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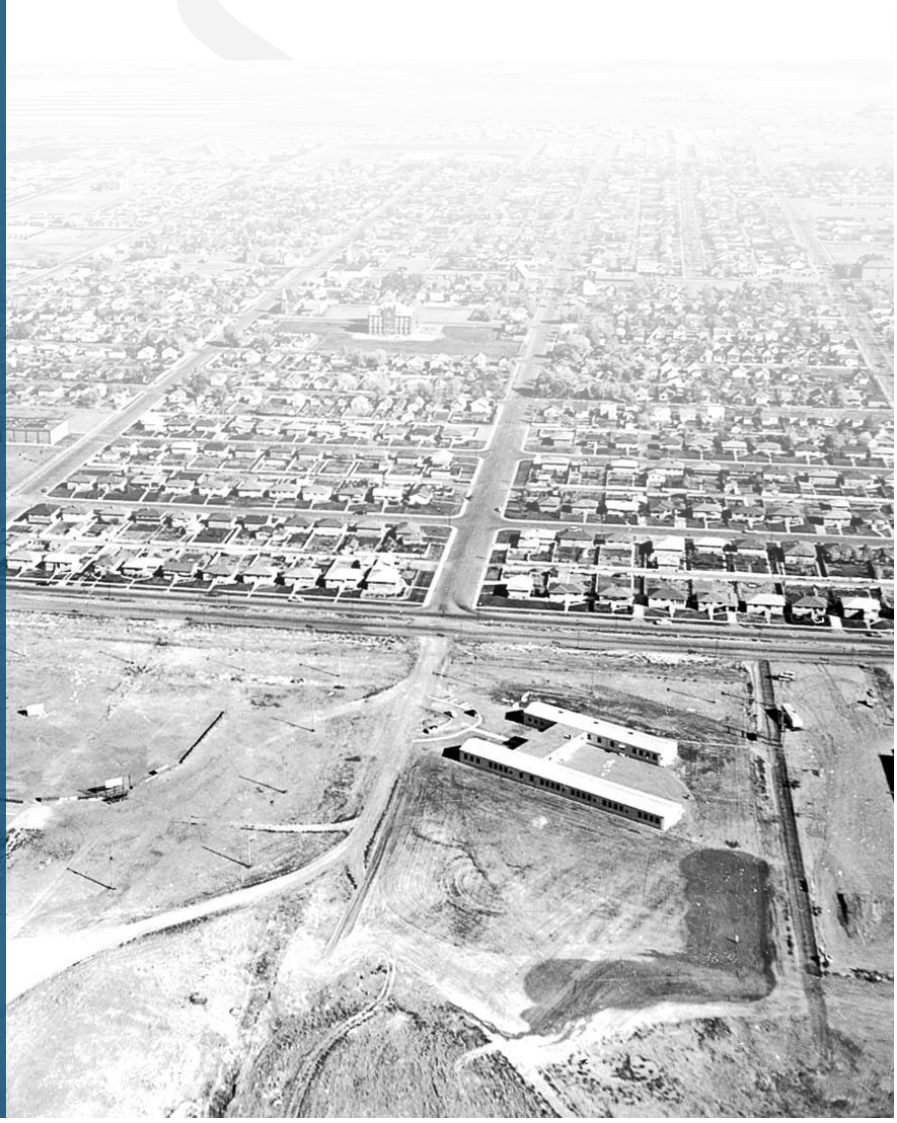
Master

Facility Plan

Year 2024



Galt Museum Archives - ICS 1962

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ICS MFP.

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Galt Museum Archives - ICS Grand Opening 1962

Executive Summary

1956 ICES Founding
1961 ICES Expansion
1969 Gym Expansion
1975 ICSS/Gym Expansion
1997 ICES Expansion
2003 ICSS Expansion
20XX

The Society for Christian Education in Southern Alberta (SCESA) is the overseer of Christian programming, facilities, and transportation for Immanuel Christian Schools (ICS) operating within the City of Lethbridge and servicing families across Southern Alberta.

The Master Facility Plan Committee (MFPC), was born out of the SCESA Strategic Plan 2023-2028 and tasked by SCESA Board, to produce a Master Facility Plan (MFP) for ICS. Created as an ad-hoc committee reporting to the SCESA board, its goal is to achieve aligning mission, educational, and employment needs for both present and future ICS facilities.

To support the committee's efforts, a survey conducted in Spring 2024 received 120 responses from students, staff, community members, and Board members. This feedback, along with the committee's input criteria, helped to identify the optimal scenario more clearly.

Discussions about a larger building capital expenditure began in the 2017-2018 school year when the building committee assessed enrollment growth and capacity limits. Noticing a consistent increase of five or more students each year, the committee recommended to the Board that cost estimates be obtained for expansion and modernization, referred to as the BIG Project. However, this proposal was ultimately voted down by the membership during the height of the COVID-19 pandemic.

Recognizing the ongoing need for a comprehensive plan and prioritizing the stewardship of Society funds, the building committee engaged MPE Engineering in winter 2022 for a Building Condition Assessment (BCA) to evaluate life cycle costs.

With operating costs nearing $100,000 annually at ICES and similar life cycle costs anticipated for an aging building, the building committee also recommended forming the Master Facility Plan Committee (MFPC) to help guide long term planning and spending.

To provide a balanced and neutral analysis of optimal building scenarios, the MFPC created the Master Facilities Planning Matrix. This tool integrates survey feedback and committee input, weighing each criteria and category. It clearly demonstrates how each scenario can serve as a viable option for a future site and building.

A new build is the most direct way to reduce escalating annual maintenance and deferred maintenance costs associated with aging buildings. A new build or significant modernization will necessitate a comprehensive funding plan to cover the substantial upfront costs. Meanwhile, proactive maintenance and expansion of existing facilities are essential to continue meeting the needs of students and staff and to bridge the gap until the new facility is established.

By leveraging the guidance provided by the SCESA Mission and Strategic Plan, the MFP navigates complexities, anticipates future needs, and crafts a comprehensive plan that reflects the aspirations of the SCESA educational community. Through collaborative efforts and strategic foresight, the MFP lays the groundwork for sustainable growth, innovation, and educational excellence at ICES and ICSS, thus enriching the educational journey of current and future generations.

Master Facility Planning Committee

Guiding Principles

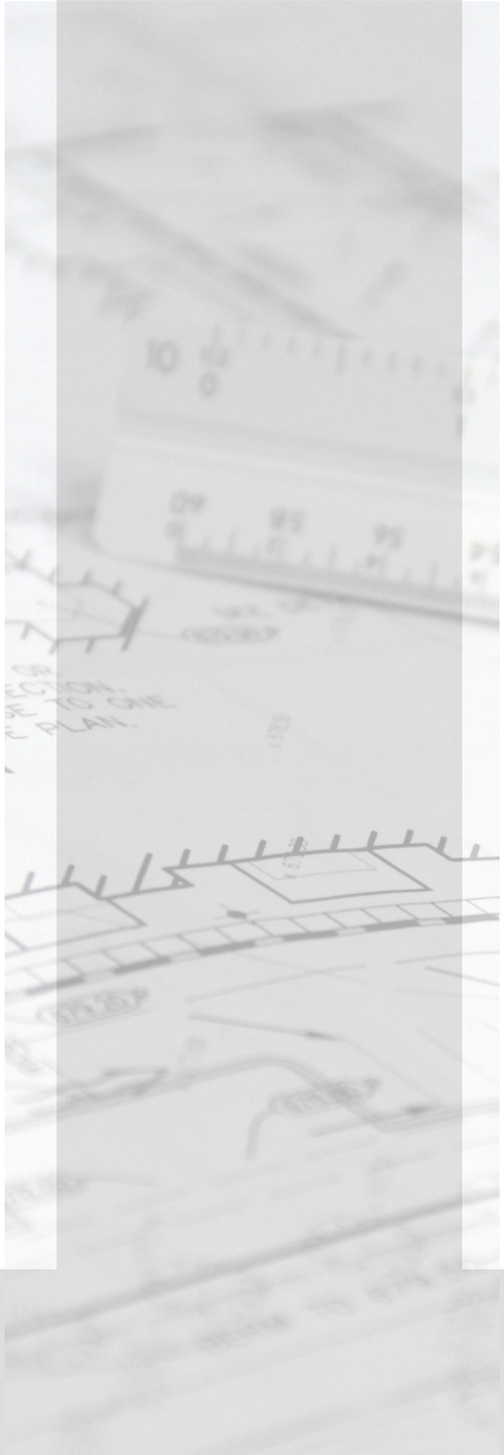
The SCESA Board is committed to ensuring that both of the ICS campuses and the transportation fleet adequately meet the needs of our students, staff, and community. We prioritize the maintenance and upgrading of aging buildings while planning for future growth and managing our finances responsibly. By adhering to these guiding principles, the SCESA Board aims to create a safe, welcoming, and forward-thinking environment that meets the evolving needs of our students, staff and community.

Master Facility Plan Development:
Establish an ad hoc committee tasked with creating a comprehensive master facility plan that outlines strategies for the next 1-5 years, 5-10 years, and 10-20 years.

Planning:
Conduct future planning discussions in conjunction with fund development and promotions staff and Society membership to ensure alignment and resource availability.

Modernization:
Continue efforts to modernize both campuses, focusing on enhancing aesthetics and building comfort for students and staff.

Infrastructure Upgrades:
Evaluate and implement necessary updates to infrastructure to support technological advancements and improve overall



Engagement Summary

Stakeholder engagement strengthens and enriches the outcomes of processes such as the Master Facilities Plan (MFP). True engagement goes beyond the informative and draws ideas, questions and concerns out of individuals and groups, to create meaningful dialog. This MFP has benefitted from multiple rounds of stakeholder engagement, including a phased survey that was released in Spring 2024 to the Board, Society, staff, and students, garnering more than 120 responses. A subsequent round of engagement was initiated with the sharing of the full draft plan in October 2024, prior to the finalization of the MFP for presentation to the board.

Through the collective work of the committee and feedback provided by our Board, Society members, staff and students who shared their thoughts on the plan, this MFP can be implemented with the confidence that it has been shaped through collective effort and dialog.

As the Board makes decisions using the guidance provided by this MFP, engagement methods can continue to be utilized, such as future surveys related to significant expenditures, and votes on major funding decisions.

Data & Analysis

Capital Projects

Immanuel Christian Elementary School

The most recent capital project proposed began in the 2017-2018 school year at Immanuel Christian Elementary School (ICES) with what was called the “BIG Project”. The project scope was to address capacity limitations with an expansion that included a gymnasium and adjacent supporting spaces, classrooms, and the renovation and modernization of most existing spaces.

2017-2018	2018-2019	2019-2020	2020-2021
Board approval to investigate concepts and costs	Presentation at Spring Society meeting of findings	- Project approved by special vote of the SCESA - Project tendered & contractor hired - Design and cost increases. - COVID-19 Pandemic	- Scope and cost outside of original approval - Special vote to continue project voted down by membership

Immanuel Christian Secondary School

The last large capital project at Immanuel Christian Secondary School (ICSS) was completed in the 2004-2005 school year. The scope of work is now known as the “LIFEwing”. This work included the construction of new art, band/choir, learning commons, administrative offices, and the removal of an old greenhouse that was connected to the science lab. The greenhouse space was incorporated into the interior building structure and repurposed to what we now know to be the Student Activity Center (SAC).

Since then, smaller capital projects have been completed in 2021-2023 school years. These projects include the upgrading and modernization of the Home Economics room, large gym change rooms, along with adjacent supporting spaces of storage and offices.

Other Work

Outside of the larger projects previously stated, several other projects benefiting students, staff, safety and building modernization have been completed since 2017 and include:

ICES

- 2016/2023 New and additional outdoor equipment with an expected lifespan of 20+ years.
- 2021 Gym projector and screen with an expected lifespan of 10 years.
- 2021/2023 Replacement of original roof with an expected lifespan of 25 years.
- 2022 Touchless taps in washrooms with an expected lifespan of 20 years.
- 2023 Built-in shelving and storage with an expected lifespan of 25 years.
- 2023 Overlay and expansion of original asphalt play area with an expect lifespan of 30 years.

ICSS

- 2018 Building Management System (BMS) expected lifespan that is dependent on technology update/changes and building asset upgrades.
- 2018 Upgraded security camera system with an expected lifespan that is dependent on technology, build quality and environmental conditions, but typically 10 years.
- 2020 LED lighting throughout with an expected lifespan of 15-20 years.
- 2022 Touchless taps in washrooms with an expected lifespan of 20 years.
- 2023 Large gym floor refinish with an expected lifespan of 20 years.
- 2023 Upgraded fire alarm devices with an expected lifespan that is dependent on technology update/changes, but typically 20 years.
- 2024 Large gym video board (donated funds) with an expected lifespan of that is dependent on use, but typically 10 years.

Data & Analysis (Continued)

Building

Building Condition Assessment (BCA) - Lifecycle Costs

In the follow up of the Big Project vote to not continue, the Building Committee was tasked with finding support for and producing a long term building maintenance plan. To gain better insight to the full scope and condition of both campuses, the committee engaged MPE Engineering Ltd. for a BCA in the spring of 2022.

Building Condition Assessment - **ICES**

Overall, the building is in fair condition with some repairs, replacements, and monitoring required. The summary of the costs for all the disciplines is shown below.

Item/Area	Comment	0-5 years	5-10 years	10-15 years	15-20 years	Total	Recent Repairs/Upgrades	Cost	Year
Site Condition	Grading concerns	$ 12,500	$ 10,000	$ 3,000		$ 25,500	New/resurfaced ashphault	$ 65,550	2023
Building Exterior	Wall cracking and roof replacement	$ 232,000	$ -	$ -		$ 232,000	New Roof on 3/4 of build	$ 203,146	2021/2023
* Environmental	Exterior Walls, Glass Block, Caulking - Vermeculite, Chrysotile					$ 200,000	N/A		
Building Interior	Floors	$ -	$ 100,000	$ -		$ 100,000	N/A		
*Environmental	DWJC, Ceiling Texture, Floors					$ 397,000	N/A		
Mechanical Systems	Life expenctancy of all HVAC at or near end of life	$ 12,000	$ 150,000	$ 220,000		$ 382,000			
Electrical Systems	Existing systems and devices sufficient but nearing end of life. Little room for power expantion based on single phase feed.	$ 60,000	$ 18,000	$ 6,000		$ 84,000			

TOTAL $**1,420,500**

Building Condition Assessment - **ICSS**

Overall, the building is in fair condition with some repairs, replacements, and monitoring required. The summary of the costs for all the disciplines is shown below.

