT equipment and communications cabling
2. Land costs
3. Property tax or its equivalent grants-in-lieu.
4. Financing/Fundraising costs
5. Abnormal soil conditions not covered in the Facility Evaluation reviews

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4. Options - Calculations



BRSD - Elementary and Middle Schools
Option 1a - Replacement for Charlie Killam 6-8 School

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m²)		A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Existing School		5,656				0
Replacement Facility				5,570		5,570
TOTAL :		5,656	0	5,570	0	5,570

CAPITAL COST						
A Demolition						
Demo School	5,656 m²	\$225.00		\$1,272,600		
Hazmat	5,656 m²	\$250.00		\$1,414,000		
A Demolition Net :				\$2,686,600		
B Preservation/Modernization						
n/a	0 m²	\$0.00		\$0		
B Preservation/Modernization Net :				\$0		
C New/Expansion						
Replacement Facility	5,570 m²	\$5,982.72		\$33,323,767		
C New/Expansion Net :				\$33,323,767		
D Modulares						
n/a	0 no	\$0.00		\$0		
D Modular's Net :				\$0		
E Other						
n/a	0 m	\$0.00		\$0		
Other Net :				\$0		
Z Contingencies						
				\$36,010,367		
Location		10.0%		\$3,601,037		
Project		0.0%		\$0		
Construction		3.0%		\$1,080,311		
Z Contingencies Net :				\$4,681,348		
(A+B+C+D+E+Z) Construction Net :				\$40,691,714		
				\$/m² GFA :	\$7,306	

Soft/Other Costs						
Land Purchase	0 acre	\$0.00		\$0		
Site Services	0 acre	\$0.00		\$0		
Project Admin		2.0%		\$813,834		
Programming		0.0%		\$0		
Design Fees		8.0%		\$3,255,337		
Furnishings & Equipment		7.0%		\$2,848,420		
IT		0.0%		\$0		
CTS Equipment		1.00	Is	\$200,000	2 streams @ \$100k	
Decanting		0.0%		\$0	excluded	
Soft/Other Net :				\$7,117,591		
SUB-TOTAL				\$47,809,306		
Non-refundable GST				1.60%		\$764,949
CAPITAL COST TOTAL (January 2025 \$)						\$48,574,254
Escalation						\$12,715,789
CAPITAL COST TOTAL						\$61,290,043

2 streams @ \$100k
excluded

BRSD - Elementary and Middle Schools

Option 1b - Modernization for Charlie Killam 6-8 School - Goots Hoots Middle School

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m²)	A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Demolition	1,073				0
Modernization		4,583			4,583
Addition			987		987
TOTAL :	1,073	4,583	987	0	5,570

CAPITAL COST					
A Demolition					
Demo Gym	1,073 m²	\$225.00		\$241,425	
Gym Demo Hazmat	1,073 m²	\$250.00		\$268,250	
Selective Demo	4,583 m²	\$200.00		\$916,600	
Selective Demo Hazmat	4,583 m²	\$250.00		\$1,145,750	
A Demolition Net :				\$2,572,025	
B Preservation/Modernization					
Major Modernization	4,583 m²	\$4,786.18		\$21,935,055	
B Preservation/Modernization Net :				\$21,935,055	
C New/Expansion					
Addition	987 m²	\$5,982.72		\$5,904,947	
C New/Expansion Net :				\$5,904,947	
D Modulares					
n/a	0 no	\$0.00		\$0	
D Modular's Net :				\$0	
E Other					
n/a	0 m	\$0.00		\$0	
Other Net :				\$0	
Z Contingencies				\$30,412,028	
Location	10.0%			\$3,041,203	
Project	0.0%			\$0	
Construction	10.0%			\$3,041,203	
Z Contingencies Net :				\$6,082,406	
(A+B+C+D+E+Z) Construction Net :				\$36,494,433	
\$/m² GFA :				\$6,552	
Soft/Other Costs					
Land Purchase	0 acre	\$0.00		\$0	
Site Services	0 acre	\$0.00		\$0	
Project Admin	2.0%			\$729,889	
Programming	0.0%			\$0	
Design Fees	8.0%			\$2,919,555	
Furnishings & Equipment	7.0%			\$2,554,610	
IT	0.0%			\$0	
CTS Equipment	1.00 ls			\$200,000	2 streams @ \$100k
Decanting	0.0%			\$0	excluded
Soft/Other Net :				\$6,404,054	
SUB-TOTAL				\$42,898,487	
Non-refundable GST	1.60%			\$686,376	
CAPITAL COST TOTAL (January 2025 \$)				\$43,584,863	
Escalation				\$12,077,596	
CAPITAL COST TOTAL				\$55,662,458	



BRSD - Elementary and Middle Schools
Option 2a - Jack Stuart Replacement K-5 School

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m²)		A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Existing School - Jack Stuart		3,153				0
Replacement Facility				3,450		3,450
TOTAL :		3,153	0	3,450	0	3,450

CAPITAL COST						
A Demolition						
Existing School - Jack Stuart		3,153 m²	\$225.00		\$709,425	
Hazmat		3,153 m²	\$250.00		\$788,250	
A Demolition Net :				\$1,497,675		
B Preservation/Modernization						
n/a		0 m²	\$0.00		\$0	
B Preservation/Modernization Net :				\$0		
C New/Expansion						
Replacement Facility		3,450 m²	\$5,982.72		\$20,640,394	
C New/Expansion Net :				\$20,640,394		
D Modulares						
n/a		0 no	\$0.00		\$0	
D Modular's Net :				\$0		
E Other						
n/a		0 m	\$0.00		\$0	
Other Net :				\$0		
Z Contingencies						
					\$22,138,069	
Location		10.0%			\$2,213,807	
Project		0.0%			\$0	
Construction		3.0%			\$664,142	
Z Contingencies Net :				\$2,877,949		
(A+B+C+D+E+Z) Construction Net :				\$25,016,018		
\$/m² GFA :				\$7,251		
Soft/Other Costs						
Land Purchase		0 acre	\$0.00		\$0	
Site Services		0 acre	\$0.00		\$0	
Project Admin			2.0%		\$500,320	
Programming			0.0%		\$0	
Design Fees			8.0%		\$2,001,281	
Furnishings & Equipment			7.0%		\$1,751,121	
IT			0.0%		\$0	
CTS Equipment			0.0%		\$0	
Decanting			0.0%		\$0	excluded
Soft/Other Net :				\$4,252,723		
SUB-TOTAL				\$29,268,741		
Non-refundable GST		1.60%			\$468,300	
CAPITAL COST TOTAL (January 2025 \$)				\$29,737,041		
Escalation					\$7,756,977	
CAPITAL COST TOTAL				\$37,494,018		

excluded

BRSD - Elementary and Middle Schools
Option 2b - Jack Stuart Modernization K-5 School - Jaguar Lair

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m²)	A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Demolition	247				0
Modernization		2,906			2,906
Addition			544		544
TOTAL :	247	2,906	544	0	3,450

CAPITAL COST					
A Demolition					
Demolition	247 m²	\$225.00	\$55,575		
Hazmat	247 m²	\$250.00	\$61,750		
Selective Demo	2,906 m²	\$200.00	\$581,200		
Selective Demo Hazmat	2,906 m²	\$250.00	\$726,500		
A Demolition Net :			\$1,425,025		
B Preservation/Modernization					
Major Modernization	2,906 m²	\$4,786.18	\$13,908,634		
B Preservation/Modernization Net :			\$13,908,634		
C New/Expansion					
Addition	544 m²	\$5,982.72	\$3,254,601		
C New/Expansion Net :			\$3,254,601		
D Modulares					
n/a	0 no	\$0.00	\$0		
D Modular's Net :			\$0		
E Other					
n/a	0 m	\$0.00	\$0		
Other Net :			\$0		
Z Contingencies			\$18,588,260		
Location	10.0%		\$1,858,826		
Project	0.0%		\$0		
Construction	10.0%		\$1,858,826		
Z Contingencies Net :			\$3,717,652		
(A+B+C+D+E+Z) Construction Net :			\$22,305,913		
\$/m² GFA :			\$6,465		
Soft/Other Costs					
Land Purchase	0 acre	\$0.00	\$0		
Site Services	0 acre	\$0.00	\$0		
Project Admin	2.0%		\$446,118		
Programming	0.0%		\$0		
Design Fees	8.0%		\$1,784,473		
Furnishings & Equipment	7.0%		\$1,561,414		
IT	0.0%		\$0		
CTS Equipment	0.00 ls		\$0		
Decanting	0.0%		\$0		excluded
Soft/Other Net :			\$3,792,005		
SUB-TOTAL			\$26,097,918		
Non-refundable GST	1.60%		\$417,567		
CAPITAL COST TOTAL (January 2025 \$)			\$26,515,484		
Escalation			\$7,049,052		
CAPITAL COST TOTAL			\$33,564,537		



BRSD - Elementary and Middle Schools
Option 3a - Replacement for Sifton K-5 School

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m²)	A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Existing School	2,802				0
Replacement Facility			3,159		3,159
TOTAL :	2,802	0	3,159	0	3,159
CAPITAL COST					
A Demolition					
Existing School	2,802 m²	\$225.00			\$630,450
Hazmat	2,802 m²	\$250.00			\$700,500
	A Demolition Net :				\$1,330,950
B Preservation/Modernization					
n/a	0 m²	\$0.00			\$0
	B Preservation/Modernization Net :				\$0
C New/Expansion					
Replacement Facility	3,159 m²	\$5,982.72			\$18,899,422
	C New/Expansion Net :				\$18,899,422
D Modulares					
n/a	0 no	\$0.00			\$0
	D Modular's Net :				\$0
E Other					
n/a	0 m	\$0.00			\$0
	Other Net :				\$0
Z Contingencies					
					\$20,230,372
Location	10.0%				\$2,023,037
Project	0.0%				\$0
Construction	3.0%				\$606,911
	Z Contingencies Net :				\$2,629,948
	(A+B+C+D+E+Z) Construction Net :				\$22,860,320
	\$/m² GFA :				\$7,237
Soft/Other Costs					
Land Purchase	0 acre	\$0.00			\$0
Site Services	0 acre	\$0.00			\$0
Project Admin		2.0%			\$457,206
Programming		0.0%			\$0
Design Fees		8.0%			\$1,828,826
Furnishings & Equipment		7.0%			\$1,600,222
IT		0.0%			\$0
CTS Equipment		0.0%			\$0
Decanting		0.0%			\$0
	Soft/Other Net :				\$3,886,254
SUB-TOTAL					\$26,746,574
Non-refundable GST		1.60%			\$427,945
CAPITAL COST TOTAL (January 2025 \$)					\$27,174,520
Escalation					\$7,083,862
CAPITAL COST TOTAL					\$34,258,381