Item/Area	Comment	0-5 years	5-10 years	10-15 years	15-20 years	Total	Recent Repairs/Upgrades	Cost	Year
Site Condition	In good condition - Parking lot upgradesoptional	$ 7,000	$ -	$ -		$ 7,000	N/A		
Building Exterior	In good condition	$ 10,000	$ 186,000	$ 31,000		$ 227,000	N/A		
* Environmental	Walls and other areas - Vermeculite					$ 190,000			
Building Interior	In good condition. Cosmetic items. Small gym floor heaving!	$ 6,000	$ 12,000	$ 9,000		$ 27,000	N/A		
*Environmental	Crawl space, floors, drywall,					$ 480,000			
Mechanical Systems	Fair condition	$ 6,500	$ 315,000	$ 300,000	$ 275,000	$ 896,500			
*Environmental	Sanitary and Sewer line coating				$ 60,000	$ 60,000			
Electrical Systems	Fair condition	$ 75,000	$ 25,000	$ 8,000		$ 108,000			

TOTAL $**1,995,500**

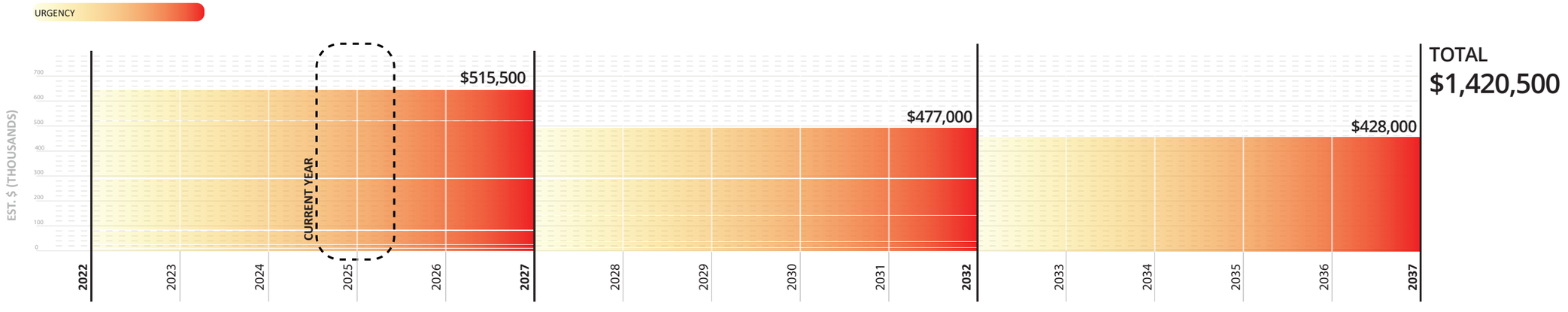
Building Capacity and Utilization

Alberta Education's formula for school capacity and utilization, along with consistent enrollment increases, was a key factor in considering the BIG Project. The existing ICES campus has an estimated full capacity of 310 students. When we began exploring expansion in the 2017-2018 school year, our capacity utilization was in the upper 90th percentile. By 2019-2020, we reached full capacity with 314 students. However, as noted in the timeline for the BIG Project, the COVID-19 pandemic caused a significant drop in enrollment, particularly at ICES, during the 2021-2022 school year. Since then, we have seen small increases in enrollment (see appendix), and our current capacity utilization for the 2024-2025 school year is approximately 75%.

The capacity and utilization of ICSS have remained relatively stable over the past five years. For the 2024-2025 school year, utilization is approximately 45%, with a maximum capacity estimated at 650 students. Although this utilization figure may seem low, it is influenced by the campus's extensive footprint and large shared spaces, such as gyms, labs, CTS (wood and mechanics), and learning commons. A closer examination of the active classroom spaces would reveal that any significant increase in student enrollment may necessitate the consideration of additional classrooms. This additional space is based on an average of 25 students per room.

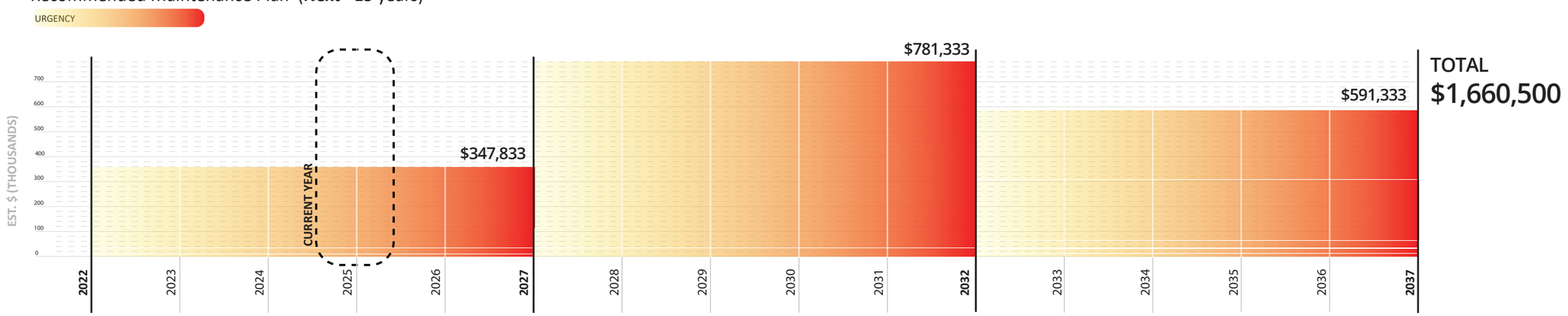
ICES - BCA | Visualized

Recommended Maintenance Plan (**Next*** 15 years)



ICSS - BCA | Visualized

Recommended Maintenance Plan (**Next*** 15 years)



Projections + Matrix

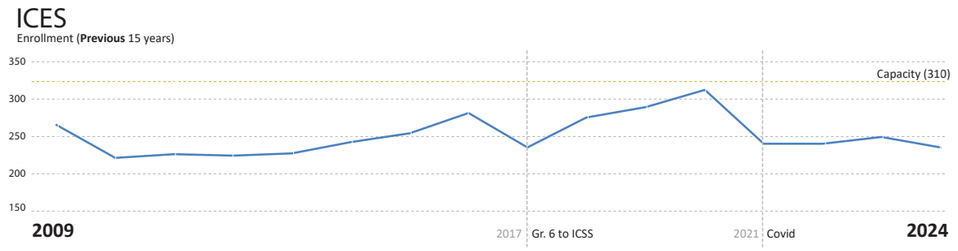
Projections

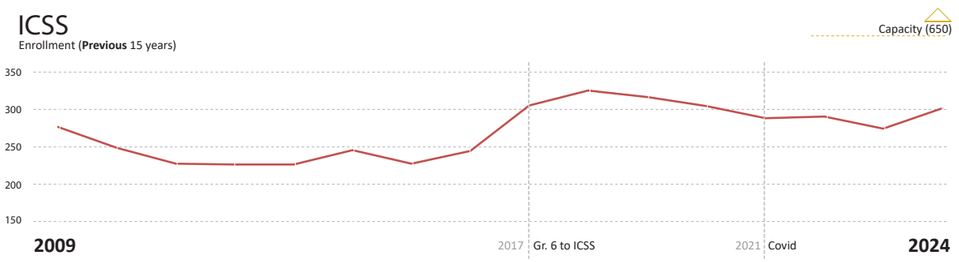
Historical enrollment and projections for ICS are based on the historical data over several periods of time.

Analysis of the 10 year period at ICES prior to 2019-2020 and COVID showed an estimated increase of 2% year over year with a few outlining factors. The first being the move of grade 6 students from ICES to ICSS in 2016-2017. Second, the addition of Early Education in 2017/2018 and closing of the Early Education program at ICES in 2022/2023. The 2019-2020 year is also the year that enrollment peaked at 314 students. Since then, the enrollment percentage has been relatively static with a current population of 235 students. Projected enrollment based on this most recent data would show it is likely to anticipate small changes.

Analysis of the 10 year period at ICSS prior to 2019-2020 and COVID showed an estimated increase of 1% year over year. The one outlining factor would be the move of grade 6 students from ICES to ICSS in 2016-2017. The 2017-2018 and the current 2024-2025 years are where enrollment peaked at 325 and 327 students respectively. Since COVID there has been a steady increase in enrollment of almost 3.5% year over year. Projected enrollment based on this most recent data and the ICES data would show it is likely to anticipate small changes.

Further demographic projections of growth in Lethbridge and the School division (LSD 51 Capital Plan - see appendix) also show steady increases. This does not provide a direct correlation to enrollment growth for our community at ICS as we are a school of choice, but does continue to show there are more people coming to Lethbridge. Not factored into this is the surrounding geographic area that ICS draws on from outside of the city limits where population estimates show consistent increases as well (Alberta Municipal Pop Est - see appendix).





Opportunities Matrix

Scenarios + Matrix

The Master Facilities Planning Matrix (MFPM) is a key deliverable for this MFP, and was developed by the committee over several working sessions. The Matrix is a comprehensive tool that is intended to provide specific guidance and considerations for more than 14 main categories (and more than 60 sub-categories) meant to capture the most critical elements of existing and potential future sites and facilities.

The Matrix was refined using several hypothetical scenarios. Once deemed complete, five scenarios representative of the most likely future outcomes for new facilities for both the ICES and ICSS campus, were analyzed.

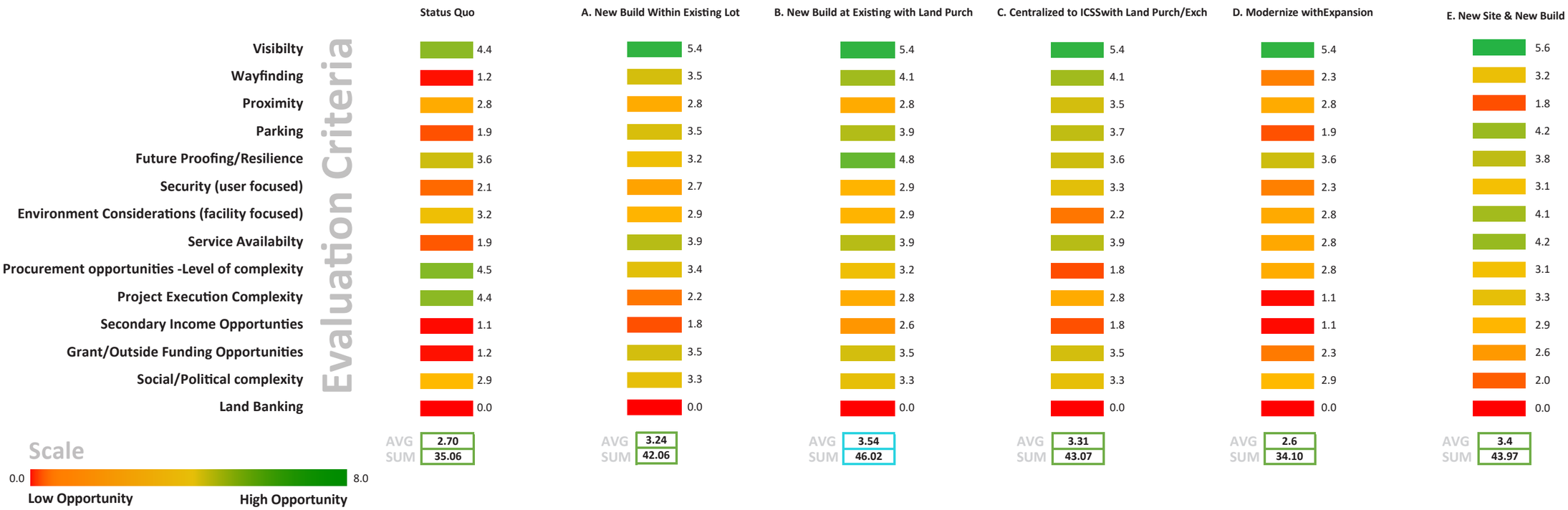
The Matrix does not recommend one specific scenario as the best or most effective, rather it shows how each scenario may be considered on its own merits, and when weighed against other potential scenarios..

The Matrix represents a powerful tool for the SCESA to use when the time comes to consider and vote on next steps for the sites and facilities that serve our students and staff.

Term	Definition	Relationship to Sites & Buildings
Visibility	How easily a structure or location can be seen and recognized by people from various vantage points	Physical Visibility, Accessibility, Branding and Recognition, Safety, Security, Environmental integration
Wayfinding	The system and processes that help people navigate and understand their surroundings ensuring they can find their way efficiently and confidently	Signage, Landmarks, Maps, Lighting, Visual Cues, Accessibility, User Experience
Proximity	The physical closeness or distance between structures, spaces, and key features within an environment.	Considerations for accessibility, site layout, sustainability, aesthetic considerations, traffic flow, layby, and future adaptability
Parking	Designated areas where vehicles can be temporarily stored.	Considerations for accessibility, site layout, sustainability, aesthetic considerations, traffic flow, layby, and future adaptability
Resilience	The ability to withstand, adapt to, and recover from adverse conditions, challenges, or disruptions with aims to ensure safety, functionality, and sustainability.	Structural integrity, sustainable practices, adaptability, urban planning, community engagement, emergency preparedness
Security	The measures and practices implemented to protect people, property, and information from threats, including unauthorized access, theft, vandalism, and other criminal activities	Physical security, surveillance, lighting, emergency preparedness, design principles, and access control
Environment	The surrounding physical, social, and ecological conditions that influence and are influenced by the built environment.	Physical, social, ecological, urban, environmental, and regulations
Service Availabilty	The accessibility and reliability of essential utilities and services that support the functionality and livability of a space.	Utilities, public, maintenance, operational, emergency, and transportation links.
Procurement Opportunities	The ability to acquire land, resources, and services necessary for development or management.	Land acquisition, site development services, environmental, zoning and permitting,
Project Execution Complexity	The challenges and intricacies involved in planning, coordinating, and implementing a construction or development project.	Site conditions, stakeholder involvement, project scope and scale, timeline constraints, risk management
Secondary Income Opportunities	Ways that a building can generate additional revenue beyond the primary use of the space.	Event hosting, shared amenities, rental space, partnerships?
Outside Funding Opportunities	Financial resources obtained from external sources that do not directly relate to existing or operating revenue.	Government grants, loans, investments, other?
Social/Political Complexity	The intricate dynamics and interactions among various stakeholders, regulations, and community factors that can influence development projects.	Community engagement, cultural context, demographics, public sentiment, regulatory framework, political landscape, policy changes,
Land Banking	The practice of acquiring and holding land for future development or investment purposes.	Future development, risk management

Opportunities Matrix

Potential Scenarios



Recommendations

Replacement facilities represent the shortest path to addressing the deferred maintenance of an ageing building inventory.