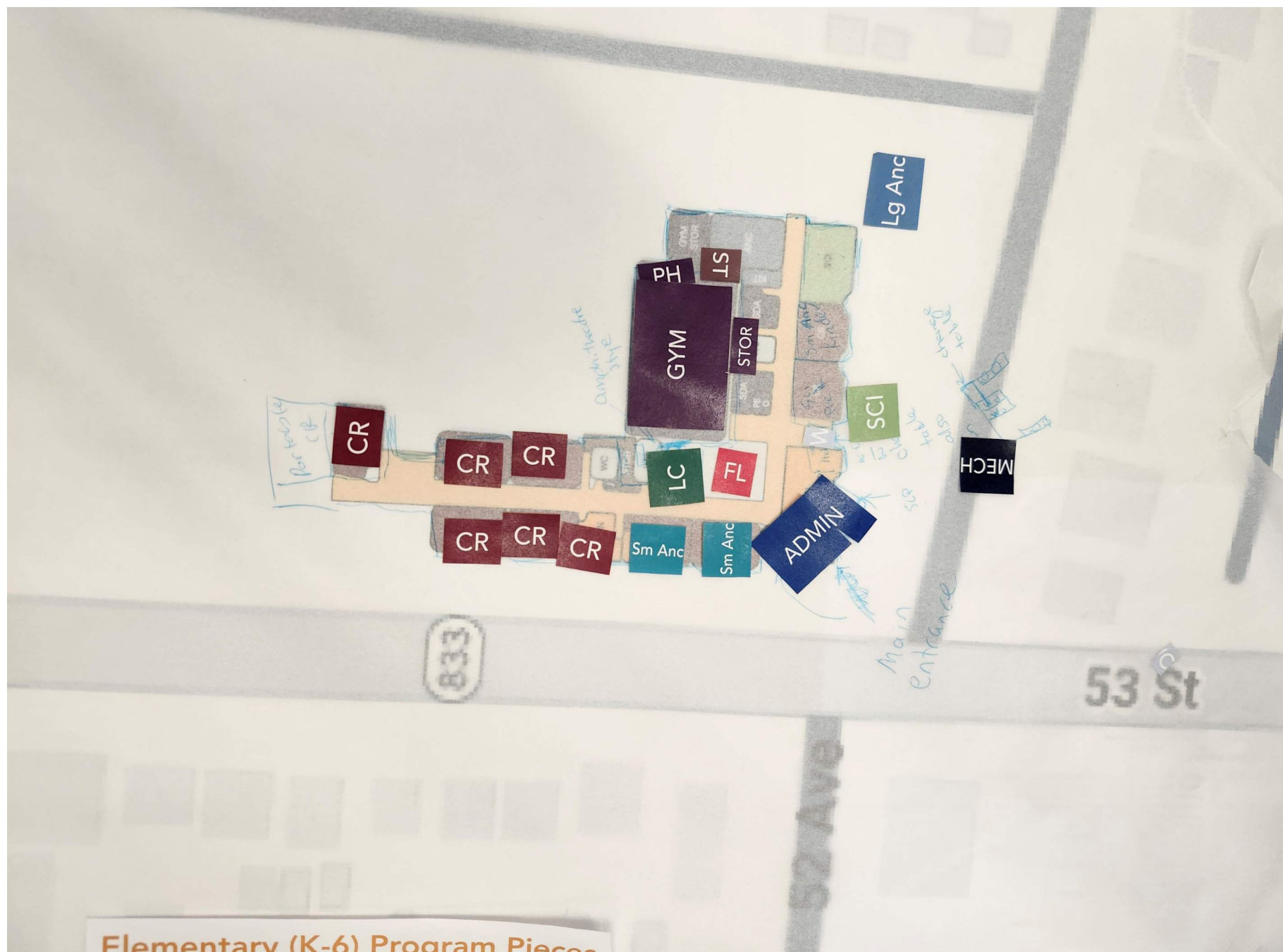
excluded

BRSD - Elementary and Middle Schools
Option 3b - Modernization for Sifton K-5 School - The Shifton

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m²)	A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Demolition	1,331				0
Modernization	0	1,471			1,471
Addition			1,688		1,688
TOTAL :	1,331	1,471	1,688	0	3,159

CAPITAL COST					
A Demolition					
Demolition	1,331 m²	\$225.00	\$299,475		
Hazmat	1,331 m²	\$250.00	\$332,750		
Selective Demo	1,471 m²	\$225.00	\$330,975		
Selective Demo Hazmat	1,471 m²	\$250.00	\$367,750		
A Demolition Net :			\$1,330,950		
B Preservation/Modernization					
Major Modernization	1,471 m²	\$4,786.18	\$7,040,468		
B Preservation/Modernization Net :			\$7,040,468		
C New/Expansion					
Addition	1,688 m²	\$5,982.72	\$10,098,836		
C New/Expansion Net :			\$10,098,836		
D Modulares					
n/a	0 no	\$0.00	\$0		
D Modular's Net :			\$0		
E Other					
n/a	0 m	\$0.00	\$0		
Other Net :			\$0		
Z Contingencies			\$18,470,255		
Location	10.0%		\$1,847,025		
Project	0.0%		\$0		
Construction	10.0%		\$1,847,025		
Z Contingencies Net :			\$3,694,051		
(A+B+C+D+E+Z) Construction Net :			\$22,164,305		
\$/m² GFA :			\$7,016		
Soft/Other Costs					
Land Purchase	0 acre	\$0.00	\$0		
Site Services	0 acre	\$0.00	\$0		
Project Admin	2.0%		\$443,286		
Programming	0.0%		\$0		
Design Fees	8.0%		\$1,773,144		
Furnishings & Equipment	7.0%		\$1,551,501		
IT	0.0%		\$0		
CTS Equipment	0.00 ls		\$0		
Decanting	0.0%		\$0		excluded
Soft/Other Net :			\$3,767,932		
SUB-TOTAL			\$25,932,237		
Non-refundable GST	1.60%		\$414,916		
CAPITAL COST TOTAL (January 2025 \$)			\$26,347,153		
Escalation			\$15,129,959		
CAPITAL COST TOTAL			\$41,477,112		



BRSD - Elementary and Middle Schools
Option 4a - Replacement for Sparling K-5 School

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m²)	A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Existing School	2,554				0
Replacement Facility			2,597		2,597
TOTAL :	2,554	0	2,597	0	2,597
CAPITAL COST					
A Demolition					
Demo School	2,554 m²	\$225.00			\$574,650
Hazmat	2,554 m²	\$250.00			\$638,500
A Demolition Net :					\$1,213,150
B Preservation/Modernization					
n/a	0 m²	\$0.00			\$0
B Preservation/Modernization Net :					\$0
C New/Expansion					
Replacement Facility	2,597 m²	\$5,982.72			\$15,537,131
C New/Expansion Net :					\$15,537,131
D Modulares					
n/a	0 no	\$0.00			\$0
D Modular's Net :					\$0
E Other					
n/a	0 m	\$0.00			\$0
Other Net :					\$0
Z Contingencies					
					\$16,750,281
Location	10.0%				\$1,675,028
Project	0.0%				\$0
Construction	3.0%				\$502,508
Z Contingencies Net :					\$2,177,537
(A+B+C+D+E+Z) Construction Net :					\$18,927,818
\$/m² GFA :					\$7,288
Soft/Other Costs					
Land Purchase	0 acre	\$0.00			\$0
Site Services	0 acre	\$0.00			\$0
Project Admin		2.0%			\$378,556
Programming		0.0%			\$0
Design Fees		8.0%			\$1,514,225
Furnishings & Equipment		7.0%			\$1,324,947
IT		0.0%			\$0
CTS Equipment		0.0%			\$0
Decanting		0.0%			\$0
Soft/Other Net :					\$3,217,729
SUB-TOTAL					\$22,145,547
Non-refundable GST		1.60%			\$354,329
CAPITAL COST TOTAL (January 2025 \$)					\$22,499,876
Escalation					\$5,879,073
CAPITAL COST TOTAL					\$28,378,948

excluded

BRSD - Elementary and Middle Schools
Option 4b - Modernization for Sparling K-5 School - The "L"

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m²)	A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Demolition	0				0
Modernization		2,554			2,554
Addition			43		43
TOTAL :	0	2,554	43	0	2,597

CAPITAL COST					
A Demolition					
Selective Demo	2,554 m²	\$200.00	\$510,800		
Selective Demo Hazmat	2,554 m²	\$250.00	\$638,500		
A Demolition Net :			\$1,149,300		
B Preservation/Modernization					
Major Modernization	2,554 m²	\$4,786.18	\$12,223,899		
B Preservation/Modernization Net :			\$12,223,899		
C New/Expansion					
Addition	43 m²	\$5,982.72	\$257,257		
C New/Expansion Net :			\$257,257		
D Modulares					
n/a	0 no	\$0.00	\$0		
D Modular's Net :			\$0		
E Other					
n/a	0 m	\$0.00	\$0		
Other Net :			\$0		
Z Contingencies					
			\$13,630,456		
Location	10.0%		\$1,363,046		
Project	0.0%		\$0		
Construction	10.0%		\$1,363,046		
Z Contingencies Net :			\$2,726,091		
(A+B+C+D+E+Z) Construction Net :			\$16,356,548		
\$/m² GFA :			\$6,298		
Soft/Other Costs					
Land Purchase	0 acre	\$0.00	\$0		
Site Services	0 acre	\$0.00	\$0		
Project Admin	2.0%		\$327,131		
Programming	0.0%		\$0		
Design Fees	8.0%		\$1,308,524		
Furnishings & Equipment	7.0%		\$1,144,958		
IT	0.0%		\$0		
CTS Equipment	0.00ls		\$0		
Decanting	0.0%		\$0		excluded
Soft/Other Net :			\$2,780,613		
SUB-TOTAL			\$19,137,161		
Non-refundable GST	1.60%		\$306,195		
CAPITAL COST TOTAL (January 2025 \$)			\$19,443,355		
Escalation			\$5,557,882		
CAPITAL COST TOTAL			\$25,001,237		

Addition to Chester Ronning to re-grade to K-9

BRSD - Elementary and Middle Schools
Option 5 - Addition to Chester Ronning to re-grade to K-9

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m ²)	A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Existing School		3,250			3,250
Replacement Facility					0
Addition			4,337		
TOTAL :	0	3,250	4,337	0	7,587

CAPITAL COST					
A Demolition					
Demo School	0 ls	\$225.00		\$0	
Hazmat	0 m ²	\$250.00		\$0	
A Demolition Net :				\$0	
B Preservation/Modernization					
Existing	3,250 m ²	\$0.00		\$0	Existing is new school
B Preservation/Modernization Net :				\$0	
C New/Expansion					
Replacement Facility	0 m ²	\$0.00		\$0	
Addition	4,337 m ²	\$5,252.27		\$22,779,106	
C New/Expansion Net :				\$22,779,106	
D Modulares					
n/a	0 no	\$0.00		\$0	
D Modular's Net :				\$0	
E Other					
Allowance for tie ins	1 ls	\$250,000.00		\$250,000	
Other Net :				\$250,000	
Z Contingencies				\$23,029,106	
Location	10.0%			\$2,302,911	
Project	0.0%			\$0	
Construction	3.0%			\$690,873	
Z Contingencies Net :				\$2,993,784	
(A+B+C+D+E+Z) Construction Net :				\$26,022,889	
\$/m² GFA :				\$3,430	
Soft/Other Costs					
Land Purchase	0 acre	\$0.00		\$0	
Site Services	0 acre	\$0.00		\$0	
Project Admin		2.0%		\$520,458	
Programming		0.0%		\$0	
Design Fees		8.0%		\$2,081,831	
Furnishings & Equipment		7.0%		\$1,821,602	
IT		0.0%		\$0	
CTS Equipment		1.00 ls		\$100,000	1 stream
Decanting		0.0%		\$0	excluded
Soft/Other Net :				\$4,523,891	
SUB-TOTAL				\$30,546,781	
Non-refundable GST		1.60%		\$488,748	
CAPITAL COST TOTAL (January 2024 \$)				\$31,035,529	
Escalation				\$7,037,055	
CAPITAL COST TOTAL				\$38,072,584	

New K-9 - 905 Capacity

BRSD - Elementary and Middle Schools
Option 6 - New K-9 School

CALCULATIONS AND ASSUMPTIONS

PROGRAM AREA (m ²)	A Demolition	B Preservation	C New	D Modulares	Total (B+C+D+E)
Existing School - 4 Existing Schools	14,165				0
New Facility			7,587		7,587
TOTAL :	14,165	0	7,587	0	7,587
CAPITAL COST					
A Demolition					
Existing School - 4 Existing School	14,165 m ²	\$225.00			\$3,187,125
Hazmat	14,165 m ²	\$250.00			\$3,541,250
A Demolition Net :					\$6,728,375
B Preservation/Modernization					
n/a	0 m ²	\$0.00			\$0
B Preservation/Modernization Net :					\$0
C New/Expansion					
New Facility	7,587 m ²	\$5,252.27			\$39,848,991
C New/Expansion Net :					\$39,848,991
D Modulares					
n/a	0 no	\$0.00			\$0
D Modular's Net :					\$0
E Other					
n/a	0 m	\$0.00			\$0
Other Net :					\$0
Z Contingencies					\$46,577,366
Location	10.0%				\$4,657,737
Project	0.0%				\$0
Construction	3.0%				\$1,397,321
Z Contingencies Net :					\$6,055,058
(A+B+C+D+E+Z) Construction Net :					\$52,632,424
\$/m² GFA :					\$6,937
Soft/Other Costs					
Land Purchase	0 acre	\$0.00			\$0
Site Services	0 acre	\$0.00			\$0
Project Admin		2.0%			\$1,052,648
Programming		0.0%			\$0
Design Fees		8.0%			\$4,210,594
Furnishings & Equipment		7.0%			\$3,684,270
IT		0.0%			\$0
CTS Equipment		1.00 ls			\$100,000
Decanting		0.0%			\$0
Soft/Other Net :					\$9,047,512
SUB-TOTAL					\$61,679,936
Non-refundable GST		1.60%			\$986,879
CAPITAL COST TOTAL (January 2024 \$)					\$62,666,815
Escalation					\$16,797,865
CAPITAL COST TOTAL					\$79,464,680

1 streams @ 100K
excluded

Elementary & Middle Schools Value Scoping Session
Camrose, Alberta

Capital Cost Analysis
January 08 & 09, 2025

5. Escalated Cash Flows

[illegible]

Group2 | Value Scoping Study - Camrose Schools

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Group2 | Value Scoping Study - Camrose Schools

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Group2 | Value Scoping Study - Camrose Schools

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[illegible]

[illegible]

Group2 | Value Scoping Study - Camrose Schools

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Group2 | Value Scoping Study - Camrose Schools

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Cost Category						Duration		Start		Cost		Escalated Cost		6.00%												6.00%												6.00%												6.00%												5.50%											
														2025												2026												2027												2028												2029											
														A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M												
														1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter																
A HARD COSTS																																																																									
A Demolition						1	0	0		Escalated Dollar																																																															
B Preservation/Modernization						1	0	0		Escalated Dollar																																																															
C New/Expansion						16	37	22,779,106		Escalated Dollar																																																															
D Modulars						1	0	0		Escalated Dollar																																																															
E Other						1	0	250,000		Escalated Dollar																																																															
Z Contingencies						16	37	2,993,784		Escalated Dollar																																																															
Total Escalated Hard Costs : (A)								\$26,022,889		\$32,003,064																																																															
B SOFT COSTS																																																																									
Land Purchase						1	0	0		Cashflow																																																															
Site Services						1	0	0		Cashflow																																																															
Project Admin						31	25	520,458		Cashflow																																																															
Design Fees								\$2,081,831		Cashflow																																																															
Design 80.00%						12	25	1,665,465		Cashflow																																																															
Construct 20.00%						16	37	416,366		Cashflow																																																															
Furnishings & Equipment						3	53	1,821,602		Cashflow																																																															
CTS Equipment						3	53	100,000		Cashflow																																																															
Decanting						1	0	0		Cashflow																																																															
Non-refundable GST						31	25	488,748		Cashflow																																																															
Total Cashflowed Soft Costs : (B)								\$5,012,640		\$6,069,521																																																															
SUB-TOTAL																																																																									
Total Hard & Soft Costs : (A + B)								\$31,035,529		\$38,072,584																																																															
FISCAL CASHFLOW								\$7,037,055		\$38,072,584																																																															
								-		2,355,053																																																															
										28,013,696																																																															
										7,703,835																																																															