However, ensuring facilities currently under ownership by the SCESA are proactively maintained and expanded to continue to meet student and staff needs, is a critical step in bridging the transition from existing facilities, to new ones.

In three basic steps, the path from today to new facilities includes proactive maintenance of existing facilities with an eye on lifecycle management and expansion of existing facilities as necessary to serve school needs, to the planning, collection and expenditures of funding necessary to construct new facilities. Within the three main steps noted above, there are many complexities and contextual considerations. The Matrix developed for this MFP provides a tool to assess, plan and execute these steps effectively and efficiently, regardless of the specifics of the opportunities and challenges presented at the time the SCESA wishes to move forward with the steps necessary to build new facilities.

Recommendations include:

-Use of the BCA's to guide lifecycle expenditures for current facilities
-included here is a further recommendation to index against inflation for high level budgeting purposes; recognizing that as costs are refined from conceptual to design to IFC-drawing level the budgets will be refined accordingly, and
-A commitment to update BCA's every 10 years or as necessary
-Adoption of the Matrix as the tool with which to undertake options analysis in advance of Society votes on expenditures related to new facilities
-A commitment to review the MFP at no greater than five year intervals

Implementation:

The goal of this strategy is to ensure a smooth transition from ageing facilities to new ones while maintaining existing structures and effectively managing resources. This will be achieved through proactive maintenance, lifecycle management, and strategic planning for new construction. The following three steps outline the path forward:

Step 1: Proactive Maintenance and Lifecycle Management

1. Building Condition Assessments (BCA):
- Utilize BCAs to guide lifecycle expenditures, ensuring maintenance aligns with long-term facility goals.

2. Budgeting:
- Establish a framework for maintenance and operational costs against inflation for high-level budgeting.
- Include disclaimers that budgets will be refined as costs become more defined through the project lifecycle.

3. Regular Review:
- Commit to updating BCAs every 10 years or sooner if significant changes occur in facility conditions.
- Develop a schedule for these updates and allocate budget resources accordingly.

Step 2: Expansion of Existing Facilities

1. Assess Needs:
- Conduct an analysis to determine current and projected needs for school facilities, taking into account enrollment trends and programmatic changes.
- Engage with staff and stakeholders to gather input on needs and potential expansions.

2. Adopt and Use Matrix:
- Adopt the Matrix as a key tool for options analysis before presenting proposals for new facilities to the Society.
- Train relevant staff on using the Matrix effectively to evaluate expansion options and their implications.
- Review the Master Facility Plan (MFP) every five years, with the option for more frequent reviews if necessary.

3. Asess Options:
- Use the Matrix to explore different scenarios for facility expansion, considering factors such as cost, timeline, and impact on the community.
- SCESA Board to present findings to the Society for informed decision-making on facility expenditures.

Recommendations (Continued)

Step 3: Planning, Funding, and Construction of New Facilities

1. Financial Planning:

- Develop a comprehensive financial strategy for funding new construction, including potential sources of funding.
- Create a funding timeline aligned with the construction schedule to ensure cash flow availability.

2. Budgeting:

- Refine budgets as projects progress from conceptual to design and into construction phases. Regularly review and adjust budgets in response to updated cost estimates and project developments.

Conclusion

The Master Facility Plan serves as a guide for the future development, maintenance, and enhancement of SCESA facilities. By prioritizing both the proactive management of existing infrastructure and consideration of expansion to meet modernization, safety, and growth needs, this plan provides the Society an effective path to address the challenges and opportunities that lie ahead.

By referencing data from Building Condition Assessments (BCA) and utilizing the Matrix for assessing options, we can make informed choices that align with our long-term goals, objectives and Society members expectations.

With a focus on modernizing campuses and upgrading infrastructure, this reflects our dedication to providing a safe, comfortable, and functional environment for students and staff. This commitment will be further reinforced through regular reviews of the MFP, allowing us to adapt to changing circumstances and continue meeting the needs of our community.

To do this well, it will require ongoing collaboration, transparency, and a proactive approach to resource management. By following the outlined steps, we have a blueprint to provide an educational environment that supports current and future generations. Our ultimate goal is for SCESA facilities to not only meet today's demands but also lay a foundation for sustainable growth and success in the years to come.

— Appendix | Full Matrix

Evaluation Criteria	Status Quo	A. New Build Within Existing Lot	B. New Build at Existing with Land Purch	C. Centralized to ICSSwith Land Purch/Exch	D. Modernize withExpansion	E. New Site & New Build
Visibilty	4.4	5.4	5.4	5.4	5.4	5.6
Safety/Passive Security	4.0	6.0	6.0	6.0	6.0	7.4
Degree of Public interface	4.0	6.0	6.0	6.0	6.0	7.4
Wayfiniding/Legibility	5.3	5.3	5.3	5.3	5.3	4.8
Intuitive navigation and comfort	5.3	5.3	5.3	5.3	5.3	4.8
Branding (Public Identity)	3.8	5.0	5.0	5.0	5.0	4.5
Site characteristics/ opportunities	3.8	5.0	5.0	5.0	5.0	4.5
Wayfinding	1.2	3.5	4.1	4.1	2.3	3.2
Easy of Access (vehicle mode)	1.2	3.6	4.8	4.8	2.4	4.0
Ease of Access (Pedestrian Mode)	1.1	3.4	3.4	3.4	2.3	2.5
	0.0					
Proximity	2.8	2.8	2.8	3.5	2.8	1.8
Adjacency (ICES to ICSS)	2.5	2.5	2.5	5.0	2.5	1.3
Walkability/Active Modes	1.9	1.9	1.9	1.9	1.9	1.5
Proximity to communities served	0.0	0.0	0.0	0.0	0.0	1.7
Proximity to public paths	2.2	2.2	2.2	2.2	2.2	1.1
Proximity to public transit routes	2.2	2.2	2.2	3.3	2.2	1.7
Retail access	3.3	3.3	3.3	2.2	3.3	1.8
Adjacency to critical services	3.9	3.9	3.9	3.7	3.9	2.7
Emergency services	4.5	4.5	4.5	3.4	4.5	2.1
Recreational servcies	3.4	3.4	3.4	3.4	3.4	2.8
Amenities/Parks	3.4	3.4	3.4	3.4	3.4	2.5
Pools/Arenas	3.4	3.4	3.4	3.4	3.4	3.2
Community outreach facilities	3.4	3.4	3.4	3.4	3.4	3.0
Major point of access (ie. Highway 3)	4.5	4.5	4.5	4.5	4.5	2.8
Parking	1.9	3.5	3.9	3.7	1.9	4.2
Private Parking Opportunities	0.4	4.5	6.0	5.6	0.4	6.0
Layby Drop-off	0.0	4.5	6.0	6.0	0.0	6.0
Bus Loop	0.0	4.5	6.0	6.0	0.0	6.0
Staff/Visitor	1.5	4.5	6.0	6.0	1.5	6.0
General Circulation	0.0	4.5	6.0	4.5	0.0	6.0
Adjacent public parking	1.2	1.2	1.2	2.3	1.2	3.3
Crush Loading (Peak Event)	1.5	3.8	4.1	2.6	1.5	3.1
Risk of Congestion - Flow of traffic	0.0	3.5	3.5	2.3	0.0	3.2
Parking zones	4.7	4.7	4.7	3.5	4.7	3.2
Demand	1.2	3.5	3.5	2.3	1.2	3.2
Adaptability	0.0	3.5	4.7	2.3	0.0	3.0
Bus Parking	4.4	4.4	4.4	4.4	4.4	4.4
Safety/Proximity	4.4	4.4	4.4	4.4	4.4	4.4
Future Proofing/Resilience	3.6	3.2	4.8	3.6	3.6	3.8
Lot coverage vs. allowable	3.6	2.4	4.8	3.6	3.6	3.7
Area required vs. available	2.4	2.4	4.8	3.6	2.4	3.7
Frontage	4.8	4.8	4.8	3.6	4.8	3.8

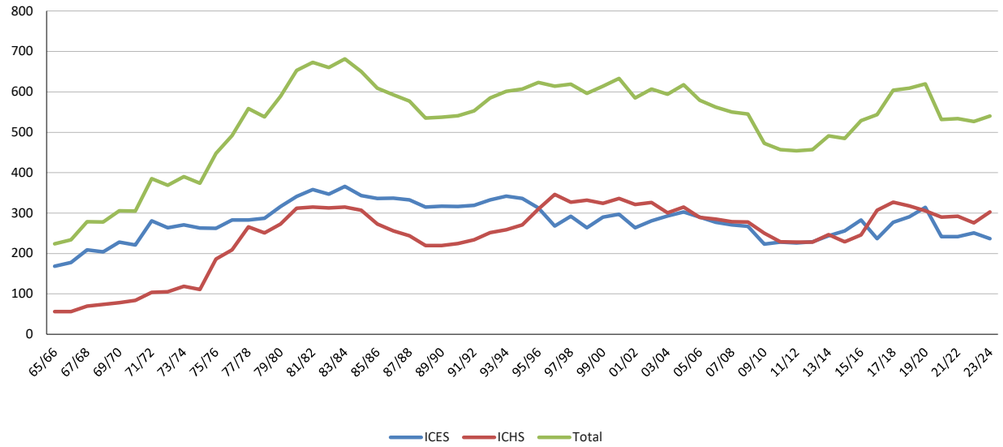
(Continued)

— **Appendix |** Full Matrix (Continued)

Evaluation Criteria	Potential Scenarios					
	Status Quo	A. New Build Within Existing Lot	B. New Build at Existing with Land Purch	C. Centralized to ICSSwith Land Purch/Exch	D. Modernize withExpansion	E. New Site & New Build
Security (user focused)	2.1	2.7	2.9	3.3	2.3	3.1
Adjacency to Known Risks	2.1	2.9	3.0	3.3	2.7	3.1
Busy Streets/ease of access to/from site	1.1	1.1	2.3	3.4	1.1	3.0
Industrial production	2.3	2.3	2.3	3.4	2.3	2.7
Commercial/Industrial vehicle adjacency	2.3	2.3	2.3	3.4	2.3	2.6
Natural Hazards (for users)	3.4	3.4	3.4	3.0	3.4	3.0
Bodies of water	3.4	3.4	3.4	3.4	3.4	2.7
Exposure (wind, sun…etc.)	3.4	3.4	3.4	3.4	3.4	3.7
Grade hazards (ie. Topography..etc)	3.4	3.4	3.4	2.3	3.4	2.7
Concentrated criminal activity	2.3	2.3	2.3	2.3	2.3	3.1
CPTED (crime prevention through env. Design)	1.1	4.6	4.6	4.6	2.3	4.3
Environment Considerations (facility focused)	3.2	2.9	2.9	2.2	2.8	4.1
Water - table, stormwater management, etc.	3.4	3.4	3.4	3.4	3.4	4.3
Slope stability	3.4	3.4	3.4	2.3	3.4	4.6
Subsistence	3.4	3.4	3.4	1.1	3.4	4.6
Geotech	3.4	3.4	3.4	2.3	3.4	4.6
Soil Gas (i.e. radon...)	2.3	2.3	2.3	2.3	2.3	4.3
Climate considerations	3.0	3.0	3.0	3.0	2.3	3.0
Wind (protection)	3.4	1.1	1.1	1.1	1.1	3.2
Sun (Exposure)	2.3	4.6	4.6	4.6	2.3	2.7
Precipitation	3.4	3.4	3.4	3.4	3.4	3.2
Service Availabilty	1.9	3.9	3.9	3.9	2.8	4.2
Future alternative energy regulations	0.0	4.4	4.4	4.4	1.1	4.4
Builiding Code requirements	1.1	4.4	4.4	4.4	3.3	4.4
Communications/internet	3.3	3.3	3.3	3.3	3.3	4.4
Proximity to services	3.3	3.3	3.3	3.3	3.3	3.7
Procurement opportunities -Level of complexity	4.5	3.4	3.2	1.8	2.8	3.1
Complexity	4.5	4.5	3.4	1.1	4.5	3.2
Readily available	4.5	4.5	3.4	1.1	4.5	2.9
Project Execution Complexity	4.4	2.2	2.8	2.8	1.1	3.3
Site preperation	4.4	2.2	3.3	2.2	1.1	3.2
Transition	4.4	2.2	2.2	3.3	1.1	3.4
Secondary Income Opportunties	1.1	1.8	2.6	1.8	1.1	2.9
Commercial needs/opportunities	0.0	2.2	2.2	2.2	0.0	2.4
Community needs/opportunties	1.1	3.3	3.3	3.3	1.1	3.4
Known future develoment (fut. Sell-off)	2.2	0.0	2.2	0.0	2.2	2.9
Grant/Outside Funding Opportunities	1.2	3.5	3.5	3.5	2.3	2.6
Government	1.1	3.3	3.3	3.3	3.3	2.2
Private	1.3	3.8	3.8	3.8	1.3	3.0
Other…						
Social/Political complexity	2.9	3.3	3.3	3.3	2.9	2.0
Adjacent Community impact	2.9	3.3	3.3	3.3	2.9	2.0
Residential impacts (neighbours)	4.4	4.4	4.4	4.4	4.4	2.0
Recreational impacts (Clubs, leagues)	2.2	3.3	3.3	3.3	2.2	2.0
Environmental impacts (Parks, agriculture, nature reserves, et	2.2	2.2	2.2	2.2	2.2	2.0
Land Banking	0.0	0.0	0.0	0.0	0.0	0.0
AVG	2.50	3.00	3.29	3.08	2.4	3.1
SUM	35.06	42.06	46.02	43.07	34.10	43.97

— **Appendix |** Historical Enrollment

Year	ICES	ICHS	Total
65/66	168	56	224
66/67	178	56	234
67/68	209	70	279
68/69	204	74	278
69/70	228	78	306
70/71	221	84	305
71/72	281	104	385
72/73	264	105	369
73/74	271	119	390
74/75	263	111	374
75/76	262	186	448
76/77	283	209	492
77/78	283	266	559
78/79	287	251	538
79/80	316	273	589
80/81	341	312	653
81/82	358	315	673
82/83	347	313	660
83/84	366	315	681
84/85	343	307	650
85/86	336	273	609
86/87	337	256	593
87/88	333	244	577
88/89	315	220	535
89/90	317	220	537
90/91	316	225	541
91/92	319	234	553
92/93	333	252	585
93/94	342	259	601
94/95	336	271	607
95/96	313	310	623
96/97	268	346	614
97/98	292	327	619
98/99	264	332	596
99/00	290	324	614
00/01	297	336	633
01/02	264	321	585
02/03	281	326	607
03/04	293	301	594
04/05	303	315	618
05/06	290	289	579
06/07	277	285	562
07/08	271	279	550
08/09	267	278	545
09/10	223	250	473
10/11	228	229	457
11/12	226	228	454
12/13	229	228	457
13/14	244	247	491
14/15	256	229	485
15/16	283	246	529
16/17	237	307	544
17/18	277	327	604
18/19	291	318	609
19/20	314	306	620
20/21	242	290	532
21/22	242	292	534
22/23	251	276	527
23/24	237	303	540



— **Appendix |** Operating Cost

Operating and Maintenance Costs

The following are costs associated with general year over year upkeep and maintenance of the buildings.

Category	10-year Average	Area Serviced	Average $ / ft²
ICES - Utilities	$ 33,772	27,600 ft²	**$1.22**
ICES - Maintenance	$ 58,000	27,600 ft²	**$2.10**
ICSS - Utilities	$ 82,375	78,000 ft²	**$1.06**
ICSS - Maintenance	$ 97,200	78,000 ft²	**$1.24**

Suite 300, 714-5th Avenue South
Lethbridge, AB T1J 0V1
Phone: 403-329-3442
Fax: 403-329-9354

MPE Engineering Ltd.

Immanuel Christian Elementary School – Society Office
2010 5 Avenue North
Lethbridge, Alberta
T1H 0S1

May 13, 2022
File: N:\1151\003-00\R01

Attention: Jason Ferrie
Society Business Manager

Dear Mr. Ferrie:

Re: Immanuel Christian Elementary School Condition Assessment

MPE Engineering Ltd. is pleased to submit this Report for the Immanuel Christian Elementary School condition assessment.

We appreciate the opportunity to provide our services for this project. Should you have any questions or require additional information, please contact the undersigned at (403) 317-3645 or pgoertzen@mpe.ca.

Yours truly,

MPE ENGINEERING LTD.

Peter Goertzen, P.Eng., LEED A.P.
Electrical/Mechanical Engineer

Enclosure

CORPORATE AUTHORIZATION

This report has been prepared by MPE Engineering Ltd. under authorization of the Society Office of Immanuel Christian Schools. The material in this report represents the best judgment of MPE Engineering Ltd. given the available information. Any use that a third party makes of this report, or reliance on or decisions made based upon it is the responsibility of the third party. MPE Engineering Ltd. accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions taken based upon this report.

Should any questions arise regarding content of this report, please contact the undersigned.

MPE ENGINEERING LTD.

Professional Stamp

PROFESSIONAL ENGINEER ALBERTA
PETER GOERTZEN
ID 68504

May 13, 2022

PERMIT TO PRACTICE
MPE
Signature _____
APEGA ID #68504
Date May 13, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Professional Engineer, P.Eng.

Professional Seal

Corporate Permit

— Appendix | Building Condition Assesment

1.0 INTRODUCTION

MPE Engineering Ltd. (MPE) performed site visits, Craig Ambler (Civil/Structural/Architectural), Ife Oyedotun and Peter Goertzen (Mechanical), and Jon Danielson (Electrical), with Jason Ferrie of the Society Office in February 2022 to assess the Immanuel Christian Elementary School (ICES) infrastructure located at 2010 5th Avenue North in Lethbridge, Alberta.

The buildings were reviewed based on site, architectural, structural, mechanical, and electrical components. The detailed results of the assessments are in Section 2.0 of this report. The building included in this assessment is the main ICES building.

The school structure was built in 3 phases. The original school including the gym was constructed in 1956 which is now the north end of the school. Second phase completed in 1961 is the southwest wing and the third phase completed in 1997 is the southeast wing. All three phases are one story structures, with flat wood framed roof systems. The roof structures in phases 1 and 2 are supported on masonry load bearing exterior and interior walls, and masonry non-load bearing partition walls. Phase 3 uses conventional load bearing wood framed exterior and interior walls, and non-load bearing wood framed partition walls. All three phases use conventional shallow concrete foundation walls/ grade beams and strip footings/pad footing systems. A concrete slab on grade floor system was used in all three phases.

1.1 Methodology

The following was evaluated for each building:

- Building Envelope:
  - Roof, Skylights
  - Windows, doors, exterior walls
- Building Interior – Overall Condition
- Mechanical Heating and Ventilation Equipment (including equipment owned by Immanuel Christian Schools)
- Plumbing systems and fixtures
- Electrical Systems (main switchgears and distribution panels)
- Parking/Asphalt and Landscaping

All accessible areas within the buildings were reviewed. Any deficiencies, repairs, and upgrades are noted within the assessment to ensure that the life expectancy of the buildings can be achieved or prolonged, as well as to maintain a safe environment for occupants and improve building efficiencies. Detailed assessments of each building are provided in the following sections.

MPE evaluated each infrastructure system individually using the risk matrix provided below. This matrix uses condition and importance factors to rank each infrastructure need. MPE developed a work plan for each infrastructure system based on these priorities.

Cost estimates of the deficiencies, repairs and upgrades are also provided in this report. Please note that the estimations are high-level estimates, valued to this year. Cost varies significantly depending on the size of the scope, labour availability in the area, and inflation rate. Combining several projects with a similar scope that utilizes a single Contractor will minimize the cost of the overall project.

		Consequence/Impact			
		1 – Low	2 – Moderate	3 – High	4 – Intolerable
Likelihood	1 – Improbable	P3	P3	P2	P2
	2 – Possible	P3	P2	P2	P2
	3 – Likely	P2	P2	P2	P1
	4 – Almost Certain	P2	P2	P1	P1

— **Appendix |** Building Condition Assesment

2.0 BUILDING CONDITION

2.1.1 Site Condition

The overall site condition is poor.

General observations:

- Parking lots appears to drain well significant evidence of ponding was not noticed in the walkthrough.
- Parking spaces are maximized on site.
- Door aprons have settled in a couple locations creating a tripping hazard when entering the building. Barrier free access at these locations have been limited at the locations of these door aprons.
- Grading around the south and east sides of the building is poor. The grading does not properly shed water away from the building instead it directs it towards the building.
- Utility boxes in the parking lot should be protect. Only 2 bollards on one side leave them exposed to vehicles.
- Landscape areas appear well maintained although it was difficult to assess due to snow cover.

Recommendations:

In the next 0-5 Years:

- MPE recommends to repair grading on the south and east sides of building - $125,000.00.

In the next 5-10 Years:

- MPE recommends repairing settled concrete door aprons. - $10,000.00.

In the next 10-15 Years:

- MPE recommends adding bollards and paint existing ones to protect utilities - $3,000.00.

Appendix A provides a breakdown of the General Site Condition.

2.1.2 Building Exterior

The overall building exterior is in fair condition.

General observations:

- Visibility was limited due to snow cover but the roof membrane appears to be in good condition in the newer roofed section. Older roof sections have signs of repairs which could mean the older sections are at or passed their life expectancy.
- The settlement and cracking of exterior walls is likely due to the water infiltration from poor grading, these are not a concern structurally at this time but should be monitored if cracking worsens.
- Inside and outside of exterior walls had cracking observed. Cracks should be filled with caulking to prevent any water or pest infiltration that could propagate cracks further, mortar joints can be repointed.
- Doors throughout show some signs of settlement which are common for a building of this age. Repainting and realigning doors is recommended to extend the life of the doors.
- Caulking around doors and windows should regularly be replaced as a general maintenance item.
- Skylight on the roof had cracked could result in some energy losses. A thermal scan could be performed to indicate the severity of any increased energy losses.

Recommendations:

In the next 0-5 Years:

- MPE recommends a roof replacement of older sections that contain tar and gravel - $220,000.00.
- MPE recommends exterior door realignments and repainting - $12,000.00.

In the next 5-10 Years:

- None

In the next 10-15 Years:

- MPE recommends repairing broken skylight (asbestos containing mortar around glass block) - $1,000.00.

Appendix B provides a breakdown of the condition of the Building Exterior.

— **Appendix |** Building Condition Assesment

2.1.3 Building Interior – Overall Conditions

The overall Building Interior is fair.

General observations:

- Cracking in several locations is noted but not a concern structurally unless the cracking worsens.
- Floor finishes were chipping and cracking in several locations throughout the building. A hazard assessment from 2010 by Sherlock Environmental Services Ltd. indicated the locations of the asbestos containing flooring. These should be abated with proper hazardous materials procedures to prevent any health hazards.
- A storage space adjacent to the stage in the small gym should not be used as a storage space as the plywood is not capable to support storage loads without additional members being added.

Recommendations:

In the next 0-5 Years:

- MPE recommends a hazardous materials assessment - $5,000.00.

In the next 5-10 Years:

- MPE recommends floor tile repairs and hazardous materials abatement - $100,000.00.

In the next 10-15 Years:

- None.

Appendix C provides a breakdown of the condition of the Building Interior.

2.1.4 Mechanical Systems

The overall site condition is fair as there were no immediate issues with the system causing a safety or functional hazard.

General observations:

- Floor drains are in poor condition. The pipe leaving the school has been evaluated with a video revealing a poor system.
- Sump currently is not being monitored.
- All of the gas furnaces in the mechanical room are in fair condition, but the 1 Lennox furnace is approaching life expectancy.
- The 6 Weathermaker 8000 furnaces in the classrooms were installed in 1997 and are approaching life expectancy.
- Below grade ducts are suspect and should be investigated further.
- Exhaust fans are expected to be upgraded when washrooms are next upgraded

Recommendations:

In the next 0-5 Years:

- MPE recommends the Lennox 80MGF4/5 140A 12 furnace in the mechanical room to be upgraded - $10,000.00.
- MPE recommends the below grade ducts to be investigated - $2,000.00.

In the next 5-10 Years:

- MPE recommends a full rehabilitation of site service, sewer and storm lines leaving school – $50,000.00
- MPE recommends sump monitoring to be implemented – $1,000.00
- MPE recommends the 7 furnaces installed in 1997 and prior to are to be replaced ($15,000.00 each) – $105,000.00.

In the next 10-15 Years:

- MPE recommends the 3 furnaces in the mechanical room ($10,000.00 each) and 12 shelve-a-duct furnaces in classrooms ($15,000.00 each) to be upgraded – $210,000.00.
- MPE recommends that the 9 exhaust fans are upgraded when the washrooms are upgraded - $9,000.00.

Appendix D provides a breakdown of the condition of the Mechanical Systems of the building.

2.1.5 Electrical Systems

The Immanuel Christian Elementary School is in fair condition throughout the building as a whole. No states of disrepair were observed that would cause any sort of electrical hazard.

- The Fire Alarm Control Panel (FACP) is antiquated.
- Fire alarm initiating devices (pull stations, heat detectors etc.) are in good condition.
- Fire alarm signaling devices have no visual alarm component
- School uses T8 fluorescent fixtures throughout hallways and classrooms.
- Several branch service panels, while functional, are obsolete.
- Main service is 120/240V 400A. Main service equipment has been updated.
- Emergency remote heads are of incandescent type.
- Data system is adequate and functional.
- Outdoor lights have been updated to LEDs

Recommendations:

In the next 0-5 years:

- Fire Alarm Control Panel (FACP) should be replaced - $10,000.00.
- All T8 fluorescent fixtures should be replaced with LED equivalent fixtures - $50,000.00.

In the next 5-10 years:

- Obsolete GE "pushmatic" panels should be retrofitted with modern equivalent panels - $15,000.00.
- Fire alarm bells should be replaced with Audio/Visual signaling devices - $3,000.00.

In the next 10-15 years:

- MPE recommends replacing emergency remote heads with LEDs - $3,000.00.
- MPE recommends replacing EXIT signs with contemporary green running man style - $3,000.00.

Appendix E provides a breakdown of the condition of the Electrical Systems of the building.

3.0 CONCLUSION

Overall, the building is in fair condition with some repairs, replacements, and monitoring required. The summary of the costs for all the disciplines is shown below.

0-5 Years: **$434,000.00**
Structural: $362,000.00
Mechanical: $12,000.00
Electrical: $60,000.00

5-10 Years: **$284,000.00**
Structural: $110,000.00
Mechanical: $156,000.00
Electrical: $18,000.00

10-15 Years: **$229,000.00**
Structural: $4,000.00
Mechanical: $219,000.00
Electrical: $6,000.00

TOTAL for the next 15 Years: **$947,000.00**

In the next 15 years, MPE estimates a total of $947,000.00 to be spent on maintenance and upgrades of the Immanuel Christian Elementary School building and systems.