[illegible]

Elementary & Middle Schools Value Scoping Session
Camrose, Alberta

Capital Cost Analysis
January 08 & 09, 2025

6. Discounted Cash Flows

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

5,570

Option 1a - Replacement for Charlie Killam 6-8 School

Capital Cost

61,290,043

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	61,290,043	0	0	139,250	83,550	187,988		61,700,831	61,700,831	61,700,831
2	0	0	0	144,820	88,563	195,507		428,890	405,378	62,106,209
3	0	0	0	150,613	93,877	203,327		447,817	400,064	62,506,272
4	0	0	0	156,637	99,509	211,460		467,607	394,843	62,901,115
5	0	0	0	162,903	105,480	219,919		488,302	389,713	63,290,829
6	0	0	0	169,419	111,809	228,716		509,943	384,675	63,675,503
7	0	0	0	176,196	118,517	237,864		532,577	379,724	64,055,228
8	0	0	0	183,244	125,628	247,379		556,251	374,861	64,430,089
9	0	0	0	190,573	133,166	257,274		581,013	370,084	64,800,173
10	0	0	0	198,196	141,156	267,565		606,917	365,391	65,165,565
11	0	0	0	206,124	149,625	278,267		634,017	360,781	65,526,346
12	0	0	0	214,369	158,603	289,398		662,370	356,253	65,882,599
13	0	0	0	222,944	168,119	300,974		692,037	351,804	66,234,403
14	0	0	0	231,861	178,206	313,013		723,081	347,435	66,581,838
15	0	0	0	241,136	188,899	325,534		755,568	343,142	66,924,980
16	0	0	0	250,781	200,232	338,555		789,569	338,926	67,263,906
17	0	0	0	260,813	212,246	352,097		825,156	334,785	67,598,690
18	0	0	0	271,245	224,981	366,181		862,407	330,717	67,929,407
19	0	0	0	282,095	238,480	380,828		901,403	326,721	68,256,128
20	0	0	0	293,379	252,789	396,061		942,229	322,796	68,578,925
21	0	0	0	305,114	267,956	411,904		984,974	318,942	68,897,866
22	0	0	0	317,318	284,034	428,380		1,029,732	315,156	69,213,022
23	0	0	0	330,011	301,076	445,515		1,076,602	311,437	69,524,459
24	0	0	0	343,212	319,140	463,336		1,125,687	307,785	69,832,244
25	0	0	0	356,940	338,288	481,869		1,177,098	304,198	70,136,442
TOTALS	61,290,043	0	0	5,799,193	4,583,930	7,828,910	0	79,502,076	70,136,442	

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

5,570

Option 1b - Modernization for Charlie Killam 6-8 School - Goots Hoots Middle School

Capital Cost

55,662,458

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	55,662,458	0	0	139,250	83,550	187,988		56,073,246	56,073,246	56,073,246
2	0	0	0	144,820	88,563	195,507		428,890	405,378	56,478,624
3	0	0	0	150,613	93,877	203,327		447,817	400,064	56,878,688
4	0	0	0	156,637	99,509	211,460		467,607	394,843	57,273,530
5	0	0	0	162,903	105,480	219,919		488,302	389,713	57,663,244
6	0	0	0	169,419	111,809	228,716		509,943	384,675	58,047,918
7	0	0	0	176,196	118,517	237,864		532,577	379,724	58,427,643
8	0	0	0	183,244	125,628	247,379		556,251	374,861	58,802,504
9	0	0	0	190,573	133,166	257,274		581,013	370,084	59,172,588
10	0	0	0	198,196	141,156	267,565		606,917	365,391	59,537,980
11	0	0	0	206,124	149,625	278,267		634,017	360,781	59,898,761
12	0	0	0	214,369	158,603	289,398		662,370	356,253	60,255,014
13	0	0	0	222,944	168,119	300,974		692,037	351,804	60,606,818
14	0	0	0	231,861	178,206	313,013		723,081	347,435	60,954,253
15	0	0	0	241,136	188,899	325,534		755,568	343,142	61,297,395
16	0	0	0	250,781	200,232	338,555		789,569	338,926	61,636,321
17	0	0	0	260,813	212,246	352,097		825,156	334,785	61,971,106
18	0	0	0	271,245	224,981	366,181		862,407	330,717	62,301,822
19	0	0	0	282,095	238,480	380,828		901,403	326,721	62,628,543
20	0	0	0	293,379	252,789	396,061		942,229	322,796	62,951,340
21	0	0	0	305,114	267,956	411,904		984,974	318,942	63,270,281
22	0	0	0	317,318	284,034	428,380		1,029,732	315,156	63,585,437
23	0	0	0	330,011	301,076	445,515		1,076,602	311,437	63,896,874
24	0	0	0	343,212	319,140	463,336		1,125,687	307,785	64,204,659
25	0	0	0	356,940	338,288	481,869		1,177,098	304,198	64,508,857
TOTALS	55,662,458	0	0	5,799,193	4,583,930	7,828,910	0	73,874,491	64,508,857	

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

3,450

Option 2a - Replacement for Jack Stuart K-5 School

Capital Cost

37,494,018

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	37,494,018	0	0	86,250	51,750	116,438		37,748,455	37,748,455	37,748,455
2	0	0	0	89,700	54,855	121,095		265,650	251,087	37,999,542
3	0	0	0	93,288	58,146	125,939		277,373	247,795	38,247,338
4	0	0	0	97,020	61,635	130,976		289,631	244,561	38,491,899
5	0	0	0	100,900	65,333	136,215		302,449	241,384	38,733,284
6	0	0	0	104,936	69,253	141,664		315,854	238,263	38,971,547
7	0	0	0	109,134	73,408	147,331		329,873	235,197	39,206,744
8	0	0	0	113,499	77,813	153,224		344,536	232,185	39,438,930
9	0	0	0	118,039	82,482	159,353		359,873	229,226	39,668,156
10	0	0	0	122,761	87,431	165,727		375,918	226,320	39,894,476
11	0	0	0	127,671	92,676	172,356		392,703	223,464	40,117,940
12	0	0	0	132,778	98,237	179,250		410,265	220,659	40,338,599
13	0	0	0	138,089	104,131	186,420		428,640	217,904	40,556,503
14	0	0	0	143,613	110,379	193,877		447,869	215,197	40,771,700
15	0	0	0	149,357	117,002	201,632		467,991	212,539	40,984,239
16	0	0	0	155,331	124,022	209,697		489,051	209,927	41,194,166
17	0	0	0	161,545	131,463	218,085		511,093	207,362	41,401,528
18	0	0	0	168,006	139,351	226,809		534,166	204,842	41,606,371
19	0	0	0	174,727	147,712	235,881		558,320	202,368	41,808,738
20	0	0	0	181,716	156,575	245,316		583,607	199,937	42,008,675
21	0	0	0	188,984	165,969	255,129		610,083	197,549	42,206,224
22	0	0	0	196,544	175,927	265,334		637,805	195,204	42,401,429
23	0	0	0	204,405	186,483	275,947		666,836	192,901	42,594,329
24	0	0	0	212,582	197,672	286,985		697,239	190,639	42,784,968
25	0	0	0	221,085	209,532	298,465		729,082	188,417	42,973,385
TOTALS	37,494,018	0	0	3,591,960	2,839,238	4,849,145	0	48,774,362	42,973,385	

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

3,450

Option 2b - Modernization for Jack Stuart K-5 School - Jaguar Lair

Capital Cost

33,564,537

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	33,564,537	0	0	86,250	51,750	116,438		33,818,974	33,818,974	33,818,974
2	0	0	0	89,700	54,855	121,095		265,650	251,087	34,070,061
3	0	0	0	93,288	58,146	125,939		277,373	247,795	34,317,856
4	0	0	0	97,020	61,635	130,976		289,631	244,561	34,562,418
5	0	0	0	100,900	65,333	136,215		302,449	241,384	34,803,802
6	0	0	0	104,936	69,253	141,664		315,854	238,263	35,042,066
7	0	0	0	109,134	73,408	147,331		329,873	235,197	35,277,263
8	0	0	0	113,499	77,813	153,224		344,536	232,185	35,509,448
9	0	0	0	118,039	82,482	159,353		359,873	229,226	35,738,675
10	0	0	0	122,761	87,431	165,727		375,918	226,320	35,964,994
11	0	0	0	127,671	92,676	172,356		392,703	223,464	36,188,459
12	0	0	0	132,778	98,237	179,250		410,265	220,659	36,409,118
13	0	0	0	138,089	104,131	186,420		428,640	217,904	36,627,022
14	0	0	0	143,613	110,379	193,877		447,869	215,197	36,842,219
15	0	0	0	149,357	117,002	201,632		467,991	212,539	37,054,758
16	0	0	0	155,331	124,022	209,697		489,051	209,927	37,264,685
17	0	0	0	161,545	131,463	218,085		511,093	207,362	37,472,047
18	0	0	0	168,006	139,351	226,809		534,166	204,842	37,676,890
19	0	0	0	174,727	147,712	235,881		558,320	202,368	37,879,257
20	0	0	0	181,716	156,575	245,316		583,607	199,937	38,079,194
21	0	0	0	188,984	165,969	255,129		610,083	197,549	38,276,743
22	0	0	0	196,544	175,927	265,334		637,805	195,204	38,471,947
23	0	0	0	204,405	186,483	275,947		666,836	192,901	38,664,848
24	0	0	0	212,582	197,672	286,985		697,239	190,639	38,855,487
25	0	0	0	221,085	209,532	298,465		729,082	188,417	39,043,904
TOTALS	33,564,537	0	0	3,591,960	2,839,238	4,849,145	0	44,844,880	39,043,904	

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

3,159

Option 3a - Replacement for Sifton K-5 School

Capital Cost

34,258,381

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	34,258,381	0	0	78,975	47,385	106,616		34,491,357	34,491,357	34,491,357
2	0	0	0	82,134	50,228	110,881		243,243	229,908	34,721,266
3	0	0	0	85,419	53,242	115,316		253,977	226,894	34,948,160
4	0	0	0	88,836	56,436	119,929		265,201	223,933	35,172,093
5	0	0	0	92,390	59,822	124,726		276,938	221,024	35,393,117
6	0	0	0	96,085	63,412	129,715		289,212	218,166	35,611,284
7	0	0	0	99,929	67,217	134,904		302,049	215,359	35,826,643
8	0	0	0	103,926	71,250	140,300		315,475	212,601	36,039,244
9	0	0	0	108,083	75,524	145,912		329,519	209,892	36,249,135
10	0	0	0	112,406	80,056	151,748		344,210	207,230	36,456,365
11	0	0	0	116,902	84,859	157,818		359,580	204,615	36,660,981
12	0	0	0	121,578	89,951	164,131		375,660	202,047	36,863,028
13	0	0	0	126,442	95,348	170,696		392,486	199,524	37,062,552
14	0	0	0	131,499	101,069	177,524		410,092	197,046	37,259,598
15	0	0	0	136,759	107,133	184,625		428,517	194,612	37,454,210
16	0	0	0	142,230	113,561	192,010		447,800	192,220	37,646,430
17	0	0	0	147,919	120,375	199,690		467,983	189,872	37,836,302
18	0	0	0	153,835	127,597	207,678		489,110	187,564	38,023,866
19	0	0	0	159,989	135,253	215,985		511,227	185,298	38,209,164
20	0	0	0	166,388	143,368	224,624		534,381	183,073	38,392,237
21	0	0	0	173,044	151,970	233,609		558,623	180,886	38,573,123
22	0	0	0	179,966	161,088	242,954		584,008	178,739	38,751,862
23	0	0	0	187,164	170,754	252,672		610,590	176,630	38,928,492
24	0	0	0	194,651	180,999	262,779		638,428	174,559	39,103,051
25	0	0	0	202,437	191,859	273,290		667,586	172,525	39,275,576
TOTALS	34,258,381	0	0	3,288,986	2,599,755	4,440,131	0	44,587,252	39,275,576	