— **Appendix |** Building Condition Assesment

APPENDIX A: General Site Conditions

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Site Conditions

Building: Immanuel Christian Elementary School

Site Conditions	Rating	Photo	Comments/Concerns	Estim. Cost
General Site Conditions				
Site landscaping.			No Comments (snow cover)	
Surface drainage conditions (i.e., drains away from building, signs of ponding).	P1		Grading around the east and south sides of the building is slope towards the building and appears to have caused settlement/heaving issues on the foundations. Regrading should be considered to avoid any further settlement/heaving.	$ 125,000.00
Evidence of sub-soil problems.			Soils becoming saturated from surface water likely infiltrating into the subsoils. This is caused by grading and drainage issues mentioned previously.	
Safety and security concerns due to site conditions.			No Comments	
Access/Roadways				
Vehicular and pedestrian access points (i.e., size, number, visibility, safety).	P2		Settlement at door aprons creates a tripping hazard when entering the building. Barrier free access is limited at more than one doorway due to this settlement. Replacing the apron would allow for better barrier free access at all doors.	$ 10,000.00
Paved pedestrian access			Asphalt appears to be in good condition. Raised edges are pulling away from building where grading has settled along the interior.	
Fire vehicle access.			No Comments	
Signage.			No Comments	
Parking Lots and Sidewalks				
Number of parking spaces for staff and visitors (including stalls for disabled persons).			No Comments	
Layout and safety of parking lots.	P3		Parking is near some utility boxes/poles, bollards would be recommended to prevent damage to utilities and make this area more noticeable.	$ 3,000.00
Surfacing and drainage of parking lots (note whether asphalt or gravel).			Parking lots appear to drain towards the alley.	
Overall Site Conditions & Estimated Costs				**$ 138,000.00**

— **Appendix |** Building Condition Assesment

Immanuel Christian School Condition Assessment
Immanuel Christian Elementary School

APPENDIX B: Building Exterior

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Building Exterior

Building: Immanuel Christian Elementary School

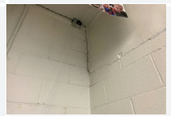
Building Exterior	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Overall Structure					
Floor structure and beams (wood floor)			All Sections	Settlement/heaving throughout the building have created some uneven floors. Continual monitoring is recommended to indicate continous movement.	
Wall structure and columns (i.e., signs of bending, cracking, settlement, voids, rust, stains).			All Sections	Cracking is evident throughout the the south end of the building likely due to settlement. Outer cracks should be caulked regularly to prevent water infiltration. No major structural concerns noted at this time but cracks should be monitored if they continue to worsen. Mortar joints should be repointed where cracking is present.	
Roof structure (i.e., signs of bending, cracking, voids, rust, stains).			All Sections	No Comments. Limited visibilty of roof structure.	
Foundation			All Sections	Cracking of walls and floors throughout the building make it appear that the foundations are shifting slightly. This is likely due to the poor water drainage of the building and subsoils are likely to be saturated during wet seasons.	
Roofing and Skylights					
(Identify the availability of an up-to-date inspection report or roofing program. Note if roof sections are of different ages and/or in varying states of repair.)					
Assess and rate roof conditions and estimate costs for required improvements (i.e., covering materials, membrane, insulation, other components).	P1		All Sections	Newer portions of roof appear to be in good condition. The older roof sections have signs that previous leaks have occurred. Re-roofing the older sections would be recommended in the near future as the roof appears that it has met or exceeded its intended life cycle.	$ 220,000.00
Roof accessories (metal flashing).			All Sections	Appears to be in good condition	

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Building Exterior

Building: Immanuel Christian Elementary School

Building Exterior	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Exterior Walls/Building Envelope					
Exterior wall finishes (i.e., signs of deterioration, cracks, brick spalling, efflorescence, water stains).			All Sections	Exterior wall finishes are cracked in several places due to building settlement. Cracks should be caulked and mortar joinst should be repointed to prevent water infiltration and propagation of cracks.	
Fascia and soffits (i.e., signs of looseness, stains, rust, peeling paint).			All Sections	No Comments	
Building envelope (i.e., evidence of air infiltration/ exfiltration through the exterior wall or ice build up on wall, eaves, canopy).			All Sections	Fasteners from roof application have caused thermal bridging in the roof insulation. This is not a major concern, although during the next roof replacement adhesives would be recommended instead of mechanical fasteners to prevent energy losses. Older sections of roof likely need replacing as it is likely near the end of its life expectancy and signs of patching was observed. A thermal scan could be performed to indicated if any leaks have occured.	
Interface of roof drainage and ground drainage systems.			All Sections	Drainage on the east portion of the building are overland drainage and should be directed farther away from the building.	
Inside faces of exterior walls (i.e., signs of cracks, water stains, dust spots).			All Sections	Cracks are evident throughout the building. Continuous monitoring of these cracks is advised to see if they are worsening.	

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Building Exterior

Building: Immanuel Christian Elementary School

Building Exterior	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Exterior Doors and Windows					
Doors (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	P2	 	All Sections	Doors and doorframes are rubbing in several places. Several doors have been shaved down, staff noted seasonal shifts in the doors have made it it difficult to maintain proper service of doors. Door alignments would be recommended to allow doors to open and close properly. This will also help weather stripping to work propely on all sides and prevent excessive energy losses.	$ 12,000.00
Windows	P3		All Sections	Skylight window above gym has cracked. Window should be replaced to limit any energy losses.	$ 1,000.00
Window accessories			All Sections	Windows and caulking apper to be in fair condition. Caulking is considered a general maintenance item and should be refinished regularly.	
Building envelope (i.e., signs of heavy condensation on doors or windows).			All Sections	No Comments further than what has previously been stated.	
Overall Bldg. Exterior Condition & Estim. Costs					**$ 233,000.00**

— **Appendix |** Building Condition Assesment

Immanuel Christian School Condition Assessment
Immanuel Christian Elementary School

APPENDIX C: Building Interior

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Building Interior

Building: Immanuel Christian Secondary School

Building Interior - Overall Conditions	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Interior Structure					
Interior walls and partitions (i.e., signs of cracks, spalling, paint peeling).			All Sections	Interior walls have occasional cracks due to settlement. Not a major structural concern.	
Floors (i.e., signs of cracks, heaving, settlement).			All Sections	Settlement/heaving throughout the building have created some uneven floors.	
Materials and Finishes					
Floor materials and finishes.	P2		All Sections	Floor finished have been chipped off or damaged due to building movement. Most of the tiles in these floors are asbestos containing materials (ACM)and should be replaced with that in mind, especially if chipping continues to worsen. Abatement of ACMs and replacement would be recommended in these areas.	$ 100,000.00
Wall materials and finishes.			All Sections	Occasional cracks throughout, repainting or caulking can help reduce the appearance of cracks.	
Ceiling materials and finishes.			All Sections	No comments	
Interior doors and hardware.			All Sections	No comments	
Millwork			All Sections	No comments	
Washroom materials and finishes.			All Sections	No comments	

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Building Interior

Building: Immanuel Christian Secondary School

Building Interior - Overall Conditions	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Health and Safety Concerns — Intent is to identify renovations considered necessary to meet applicable codes, primarily due to safety concerns. Basis of evaluation should be an up-to-date inspection report from the authority having jurisdiction together with direct observations as appropriate. Evaluator should note if in his opinion a comprehensive code evaluation is required.					
Building construction type - combustible or non-combustible, sprinklered or non-sprinklered.			All Sections	Combustible and non-combustible, non sprinklered	
Fire separations (i.e., between buildings, wings, zones if non-sprinklered).			All Sections	No comments	
Fire resistance rating of materials (i.e., corridor walls and doors).			All Sections	No comments	
Exiting distances and access to exits.			All Sections	Sufficient	
Availability of hazardous materials audit (i.e., evidence of safety concerns with respect to asbestos, PCB's, chemicals).	P1		All sections	No hazardous materials report was provided, given the age of the building one would be recommended to be aware of the hazards.	$ 5,000.00
Other health and safety concerns (i.e., evidence of excessive noise conditions, air quality problems)			All Sections	Asbestos containing tiles that are breaking up.	
Overall Bldg. Interior Condition & Estim. Costs					**$ 105,000.00**

4/22/2022 2

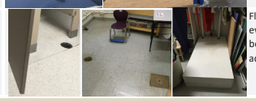
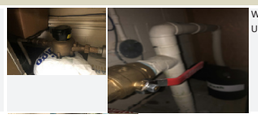
APPENDIX D: Mechanical Systems

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Elementary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Mechanical Site Services				
Exterior plumbing systems (i.e., irrigation systems, hose bibs).	P3		Roof downspouts are in fair condition. An upgrade is not expected to be required for the next 10-15 years.	
Interior drainage (ie. Sumps, floor drains)	P2		Floor drains are in poor condition. The pipe leaving the school has been evaluated with a video which revealed a poor system. An upgrade may be required in the next 5-10 years ($50,000.00). MPE recommends adding sump monitoring ($1,000.00).	$ 51,000.00
Fire Suppression Systems				
Fire suppression systems (i.e., pumps, sprinklers, piping, reservoirs, hoses, stand pipes, CO2 systems).	P3		Fire hoses by gym are in fair condition. Upgrade not expected for the next 10-15 years. This may be removed if confirmed by AHJ.	
Hand extinguishers, blankets and showers (i.e., in CTS areas).	P4		Fire extinguishers are in excellent condition and were installed on August 17, 2022. Upgrade not expected for the next 25 years.	
Water Supply and Plumbing Systems				
Domestic water supply (i.e., pressure, volume, quality - note whether municipal or well supply).	P3		Water Meter and Service in Admin. 104 are in fair working condition. Upgrade not expected for the next 10-15.	

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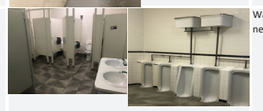
Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Elementary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Piping and fittings.	P3		Piping and supports are in fair condition. Upgrade not expected for the next 10-15 years.	
Plumbing fixtures (i.e., toilets, urinals, sinks)	P3		Washroom fixtures are in fair condition. Upgrade not expected for the next 10-15 years.	
Domestic hot water system (i.e., heater, storage tanks, failure alarms, pressure, volume, recirculation).	P5		Hot water tank in Mechanical room 1M17 is in excellent condition. Last upgraded on June 23, 2015, with heat floor pump added to system. Upgrade not expected for the next 15-20 years.	

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Elementary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Heating Systems				
Heating capacity and reliability (including backup capacity).	P3		The gas furnaces in Mechanical room 1M17 are in fair condition. The 3 American Standard furnaces were upgraded in 2006, 2007, and 2008, respectively, and are not expected to need an upgrade for another 10-15 years ($10,000.00 each). The Lennox furnace in the mechanical room was upgraded in the year 2000 and may need an upgrade in the next 2-5 years ($10,000.00).	$ 40,000.00
Heating in classrooms.	P3		Shelve-a-duct furnace system in classroom are in fair condition. The furnaces in rooms 123, 124, 114 were installed in 2008 and are not expected to require an upgrade for the next 10-15 years ($15,000.00 each). The furnaces in rooms 122, 120, 112, 160, 162, 164, 166, were installed in 2007 and are not expected to require an upgrade for the next 10-15 years ($15,000.00 each). The furnaces in rooms 110 and 115, were installed in 2005 and 2006, respectively and are not expected to require an upgrade for the next 10-15 years ($15,000.00 each).	$ 180,000.00
Old furnaces in classrooms.	P1		Plenums for furnaces to be further investigated. The furnace in room 126 was installed in 1995 and needs an upgrade ($15,000.00 each). The furnaces in rooms 170, 172, 176, 177, 175, 173 were installed in 1997 and needs an upgrade ($15,000.00 each). For immediate upgrades, costs are more for direct replacement. Other options are available but will have higher costs.	$ 105,000.00
Fresh air for combustion and condition of the combustion chimney.	P3		Fresh air intake and combustion exhaust in Mechanical room 1M17 are in fair condition. Upgrade is not expected for the next 10-15 years.	
Heating distribution systems (i.e., piping, ductwork) and associated components (i.e., diffusers, radiators).	P3		Supply diffusers in ceiling are in fair condition. MPE recommends that the washroom diffusers are increased when upgraded.	

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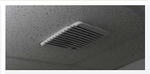
Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Elementary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Below grade ductwork.	P2		The ducts below grade are suspect and should be further investigated in the next 1-2 years.	$ 2,000.00
Zone/unit heaters and controls.	P4	 	Ceiling mounted unit heaters in fair condition and are not expected to need an upgrade for the next 10-15 years.	
Natural Gas Service	P4	 	Outdoor natural gas meter and natural gas line in Mechanical room 1M17 in good condition and are not expected to need an upgrade in the next 10-15 years.	
Ventilation Systems				
Exhaust systems capacity and condition.	P3		Exhaust vents are in fair condition and are recommended to be upgraded when washrooms are upgraded. 9 exhaust fans are to are to be replaced.	$ 9,000.00
Overall Mech Systems Condition & Estim. Costs				**$ 387,000.00**

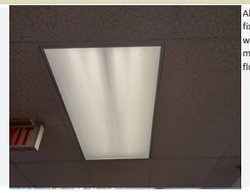
Immanuel Christian School Condition Assessment
Immanuel Christian Elementary School

APPENDIX E: Electrical Systems

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Electrical Systems

Building: Immanuel Christian Elementary School

Electrical Systems	Rating	Photo	Description/Condition	Estim. Cost
Electrical Site Services				
Main Service: Primary service capacity and reliablity (i.e. access, location, components, installation, bus sizes - note whether OH or UG).	P3		Existing Service is located on the Main level adjacent to the gymnasium. The main means of disconnect has been upgraded since the construction of the school. The service appears to be original to the building and is a 400A, 120/240V service. The utility feed is Overhead single-phase connected to a shared transformer. This single phase type service would make adding motor loads such as condensers and AHU's difficult. In previous MPE load demand evaluations, it was found that the school was operating within the parameters of the 400A service. However, if there were to be any building expansion, or addition of mechanical loads such as air conditioning, a service upgrade would be required.	
Distribution Panels: Panels and wireways capacity and condition	P2		There are 4 panels original panels throughout the school that are of the GE "pushmatic" type. These panels have been obsolete for several decades. Given their advanced age, the likelihood of a failure is fairly high. There will not be any replacement parts available for these panels. There are 5 panels throughout the school that are the Federal Pioneer Electric "FPE" type. These panels are now obsolete and replacement parts have become increasingly difficult to obtain. MPE recommends prioritizing the replacement of the "pushmatic" panels. After this has been completed, the FPE panels should then be replaced as well.	$15,000 (replace pushmatic) $20,000 (replace FPE)
Interior lighting systems and components (i.e., illumination levels, conditons, controls)	P3		All interior hallway, office and classroom lights are T8 fluorescent fixtures, with the exception of the fixtures in the administration offices, which are LED's. Retrofit LED's have proven to be cost effective in maintenance and power savings. MPE recommends replacing all fluorescent fixtures with LED fixtures.	$ 50,000.00

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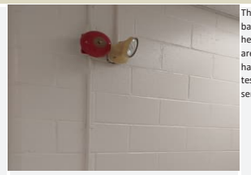
Date: April 2022

Facility Evaluation Form
Electrical Systems

Building: Immanuel Christian Elementary School

Electrical Systems	Rating	Photo	Description/Condition	Estim. Cost
Exterior lighting systems and components (i.e., illumination levels, conditons, controls)	P3		Several LED lights have been added around the perimeter of the building recently. These fixtures should be adequate throughout their lifespan, generally 10-15 years	
Life Safety Systems				
Emergency lighting systems (i.e., safety concerns, condition).	P3		The emergency lighting system throughout the school is provided by battery packs powering attached lighting heads and remotely located heads. The majority of these lights are of the incandescent type which are in the process of being phased out for LED fixtures. The LED fixtures have greater reliability and lifespan, requiring less servicing during testing. MPE recommends that as incandescent heads require servicing, they are replaced with LED heads.	$ 3,000.00
Exit lighting and signage (i.e., safety concerns, condition).	P3		All exit signs throughout the school were in the proper location and in good working condition. They are of the older "red exit" style which is being phased out. The cost of obtaining replacement fixtures of this type have been increasing yearly to promote a change to the "green running-man" style. A change to the new style would need to be whole as mixed emergency signage is not permitted under building code. MPE recommends leaving the existing system as is until such a time that replacement parts are made completely unavailable.	$ 5,000.00

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Date: April 2022

Facility Evaluation Form
Electrical Systems

Building: Immanuel Christian Elementary School

Electrical Systems	Rating	Photo	Description/Condition	Estim. Cost
Fire And smoke alarm systems (i.e., safety concerns, up-to-date technology, regularly tested).	P3		The Fire Alarm Control Panel is an antiquated notifier type. The system is a class B, non-addressable, conventional system. Many schools have been constructed with or switched over to a class A, addressable system. However, the Class B system currently installed is functional and does not need to be replaced. The Fire alarm control Panel has exceeded its service life and should be replaced.	$ 10,000.00
Fire And smoke alarm systems (i.e., safety concerns, up-to-date technology, regularly tested).	P3		The Fire alarm initiating devices throughout the building are of the non-addressable, class B type. They have been maintained and verified yearly. The were no locations in which a detection device is required that were lacking a device. The signaling devices are of the audible bell type with no visual alarm. MPE recommends replacing the existing bells with an audio/visual type alarm during the next fire alarm verification	$ 5,000.00

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Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Electrical Systems

Building: Immanuel Christian Elementary School

Electrical Systems	Rating	Photo	Description/Condition	Estim. Cost	
Network and Communication Systems					
Internet Network Infrastructure	P3		A fiber line has been run in to a main data switch. The bandwidth is adequate for the needs of the school at this time. There are several available ports for expansion as needs change throughout the school. Several of the older data lines were noted to be Cat 5, with the newer lines being Cat 6. Cat 5 cable may prove inadequate as technology evolves and bandwidth demands increase. The system does not require upgrading at this time, but ICS should be made aware that some of the lines may not support high data demands.		
Overall Electrical Systems Condition & Estim. Costs				**$ 73,000.00**	

— **Appendix |** Building Condition Assesment

Suite 300, 714-5th Avenue South
Lethbridge, AB T1J 0V1
Phone: 403-329-3442
Fax: 403-329-9354

Immanuel Christian Secondary School – Society Office
802 6 Avenue North
Lethbridge, Alberta
T1H 0S1

January 10, 2023
File: N:\1151\003-00\R01R1

Attention: Jason Ferrie
Society Business Manager

Dear Mr. Ferrie:

Re: Immanuel Christian Secondary School Condition Assessment

MPE Engineering Ltd. is pleased to submit this Report for the Immanuel Christian Secondary School condition assessment.

We appreciate the opportunity to provide our services for this project. Should you have any questions or require additional information, please contact the undersigned at (403) 317-3645 or pgoertzen@mpe.ca.

Yours truly,

MPE ENGINEERING LTD.

Peter Goertzen, P.Eng., LEED A.P.
Electrical/Mechanical Engineer

Enclosure

CORPORATE AUTHORIZATION

This report has been prepared by MPE Engineering Ltd. under authorization of the Society Office of Immanuel Christian Schools. The material in this report represents the best judgment of MPE Engineering Ltd. given the available information. Any use that a third party makes of this report, or reliance on or decisions made based upon it is the responsibility of the third party. MPE Engineering Ltd. accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions taken based upon this report.

Should any questions arise regarding content of this report, please contact the undersigned.

MPE ENGINEERING LTD.

Professional Stamp

PROFESSIONAL ENGINEER ALBERTA
PETER GOERTZEN
ID 68504
January 10, 2023

PERMIT TO PRACTICE
MPE E
Signature
APEGA ID #68504
Date January 10, 2023
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Professional Engineer, P.Eng.

Professional Seal

Corporate Permit

— **Appendix |** Building Condition Assesment

1.0 INTRODUCTION

MPE Engineering Ltd. (MPE) performed site visits, Craig Ambler (Civil/Structural/Architectural), Ife Oyedotun and Peter Goertzen (Mechanical), and Jon Danielson (Electrical), with Jason Ferrie of the Society Office in February 2022 to assess the Immanuel Christian Secondary School (ICSS) infrastructure located at 802 6th Avenue North in Lethbridge, Alberta.

The buildings were reviewed based on site, architectural, structural, mechanical, and electrical components. The detailed results of the assessments are in Section 2.0 of this report. The building included in this assessment included the main ICSS building.

1.1 Methodology

The following was evaluated for each building:

- Building Envelope:
  - Roof, Skylights
  - Windows, doors, exterior walls
- Building Interior – Overall Condition
- Mechanical Heating and Ventilation Equipment (including equipment owned by Immanuel Christian School)
- Plumbing systems and fixtures
- Electrical Systems (main switchgears and distribution panels)
- Irrigation

All accessible areas within the buildings were reviewed. Any deficiencies, repairs, and upgrades are noted within the assessment to ensure that the life expectancy of the buildings can be achieved or prolonged, as well as to maintain a safe environment for occupants and improve building efficiencies. Descriptive assessments of each building are provided in the following sections.

MPE evaluated each infrastructure system individually using the risk matrix provided below. This matrix uses condition and importance factors to rank each infrastructure need. MPE developed a work plan for each infrastructure system based on these priorities.

Cost estimates of the deficiencies, repairs and upgrades are also provided in this report. Please note that the estimations are high-level estimates, valued to this year. Cost varies significantly depending on the size of the scope, labour availability in the area, and inflation rate. Combining several projects with a similar scope that utilizes a single Contractor will minimize the cost of the overall project.

		Consequence/Impact			
		1 – Low	2 – Moderate	3 – High	4 – Intolerable
Likelihood	1 – Improbable	P3	P3	P2	P2
	2 – Possible	P3	P2	P2	P2
	3 – Likely	P2	P2	P2	P1
	4 – Almost Certain	P2	P2	P1	P1

— **Appendix |** Building Condition Assesment

2.0 BUILDING CONDITION

2.1.1 Site Condition

The overall site condition is good.

General observations:

- Parking lots appears to drain well significant evidence of ponding was not noticed in the walkthrough.
- Minimal parking is available due to the building placement on the lot. Parking blocks appear to be shifted which can be a hazard when parking because of misalignment.
- Pedestrian sidewalks are present along the main entrances providing good access to the building. One egress point has a non-building code conforming landing as stated in the table.
- The irrigation box on the Northeast corner of the building is open and should be closed to limit any pest infestation or vandalism.
- Landscape areas appear well maintained although it was difficult to assess due to snow cover.

Recommendations:

In the next 0-5 Years:

- MPE recommends adding the landing to the one egress point west of the main entrance - $6,000.00.
- MPE recommends adding a lid or cover to the irrigation box to deter vandals - $1,000.00.

In the next 5-10 Years:

- None

In the next 10-15 Years:

- None

Appendix A provides a breakdown of the General Site Condition.

2.1.2 Building Exterior

The overall building exterior is in good condition.

General observations:

- Roofing was difficult to assess due to snow cover. Roof membrane had limited bubbling and alligator cracking in some locations on the roof. Roof drain strainers had been knocked off the drains which can cause some clogging of drains. A thermal scan on the roof membrane could be performed to indicate if there are any issues/leaks in the roof membrane.
- Water infiltration was observed in the boiler room causing damage to the drywall and finished in that area. Infiltration appears to be due to a roof/wall joint leak.
- Occasional cracks were noted in the construction and/or mortar joints. Block walls had peeling paint in some locations. These exterior walls should be repaired regularly to prevent water infiltration and is considered a general maintenance item.
- Foundation walls around the exterior had some honeycombing from original construction. Occasional cracks were also observed but are not a structural concern at this time as there are no signs of rebar corrosion.
- Doors throughout show some signs of settlement which are common for a building of this age and are not a concern. Repainting and realigning doors is recommended to extend the life of the doors.
- Caulking around doors and windows should regularly be replaced as a general maintenance item.
- Drainage pipe connection show deteriorating wood and fasteners that should eventually be replaced.

Recommendations:

In the next 0-5 Years:

- MPE recommends repairing water leaks in the boiler room that is exposing some of the insulating material and soaking drywall - $5,000.00
- MPE recommends exterior block wall cracking, mortar joint repairs and repainting after repairs - $3,000.00.
- MPE recommends repairing/replacing roof drain screens - $2,000.00.

In the next 5-10 Years:

- MPE recommends roof replacement of aging roof systems -$180,000.00.
- MPE recommends exterior door adjustments and repainting - $6,000.00.

In the next 10-15 Years:

- MPE recommends repainting of metal siding where it is showing signs of aging - $30,000.00.
- MPE recommends repairing drainage pipe connections $1,000.00.

Appendix B provides a breakdown of the condition of the Building Exterior.

— **Appendix |** Building Condition Assesment

2.1.3 Building Interior – Overall Conditions

The overall Building Interior is good.

General observations:

- Small gym floor has heaving evidence throughout the floor. A previous observation had commenced but does not appear to be complete. Further observation may be required.
- The large gym floor has an uneven surface due to being in a construction joint. This is not a concern with the structure as some settlement or heaving can be expected with the new construction. This does cause some concern with the performance of the floor as it is not entirely flat.
- A storage space adjacent to the stage in the small gym should not be used as a storage space as the plywood is not capable to support storage loads without additional members being added.
- Hazardous material concerns were noted in the tables and should be abated if possible.
- Walls, floor and ceiling finishes show signs of wear and tear and occasional damage, but these are only cosmetic concerns at this time.

Recommendations:

In the next 0-5 Years:

- MPE recommends having hazardous materials testing and if necessary, abatement in areas indicated in the - $5,000.00.
- Storage space at both ends of stage, needs to be better supported - $1,000.00.

In the next 5-10 Years:

- MPE recommends mall gym floor repairs, a solution was provided in a previous review, it was recommended to notch joists to alleviate the heaving. Joist repairs- $6,000.00.
- Repair/replacement of cracked floor finishes. The flooring should be included in the hazardous materials assessment - $6,000.00.

In the next 10-15 Years:

- MPE recommends interior door alignments/repainting - $4,000.00.
- MPE recommends cosmetic damage repairs to interior wall finishes - $5,000.00.

Appendix C provides a breakdown of the condition of the Building Interior.

2.1.4 Mechanical Systems

The overall site condition is fair as there were no immediate issues with the system causing a safety or functional hazard.

General observations:

- Municipal water supply piped with copper and in fair condition with separate water meters for domestic and irrigation.
- The site service, sewer and storm lines leaving the school are suspect due to aging.
- Some supports made from galvanized steel are severely corroded and need to be replaced with different material.
- Asbestos in the Maintenance Shop to be abated before the next upgrade.
- Piping and conduit penetrations in basement are not all fire caulked.
- Domestic water heaters are in excellent condition. Aluminum cable sheath on domestic water heaters is at risk of corroding in contact with copper pipe for water heater.
- Recirculating pumps are in fair condition.
- Floor heat pumps by Grundfos are no longer in operation.
- Air handling units are in fair condition.
- RTUs are in fair condition.
- Boilers and venting are in fair condition.
- The exhaust fans for the washrooms are aging.
- Kitchen is missing exhaust hoods.

Recommendations:

In the next 0-5 Years:

- Corroded supports made from galvanized steel are to be replaced and asbestos to be abated before next upgrade – $3,000.00.
- Piping and conduit penetrations in basement and around school to be fire caulked – $2,500.00.
- Aluminum cable sheath in contact with copper pipe for DWHs are to be rerouted to avoid corroding – $1,000.00.
- Install temperature and time controls on recirculating pumps to prevent wearing and save energy – $1,000.00.
- MPE recommends the settings of the Grundfos floor heat pumps to be reviewed to make system operational when external temperatures are below -5 degrees Celsius – N/A.
- MPE recommends the ventilation in the kitchen to be investigated for adequacy and no foods containing grease laden vapours are to be cooked to avoid cooking fumes and smoke. Installation of exhaust hoods is recommended – $1,500.00.

— **Appendix |** Building Condition Assesment

In the next 5-10 Years:

- MPE recommends a video evaluation before a full rehabilitation of site service, sewer and storm lines leaving school. – $50,000.00.
- Check pipe supports for pinhole leaks and add leak sensor to trigger BMS if pump fails – $1,000.00.
- MPE recommends all the older exhaust fans for washrooms to be replaced as the washrooms are upgraded – $5,000.00.
- Air handling units should be upgraded – $260,000.00.