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

3,159

Option 3b - Modernization for Sifton K-5 School - The Shifton

Capital Cost

41,477,112

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	41,477,112	0	0	78,975	47,385	106,616		41,710,088	41,710,088	41,710,088
2	0	0	0	82,134	50,228	110,881		243,243	229,908	41,939,996
3	0	0	0	85,419	53,242	115,316		253,977	226,894	42,166,891
4	0	0	0	88,836	56,436	119,929		265,201	223,933	42,390,824
5	0	0	0	92,390	59,822	124,726		276,938	221,024	42,611,848
6	0	0	0	96,085	63,412	129,715		289,212	218,166	42,830,014
7	0	0	0	99,929	67,217	134,904		302,049	215,359	43,045,373
8	0	0	0	103,926	71,250	140,300		315,475	212,601	43,257,974
9	0	0	0	108,083	75,524	145,912		329,519	209,892	43,467,866
10	0	0	0	112,406	80,056	151,748		344,210	207,230	43,675,096
11	0	0	0	116,902	84,859	157,818		359,580	204,615	43,879,711
12	0	0	0	121,578	89,951	164,131		375,660	202,047	44,081,759
13	0	0	0	126,442	95,348	170,696		392,486	199,524	44,281,283
14	0	0	0	131,499	101,069	177,524		410,092	197,046	44,478,329
15	0	0	0	136,759	107,133	184,625		428,517	194,612	44,672,940
16	0	0	0	142,230	113,561	192,010		447,800	192,220	44,865,161
17	0	0	0	147,919	120,375	199,690		467,983	189,872	45,055,032
18	0	0	0	153,835	127,597	207,678		489,110	187,564	45,242,597
19	0	0	0	159,989	135,253	215,985		511,227	185,298	45,427,895
20	0	0	0	166,388	143,368	224,624		534,381	183,073	45,610,967
21	0	0	0	173,044	151,970	233,609		558,623	180,886	45,791,854
22	0	0	0	179,966	161,088	242,954		584,008	178,739	45,970,593
23	0	0	0	187,164	170,754	252,672		610,590	176,630	46,147,223
24	0	0	0	194,651	180,999	262,779		638,428	174,559	46,321,782
25	0	0	0	202,437	191,859	273,290		667,586	172,525	46,494,306
TOTALS	41,477,112	0	0	3,288,986	2,599,755	4,440,131	0	51,805,983	46,494,306	

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

2,597

Option 4a - Replacement for Sparling K-5 School

Capital Cost

28,378,948

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	28,378,948	0	0	64,925	38,955	87,649		28,570,477	28,570,477	28,570,477
2	0	0	0	67,522	41,292	91,155		199,969	189,007	28,759,484
3	0	0	0	70,223	43,770	94,801		208,794	186,529	28,946,012
4	0	0	0	73,032	46,396	98,593		218,021	184,095	29,130,107
5	0	0	0	75,953	49,180	102,537		227,669	181,703	29,311,810
6	0	0	0	78,991	52,131	106,638		237,760	179,354	29,491,164
7	0	0	0	82,151	55,258	110,904		248,313	177,046	29,668,209
8	0	0	0	85,437	58,574	115,340		259,351	174,778	29,842,988
9	0	0	0	88,854	62,088	119,953		270,896	172,551	30,015,538
10	0	0	0	92,409	65,814	124,752		282,974	170,363	30,185,901
11	0	0	0	96,105	69,762	129,742		295,609	168,213	30,354,115
12	0	0	0	99,949	73,948	134,931		308,828	166,102	30,520,217
13	0	0	0	103,947	78,385	140,328		322,661	164,028	30,684,245
14	0	0	0	108,105	83,088	145,942		337,135	161,991	30,846,236
15	0	0	0	112,429	88,074	151,779		352,282	159,989	31,006,225
16	0	0	0	116,926	93,358	157,850		368,135	158,023	31,164,248
17	0	0	0	121,603	98,959	164,164		384,727	156,093	31,320,341
18	0	0	0	126,467	104,897	170,731		402,095	154,196	31,474,537
19	0	0	0	131,526	111,191	177,560		420,277	152,333	31,626,870
20	0	0	0	136,787	117,862	184,663		439,312	150,503	31,777,373
21	0	0	0	142,259	124,934	192,049		459,242	148,706	31,926,079
22	0	0	0	147,949	132,430	199,731		480,110	146,941	32,073,019
23	0	0	0	153,867	140,376	207,720		501,963	145,207	32,218,226
24	0	0	0	160,022	148,798	216,029		524,849	143,504	32,361,730
25	0	0	0	166,423	157,726	224,670		548,819	141,832	32,503,562
TOTALS	28,378,948	0	0	2,703,861	2,137,247	3,650,212	0	36,870,268	32,503,562	

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

2,597

Option 4b - Modernization for Sparling K-5 School - The "L"

Capital Cost

25,001,237

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	25,001,237	0	0	64,925	38,955	87,649		25,192,766	25,192,766	25,192,766
2	0	0	0	67,522	41,292	91,155		199,969	189,007	25,381,773
3	0	0	0	70,223	43,770	94,801		208,794	186,529	25,568,301
4	0	0	0	73,032	46,396	98,593		218,021	184,095	25,752,396
5	0	0	0	75,953	49,180	102,537		227,669	181,703	25,934,099
6	0	0	0	78,991	52,131	106,638		237,760	179,354	26,113,453
7	0	0	0	82,151	55,258	110,904		248,313	177,046	26,290,498
8	0	0	0	85,437	58,574	115,340		259,351	174,778	26,465,276
9	0	0	0	88,854	62,088	119,953		270,896	172,551	26,637,827
10	0	0	0	92,409	65,814	124,752		282,974	170,363	26,808,190
11	0	0	0	96,105	69,762	129,742		295,609	168,213	26,976,404
12	0	0	0	99,949	73,948	134,931		308,828	166,102	27,142,506
13	0	0	0	103,947	78,385	140,328		322,661	164,028	27,306,534
14	0	0	0	108,105	83,088	145,942		337,135	161,991	27,468,524
15	0	0	0	112,429	88,074	151,779		352,282	159,989	27,628,514
16	0	0	0	116,926	93,358	157,850		368,135	158,023	27,786,537
17	0	0	0	121,603	98,959	164,164		384,727	156,093	27,942,630
18	0	0	0	126,467	104,897	170,731		402,095	154,196	28,096,826
19	0	0	0	131,526	111,191	177,560		420,277	152,333	28,249,159
20	0	0	0	136,787	117,862	184,663		439,312	150,503	28,399,662
21	0	0	0	142,259	124,934	192,049		459,242	148,706	28,548,368
22	0	0	0	147,949	132,430	199,731		480,110	146,941	28,695,308
23	0	0	0	153,867	140,376	207,720		501,963	145,207	28,840,515
24	0	0	0	160,022	148,798	216,029		524,849	143,504	28,984,019
25	0	0	0	166,423	157,726	224,670		548,819	141,832	29,125,851
TOTALS	25,001,237	0	0	2,703,861	2,137,247	3,650,212	0	33,492,557	29,125,851	