In the next 10-15 Years:

- MPE recommends ensuring adequate outdoor and roof drains are present and upgrading site drainage - $70,000.00.
- MPE recommends abatement of asbestos coating of sanitary and storm lines - $90,000.00.
- MPE recommends the piping on RTUs to be painted and checked for leaks - $1,000.00.
- MPE expects boilers in the boiler room to be upgraded - $100,000.00.
- MPE recommends the combustion air intakes to be monitored on exterior for leaks and upgraded – $10,000.00.
- The radiant cabinets may need an upgrade – $600,000.00.
- Ceiling mounted unit heater may need an upgrade - $2,500.00.
- Roof top unit should be upgraded - $7,000.00.
- MPE recommends the Exhaust hoods in the outdoor education room to be replaced - $3,000.00

In the next 15-20 Years:

- The domestic water supply may need a replacement in next – $40,000.00.
- Washroom fixtures may need an upgrade - $200,000.00.
- A/C unit should be upgraded – $3,000.00.

In the next 20 years:

- The water treatment system for boiler room may need an upgrade - $30,000.00.

Appendix D provides a breakdown of the condition of the Mechanical Systems of the building.

2.1.5 Electrical System

The Immanuel Christian Secondary School electrical system is in fair condition throughout the building as a whole. No states of disrepair were observed that would cause any sort of electrical hazard.

General observations:

- Main Service appears in good condition but is past the recommended service life.
- Branch circuit panels are functional. These panels are manufactured by FPE.
- Hallway/Classroom/Office lighting has been updated.
- Gymnasium lighting is T5 fixtures.
- Emergency lighting system is functional. Most emergency lights are incandescent.
- Exit signs are of older “EXIT” style.
- Fire Alarm Control Panel (FACP) is in good condition.
- Fire alarm initiating and signaling devices are in good condition.
- Telephone system is original to the building and functional.
- Data system is functional and adequate.

Recommendations:

In the next 0-5 Years:

- MPE recommends replacing the main service as it is approaching the point of where a failure is more probable. The age of the equipment makes finding replacement parts in the event of a failure very difficult. - $50,000.00.
- MPE recommends replacing the gymnasium fixtures with LED equivalent - $25,000.00.

In the next 5-10 years:

- MPE recommends replacing all FPE circuit panels with contemporary panels using easily acquired breakers - $25,000.00.

In the next 10-15 years:

- MPE recommends replacing incandescent remote heads with LED equivalent - $5,000.00.
- MPE recommends replacing “EXIT” signs with contemporary green running man style - $3,000.00.

Appendix E provides a breakdown of the condition of the Electrical Systems of the building.

3.0 CONCLUSION

Overall, the building is in fair condition with some repairs, replacements, and monitoring required. The summary of the costs for all the disciplines is shown below.

0-5 Years:	**$107,000.00**
Structural:	$23,000.00
Mechanical:	$9,000.00
Electrical:	$75,000.00
5-10 Years:	**$539,000.00**
Structural:	$198,000.00
Mechanical:	$316,000.00
Electrical:	$25,000.00
10-15 Years:	**$931,500.00**
Structural:	$40,000.00
Mechanical:	$883,500.00
Electrical:	$8,000.00

TOTAL for the next 15 Years: **$1,577,500.00**

In the next 15 years, MPE estimates a total of $1,577,500.00 to be spent on maintenance and upgrades of the Immanuel Christian Secondary School building and systems.

Beyond this total for the next 15 years, some mechanical components are expected to need to be replaced in the next 15-25 years with a total cost of $273,000.00. However, cost estimates beyond 15 years are beyond the scope of this assessment and would need further inspection for a more accurate estimate.

Immanuel Christian School Condition Assessment
Immanuel Christian Secondary School

APPENDIX A: General Site Conditions

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Site Conditions

Building: Immanuel Christian Secondary School

Site Conditions	Rating	Photo	Comments/Concerns	Estim. Cost
General Site Conditions				
Overall site size.			No Comments	
Site landscaping.	P2		Irrigation box is left exposed and should be covered/locked to avoid tampering.	$ 1,000.00
Surface drainage conditions (i.e., drains away from building, signs of ponding).			Surface drainage appeared to be affective. No ponding evident.	
Evidence of sub-soil problems.			No Comments	
Safety and security concerns due to site conditions.			No Comments	
Access/Roadways				
Vehicular and pedestrian access points (i.e., size, number, visibility, safety).	P1		Landing on front of building does not provide safe fire egress. Current building code states landings should be at least 900mm away from building and no step down out of the door.	$ 6,000.00
Surfacing of on-site road network (note whether asphalt or gravel).			Gravel throughout, adequate grading.	
Fire vehicle access.			Appears to be sufficient around building	
Signage.			No Comments	
Parking Lots and Sidewalks				
Number of parking spaces for staff and visitors (including stalls for disabled persons).			Limited parking adjacent to building due to building orientation.	
Layout and safety of parking lots.			Parking lots is small and parking curbs are not consistently placed which could lead to vehicle damage from inconsistent alignment. Can be considered a maintennacne item if curbs continue to be displaced.	
Surfacing and drainage of parking lots (note whether asphalt or gravel).			Gravel parking lots appear to have sufficient slope towards road/storm drains.	
Overall Site Conditions & Estimated Costs				**$ 7,000.00**

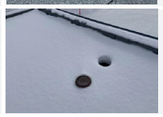
APPENDIX B: Building Exterior

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Building Exterior

Building: Immanuel Christian Secondary School

Building Exterior	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Overall Structure					
Floor structure and beams (wood floor)	P2		All Sections	No comments	
Wall structure and columns (i.e., signs of bending, cracking, settlement, voids, rust, stains).	P1		All Sections	Occasional cracking thoughout of the walls. Likely due to settlement and pour consolidation of concrete which not a concern structurally but filling the holes is recommended so pests can not build homes in these holes.	$ 2,000.00
Roof structure (i.e., signs of bending, cracking, voids, rust, stains).			All Sections	No Comments	
Foundation	P1		All Sections	Occasional honeycombing and cracking on the exteriors. Likely due to settlement and pour consolidation of concrete which not a concern structurally but filling the holes/voids is recommended so pests and water can not infiltrate these holes.	$ 1,000.00
Roofing and Skylights ***(identify the availability of an up-to-date inspection report or roofing program. Note if roof sections are of different ages and/or in varying states of repair.)***					
Assess and rate roof conditions and estimate costs for required improvements (i.e., covering materials, membrane, insulation, other components).	P2		All Sections	Membrane bubbling was noted in some locations. Alligator cracking shows that roofing is nearing its life (approximately 2-5 years remaining). No leaks were noted. Debris collecting in corners of roof which can reduce the life expectancy of the membrane. Debris removal would be recommended. Interface between main building and boiler room was leaking water. Snow made it difficult to assess the roof on this section. Roofing replacement can be split into sections to reduce yearly capital costs.	$ 180,000.00
Roof accessories (metal flashing).	P1		All Sections	Many roof drain strainers were knocked off the drain, which can lead to debris entering the drains and cause reduced flow. Flashing was in good condition, some paint could be used to extend the life of some of the older flashing.	$ 2,000.00
Control of ice and snow falling from roof.			All Sections	Main entrance has snow/ice/water falling off west side onto a seating space (not likely used during the winter).	

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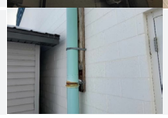
Date: April 2022

Facility Evaluation Form
Building Exterior

Building: Immanuel Christian Secondary School

Building Exterior	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Exterior Walls/Building Envelope					
Exterior wall finishes (i.e., signs of deterioration, cracks, brick spalling, efflorescence, water stains).			All Sections	Block mortar has occasional cracking, not a structural concern but may create water penetrations which can propagate cracking. Paint on blocks was showing sign of age and peeling in some locations. Cracks should be filled with silicone to prevent any water infiltration, this is considered a general maintenance item.	
Fascia and soffits (i.e., signs of looseness, stains, rust, peeling paint).	P3		All Sections	The metal siding is showing signs of aging in some locations. Repainting can extend the life of these products and give it an updated appearance but is not imperative at this time.	$ 30,000.00
Building envelope (i.e., evidence of air infiltration/ exfiltration through the exterior wall or ice build up on wall, eaves, canopy).	P1		All Sections	Boiler room has water entering it and has caused what appears to be mould coming into the area. Water leakage has damaged drywall. Leaks should be repaired and mould should be abated.	$ 5,000.00
Interface of roof drainage and ground drainage systems.	P3		All Sections	Drainage pipe on east side of building is attached to exposed wood. Wood is deteriorating and fasteners are rusting. This appears to be draining for an emergency scupper so replacement does not require immediate attention.	$ 1,000.00
Inside faces of exterior walls (i.e., signs of cracks, water stains, dust spots).			All Sections	Cracking in the mortar joints was noted in several locations Likely due to foundation settlement. Not a structural concern.	

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Building Exterior

Building: Immanuel Christian Secondary School

Building Exterior	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Exterior Doors and Windows					
Doors (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	P2		All Sections	Doors show some signs of settlement as doors occasionally rub on frames. Cracking was noted around some door frames. Several doors also had paint chipping off or peeling. These doors should be repainted and realigned in order to extend the life of them.	$ 6,000.00
Door accessories (hardware, weatherstripping, door sweep, closer).			All Sections	Caulking around doors showed occasional cracking. Caulking should be replaced regularly as a general maintenance item.	
Exit door hardware (i.e., safety and/or code concerns).			All Sections	No concerns noted.	
Windows			All Sections	Caulking around windows showed occasional cracking. Caulking should be replaced regularly as a general maintenance item.	
Window accessories			All Sections	No comments	
Building envelope (i.e., signs of heavy condensation on doors or windows).			All Sections	No concerns noted.	
Overall Bldg. Exterior Condition & Estim. Costs					**$ 227,000.00**

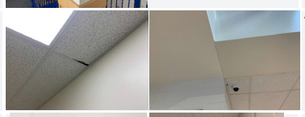
APPENDIX C: Building Interior

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
Date: April 2022

Facility Evaluation Form
Building Interior

Building: Immanuel Christian Secondary School

Building Interior - Overall Conditions	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Interior Structure					
Interior walls and partitions (i.e., signs of cracks, spalling, paint peeling).			All Sections	Occasional cracks, No structural concerns.	
Floor structure and beams (wood floor)	P2		All Sections	Grade beams apper to be heaving and have lifted the floor as indicated in a previous report.	$ 6,000.00
				Large gym had an expansion in 2003 and evidence of heaving in the floor has created an uneven surface along the line of the new construction. Not a structural concern but has caused non-level surface for gym users.	
Materials and Finishes					
Floor materials and finishes.	P2		All Sections	Cracking of floor tile in several locations was observed. Tile replacement may be required where cracking has created tripping hazard. Tile may be an asbestos containing material and should be tested before any removal/repairs take place.	$ 6,000.00
Wall materials and finishes.	P3		All Sections	Occasional cosmetic damage throughout.	$ 5,000.00
Ceiling materials and finishes.			All Sections	Some ceiling tiles have cosmetic damage in several locations but do not appear to be broken. Occasional drywall cracking in construction joints are expected	
Interior doors and hardware.	P3		All Sections	Cracking in the finishes around doors. Doors showed signs of settlement and were rubbing on the door frames. Door realignments are recommended to provide proper opening and closing of doors to minimize rubbing.	$ 4,000.00
Millwork			All Sections	No comments	

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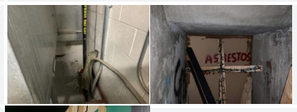
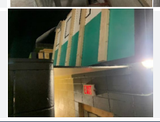
Date: April 2022

Facility Evaluation Form
Building Interior

Building: Immanuel Christian Secondary School

Building Interior - Overall Conditions	Rating	Photo	Bldg. Section	Description/Condition	Estim. Cost
Health and Safety Concerns --- ***Intent is to identify renovations considered necessary to meet applicable codes, primarily due to safety concerns. Basis of evaluation should be an up-to-date inspection report from the authority having jurisdiction together with direct observations as appropriate. Evaluator should note if in his opinion a comprehensive code evaluation is required.***					
Building construction type - combustible or non-combustible, sprinklered or non-sprinklered.			All Sections	Combined non combustible and combustible. Non Sprinklered	
Fire separations (i.e., between buildings, wings, zones if non-sprinklered).			All Sections	No comments	
Fire resistance rating of materials (i.e., corridor walls and doors).			All Sections	No comments	
Exiting distances and access to exits.			All Sections	Sufficient	
Availability of hazardous materials audit (i.e., evidence of safety concerns with respect to asbestos, PCB's, chemicals).	P1		All sections	Boiler room had vermiculite leaking out of the walls onto the floor. This is to be treated as an asbestos containing material and should be remediated and sealed up immediately to minimize any health hazards to building occupants. Testing was completed post walk through and it was determined that the material was not asbestos containing. Small gym had a location that possibly contains asbestos. This area should be blocked off to avoid disturbance.	$ 5,000.00
Other health and safety concerns (i.e., evidence of excessive noise conditions, air quality problems)	P1		All Sections	Storage spaces above stage stairs in small gym appear to be over loaded. There are no members supporting the large span of plywood being used as support. These spaces should not be used for storage until the area can be reinforced properly.	$ 1,000.00
Overall Bldg. Interior Condition & Estim. Costs					**$ 27,000.00**

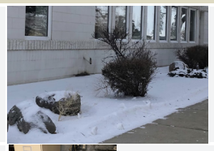
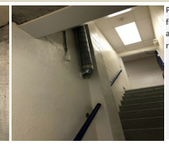
— **Appendix |** Building Condition Assesment

APPENDIX D: Mechanical Systems

Project No.: 1151-003-00
Date: January 2023

Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Secondary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Mechanical Site Services				
Site drainage systems (i.e., surface and underground systems, catch basins).	P3		Outdoor drains in fair condition. Ensure adequate roof drains are present. Upgrades not expected for the next 10-15 years.	$ 70,000.00
Interior drainage (ie. Sumps, floor drains)	P2		Floor sump in Maintenance Shop in fair condition. The site service , sewer and storm lines leaving the school have been evaluated with a video which revealed a poor system. An upgrade may be required in the next 5-10 years ($50,000.00). MPE recommends to check supports for pinhole leaks and add leak sensor in the next 5-10 years to trigger BMS if pump fails ($1,000.00).	$ 51,000.00
Fire Suppression Systems				
Fire rated partitions and penetrations.	P3	 	Piping and conduit penetrations in basement Storage 024E requires fire caulking. Wall penetrations through the wall in the Storage 001 area to be fire rated immediately as the door to Storage room is fire rated. Fire separations in general are fairly sufficient.	$ 2,500.00