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

7,587

Option 5 - Addition to Chester Ronning to re-grade to K-9

Capital Cost

38,072,584

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	38,072,584	0	0	189,675	113,805	256,061		38,632,126	38,632,126	38,632,126
2	0	0	0	197,262	120,633	266,304		584,199	552,173	39,184,299
3	0	0	0	205,152	127,871	276,956		609,980	544,934	39,729,233
4	0	0	0	213,359	135,544	288,034		636,936	537,822	40,267,055
5	0	0	0	221,893	143,676	299,555		665,125	530,836	40,797,891
6	0	0	0	230,769	152,297	311,538		694,603	523,972	41,321,864
7	0	0	0	239,999	161,435	323,999		725,433	517,230	41,839,093
8	0	0	0	249,599	171,121	336,959		757,679	510,606	42,349,699
9	0	0	0	259,583	181,388	350,438		791,409	504,099	42,853,797
10	0	0	0	269,967	192,271	364,455		826,693	497,706	43,351,504
11	0	0	0	280,765	203,807	379,033		863,606	491,427	43,842,931
12	0	0	0	291,996	216,036	394,195		902,226	485,259	44,328,189
13	0	0	0	303,676	228,998	409,962		942,636	479,199	44,807,388
14	0	0	0	315,823	242,738	426,361		984,922	473,247	45,280,636
15	0	0	0	328,456	257,302	443,415		1,029,173	467,400	45,748,036
16	0	0	0	341,594	272,740	461,152		1,075,486	461,657	46,209,693
17	0	0	0	355,258	289,105	479,598		1,123,960	456,016	46,665,710
18	0	0	0	369,468	306,451	498,782		1,174,701	450,475	47,116,185
19	0	0	0	384,247	324,838	518,733		1,227,818	445,033	47,561,218
20	0	0	0	399,617	344,328	539,482		1,283,427	439,687	48,000,905
21	0	0	0	415,601	364,988	561,062		1,341,651	434,436	48,435,341
22	0	0	0	432,225	386,887	583,504		1,402,617	429,279	48,864,620
23	0	0	0	449,514	410,101	606,844		1,466,459	424,214	49,288,835
24	0	0	0	467,495	434,707	631,118		1,533,320	419,240	49,708,074
25	0	0	0	486,195	460,789	656,363		1,603,347	414,354	50,122,428
TOTALS	38,072,584	0	0	7,899,188	6,243,856	10,663,903	0	62,879,531	50,122,428	

BRSD - Elementary and Middle Schools

PROGRAM AREA (m²)

7,587

Option 6 - New K-9 School

Capital Cost

79,464,680

DISCOUNTED CASHFLOW										
1	2	3	4	5	6	7	8	9	10	11
YEAR	0	Annual Costs					CAPITAL / CYCLICAL RENEWAL	(2+3+4+5+6+7+8) Net Cash Flow	Annual Present Value 5.80%	nPV Cumulative Present Value
		Community 5.00%	Receipts/Income 5.00%	Facility Systems Maintenance 4.00%	Facility Operations - Utilities 6.00%	Facility Operations - Expenses 4.00%				
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	79,464,680	0	0	189,675	113,805	256,061		80,024,221	80,024,221	80,024,221
2	0	0	0	197,262	120,633	266,304		584,199	552,173	80,576,394
3	0	0	0	205,152	127,871	276,956		609,980	544,934	81,121,328
4	0	0	0	213,359	135,544	288,034		636,936	537,822	81,659,150
5	0	0	0	221,893	143,676	299,555		665,125	530,836	82,189,986
6	0	0	0	230,769	152,297	311,538		694,603	523,972	82,713,959
7	0	0	0	239,999	161,435	323,999		725,433	517,230	83,231,188
8	0	0	0	249,599	171,121	336,959		757,679	510,606	83,741,794
9	0	0	0	259,583	181,388	350,438		791,409	504,099	84,245,893
10	0	0	0	269,967	192,271	364,455		826,693	497,706	84,743,599
11	0	0	0	280,765	203,807	379,033		863,606	491,427	85,235,026
12	0	0	0	291,996	216,036	394,195		902,226	485,259	85,720,284
13	0	0	0	303,676	228,998	409,962		942,636	479,199	86,199,483
14	0	0	0	315,823	242,738	426,361		984,922	473,247	86,672,731
15	0	0	0	328,456	257,302	443,415		1,029,173	467,400	87,140,131
16	0	0	0	341,594	272,740	461,152		1,075,486	461,657	87,601,788
17	0	0	0	355,258	289,105	479,598		1,123,960	456,016	88,057,805
18	0	0	0	369,468	306,451	498,782		1,174,701	450,475	88,508,280
19	0	0	0	384,247	324,838	518,733		1,227,818	445,033	88,953,313
20	0	0	0	399,617	344,328	539,482		1,283,427	439,687	89,393,000
21	0	0	0	415,601	364,988	561,062		1,341,651	434,436	89,827,436
22	0	0	0	432,225	386,887	583,504		1,402,617	429,279	90,256,715
23	0	0	0	449,514	410,101	606,844		1,466,459	424,214	90,680,930
24	0	0	0	467,495	434,707	631,118		1,533,320	419,240	91,100,169
25	0	0	0	486,195	460,789	656,363		1,603,347	414,354	91,514,523
TOTALS	79,464,680	0	0	7,899,188	6,243,856	10,663,903	0	104,271,626	91,514,523	

7. Definitions**DEFINITIONS****Discounted Present Value (DPV)**

The DPV is the theoretical value that needs to be set aside today to pay for a future cost. It recognizes that the time value of money is affected by the level of interest earned on available funds.

Net Present Value (NPV)

A NPV calculation is used to account for the fact that \$1 today is not worth the same as \$1 five years from now, due to inflation and interest rates. The use of a NPV calculation is used to take into account the time value of money.

Discount Rate

The discount rate is the combination of investment return and inflation. It acknowledges that money is normally working to accrue interest or dividends that help offset the otherwise devaluing effects of general inflation. The discount rate reflects, at least in part, the interest payable on borrowed money to finance an investment and/or interest lost through use of accumulated equity. A weighted combination of both interest rates is therefore involved. The interest rates may be real or nominal, before or after tax, and may include or exclude profit expectations and risk contingencies.

Discounted Cash Flow (DCF)

The DCF analysis is a technique for assessing the return on capital employed in an investment project over its economic life. The DCF technique focuses on the overall cost consequences of an investment, considering the amount and timing of cash inflows and outflows and envisaged rates of return. The underlying principle is to determine the value of future cash flows generated by an investment opportunity over its economic life.

Mill Rate

The tax per dollar of assessed value of property. The rate is expressed in "mills", where one mill is one-tenth of a cent (\$0.001).

Whole Life Cost

Whole-Life Costs are the Cumulative Total of Capital, Annual, Cyclical and Residual Future Costs Calculated in Today's Dollars (Net Present Value).

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