— **Appendix |** Building Condition Assesment

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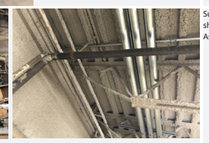
Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Secondary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Hand extinguishers, blankets and showers (i.e., in CTS areas).	P4		Fire extinguishers in proper locations and in good condition.	N/A
Water Supply and Plumbing Systems				
Domestic water supply (i.e., pressure, volume, quality - note whether municipal or well supply).	P4		Municipal water supply in fair condition with separate water meters for domestic and irrigation and piped with copper. The water service is assumed to be a 50 meters run of 8" pipe from the South alley to the basement Maintenance shop. The connection is expected to cost $25,000.00 and the pipe install is expected to be $300/m of 8" pipe. Upgrade not expected for the next 15-20 years.	$ 40,000.00
Pipe supports.	P2	 	Supports made from galvanized steel are severely corroded and should be replaced with different material on the next 2-5 years. Asbestos to be abated before next upgrade.	$ 3,000.00
Plumbing fixtures (i.e., toilets, urinals, sinks)	P3	  	New and existing washroom fixtures in fair condition. Upgrades not expected for the next 10-15 years	$ 200,000.00

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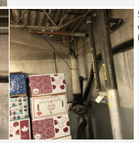
Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Secondary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Domestic hot water system (i.e., heater, storage tanks, failure alarms, pressure, volume, etc.).	P5		Domestic water heaters are Bradford White Model RG250S6N 50 gallon 45000 Btu/hr, and were installed on November 22nd, 2017. Domestic water heaters are in excellent condition and upgrades not expected for the next 20 years. Aluminum cable sheath in danger of corroding in contact with copper pipe for water heater and is to be immediately re-routed.	$ 1,000.00
Domestic hot water system - Recirculating Pumps.	P3		Recirculating pumps in fair condition and require temperature and time controls for economic operation and to prevent wearing of pipes as soon as possible.	$ 1,000.00
Sanitary and storm lines.	P3	 	Sanitary and storm lines in fair condition. Sanitary and storm drains on interior are cast iron with asbestos coating. Abatement required before upgrade in the next 10-15 years.	$ 90,000.00

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
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Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Secondary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Heating Systems				
Heating capacity and reliability (including backup capacity). Boiler system	P3		Boilers in boiler room are by RBI Water Heaters, Model 33D81500NASSS, and operating at 1,260,000 Btu/h with redundancy and in fair condition. Upgrades are not expected for the next 10-15 years.	$ 100,000.00
Fresh air for combustion and condition of the combustion chimney.	P3		Dampers on combustion air intakes. Exhaust hood for venting from boiler in fair condition. Combustion air intake requires monitoring on exterior for leaks. Upgrades not expected for the next 10-15 years.	$ 10,000.00
Treatment of water used in heating systems.	P5		Glycol tested 4 years ago. Water treatment system in good condition. Upgrade not expected for the next 20 years.	$ 30,000.00
Heating distribution systems (i.e., piping, ductwork) and associated components (i.e., diffusers, radiators).	P3		Radiant cabinets in fair condition. Upgrades not expected for the next 10-15 years.	$ 600,000.00

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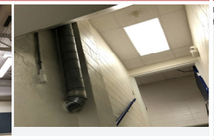
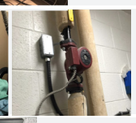
Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Secondary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Heating piping, valve and/or duct insulation.	P3	 	Insulation is primarily present on mains. No upgrades present or future are recommended.	N/A
Heating mixing boxes, dampers and linkages.	P3		All AHUs have external mixing dampers for fresh air and exhaust air, c/w Belimo dampers.	N/A
Heating distribution/circulation in larger spaces (i.e., user comfort, temperature of outside wall surfaces).	P3		BMS System is by Delta Controls c/w enteliWEB software and is working effectively.	N/A
Floor Heat Pumps	P3	 	Floor heat pumps by Grunfos are in fair condition but no longer in use. MPE recommends them to have settings reviewed to make this system operational at times when external temperatures are below -5 degrees Celcius.	N/A
Zone/unit heaters and controls.	P3		Ceiling mounted unit heater in hallway by exit in fair condition. Upgrades for unit heaters are not expected for the next 10-15 years.	$ 2,500.00

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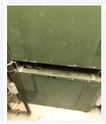
Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Secondary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Natural Gas Service	P3		Natural gas service in boiler room is operating at 5 PSI and vented to exterior and is in fair condition .	N/A
Ventilation Systems				
Roof top units.	P3		Roof top units are by Lennox, Model KGA072S4BH4Y, and in fair condition. MPE recommends that gas piping on RTUs are to be painted to prevent leaks ($1000). RTUs contain heating coils but no cooling. Upgrades not expected for the next 10-15 years ($7000).	$ 8,000.00
Air handling units	P3		Air handling units are Delhi Industries Inc., Model 9218 VIB HD, installed in 2003, and are in fair condition. AHUs contain heating coils and c/w F/A intake, but no cooling is included.	$ 260,000.00
AHU-1 (Resource Room)	P3		Air handling unit for Resource room in fair condition. Upgrade not required for the next 5-10 years.	Cost included above

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Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Secondary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
AHU-2 (Copy Room/Kitchen), AHU-4 (Front Entry)	P3		Air handling units for Copy room and Front Entry in fair condition. Upgrade not required for the next 5-10 years.	Cost included above
AHU-3 (Staff Room)	P3		Air handling unit with VFD for Staff room in fair condition. Upgrade not required for the next 5-10 years.	Cost included above
AHU-5 (Large Gym)	P3		Air handling unit for Large Gym in fair condition. Upgrade not required for the next 5-10 years.	Cost included above
AHU-6 (West Wing)	P3		Air handling unit for West Wing in fair condition. Upgrade not required for the next 5-10 years.	Cost included above
AHU-7 (Student Center)	P3		Air handling unit for Student Center in fair condition. Upgrade not required for the next 5-10 years.	Cost included above

— **Appendix |** Building Condition Assesment

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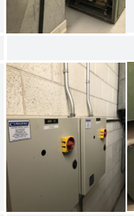
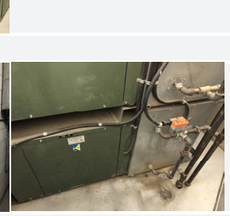
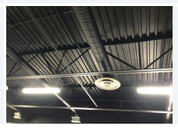
Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Secondary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
AHU-8 (Center Block Core)	P3		Air handling unit for Center Block in fair condition. Upgrade not required for the next 5-10 years.	Cost included above
AHU-9 (Small Gym)	P3		Air handling unit for Small Gym in fair condition. Upgrade not required for the next 5-10 years.	Cost included above
AHU-10 (Library), AHU-12 (Art Room)	P3	 	Air handling unit for Library and Art Room in fair condition. Upgrade not required for the next 5-10 years.	Cost included above
AHU-11 (Computer Room), AHU-13 (Music Room), AHU-17 (Classroom Blk 1st Floor), AHU-18 (Classroom Blk 2nd Floor)	P3		Air handling unit for Computer Room, Music Room, Classroom Blk 1st Floor, and Classroom Blk 2nd in fair condition. Upgrade not required for the next 5-10 years.	Cost included above
Air distribution system.	P3		Supply and return throughout building are sufficient.	N/A

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Facility Evaluation Form
Mechanical Systems

Building: Immanuel Christian Secondary School

Mechanical Systems	Rating	Photo	Description/Condition	Estim. Cost
Exhaust systems capacity and condition.	P3		Exhaust fan on roof is by Greenheck, Model CUBE-101HO-4-X, and is in fair condition. The Exhaust hoods in Outdoor Education room are in fair condition. Upgrades are not expected for the next 10-15 years ($3,000). MPE recommends all the older exhaust fans for washrooms to be replaced as the washrooms are upgraded in the next 5-10 years ($5,000.00).	$ 8,000.00
Exhaust systems capacity and condition.	P3		Kitchen missing exhaust hoods. Ventilation in kitchen to be investigated for adequacy. Use of this space should not involve any cooking of food with grease laden vapours to avoid issues with cooking fumes and smoke.	$ 1,500.00
Cooling Systems				
Cooling system capacity and condition (i.e., chillers, cooling towers, condensers).	P3	 	A/C units are by Duncane, Model AC10B48TA, and in fair condition. Upgrades not expected for the next 10-15 years.	$ 3,000.00
Overall Mech Systems Condition & Estim. Costs				**$ 1,481,500.00**

— **Appendix |** Building Condition Assesment

APPENDIX E: Electrical Systems

Project No.: 1151-003-00
Date: March 2022

Facility Evaluation Form
Electrical Systems

Building: Emmnauel Christian Secondary School

Electrical Systems	Rating	Photo	Description/Condition	Estim. Cost
Electrical Site Services				
Main Service: Primary service capacity and reliablity (i.e. access, location, components, installation, bus sizes - note whether OH or UG).	P2		Existing Service is located on the basement level in the meter room. The service appears to be original to the building and is a Federal Pioneer Electric (FPE), 1000A, 120/208V service. The equipment appears to be well maintained and in good working order, a typical life span of 40 to 50 years is reasonable for this equipment in the environment that it is currently being operated. FPE is no longer making equipment and purchasing components for repair or expansion has become increasingly difficult in recent years. Due to possible replacement parts and the size of this service, MPE suggest a planned replacement in 5-10 years.	
Distribution Panels: Panels and wireways capacity and condition	P3		The majority of distribution panels appear to be replacements since original school construction. Several panels are FPE panels which contain obsolete, discontinued breakers which have become increasingly difficult to obtain. As the panels reach the end of their 40-50 year service life, maintenance cost and frequency should be monitored and panels should be replaced with modern equipment that uses more easily obtained components.	
Lighting Systems				
Interior lighting systems and components (i.e., illumination levels, conditons, controls)	P3		All interior hallway, office and classroom lights have been retrofitted to LED panel fixtures. The lifespan of these fixtures can be up to 25 years and they should not require any more than maintenance servicing until then.	
Interior lighting systems and components				

— **Appendix |** Building Condition Assesment

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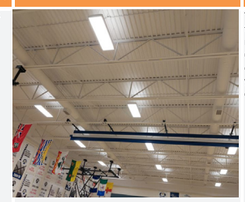
Date: March 2022

Facility Evaluation Form
Electrical Systems

Building: Emmnauel Christian Secondary School

Electrical Systems	Rating	Photo	Description/Condition	Estim. Cost
Interior lighting systems and components (i.e., illumination levels, conditons, controls)	P3		The larger gymnasium lighting is of the older style T5 high bay fixture type. This type have fixture has a shorter bulb lifespan requiring a lift to replace. Also, a LED fixture will use roughly 50-65% of the energy the existing T5 fixtures consume. The "break even" point of the fixture cost against energy savings is usually 4-6 years and MPE would recommend replacing the T5 fixtures with contemporary LED high bay fixtures.	
Life Safety Systems				
Emergency lighting systems (i.e., safety concerns, condition).	P3		The emergency lighting system throughout the school is provided by battery packs powering attached lighting heads and remotely located heads. The majority of these lights are of the incandescent type which are in the process of being phased out for LED fixtures. The LED fixtures have greater reliability and lifespan, requiring less servicing during testing. MPE recommends that as incandescent heads require servicing they are replaced with LED heads.	

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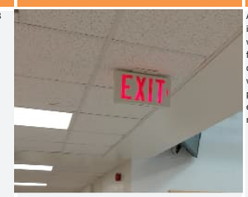
Facility Evaluation Form
Electrical Systems

Building: Emmnauel Christian Secondary School

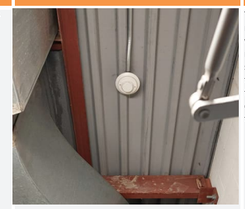
Electrical Systems	Rating	Photo	Description/Condition	Estim. Cost
Exit lighting and signage (i.e., safety concerns, condition).	P3		All exit signs throughout the school were in the proper location and in good working condition. They are of the older "red exit" style which is being phased out. The cost of obtaining replacement fixtures of this type have been increasing yearly to promote a change to the "green running-man" style. A change to the new style would need to be whole as mixed emergency signage is not permitted under building code. MPE recommends leaving the existing system as is until such a time that replacement parts are made completely unavailable.	
Fire And smoke alarm systems (i.e., safety concerns, up-to-date technology, regularly tested).	P3		The Fire Alarm Control Panel has been upgraded from the original system to an Edwards EST Panel. The system is a class B, non addressable, conventional system. Many schools have been constructed with or switched over to a class A, addressable system. However, the Class B system currently installed is functional and does not need to be replaced.	

— **Appendix |** Building Condition Assesment

Project No.: 1151-003-00
Date: March 2022

Facility Evaluation Form
Electrical Systems

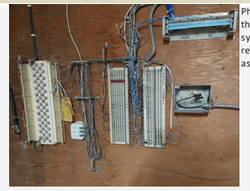
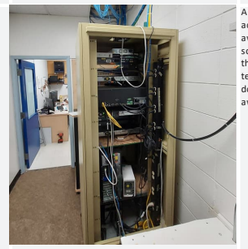
Building: Emmnauel Christian Secondary School

Electrical Systems	Rating	Photo	Description/Condition	Estim. Cost
Fire And smoke alarm systems (i.e., safety concerns, up-to-date technology, regularly tested).	P3		The Fire alarm initiating devices throughout the building are of the non addressable, class A type. They have been maintained and verified yearly. The were no locations in which a detection device is required that were lacking a device. Many of the heat detectors are starting to age and are missing front covers. These are of the fixed temperature type, meaning that they cannot be tested for function, as they will only activate once. The lifespan of these devices is 25 years +/-. MPE recommends replacing all fixed temperature devices with FT/ROR devices during verification.	

Project No.: 1151-003-00
Date: March 2022

Facility Evaluation Form
Electrical Systems

Building: Emmnauel Christian Secondary School

Electrical Systems	Rating	Photo	Description/Condition	Estim. Cost
Network and Communication Systems				
Telephone system and components (i.e., capacity, reliability, condition).	P3		Phone infrastructure is primarily original wiring in many parts of the school with changes be made as requirements demand. The system is functional. Until phone systems are fully phased out MPE recommends keeping the existing infrastructure operation as long as possible.	$ 4,000.00
Internet Network Infrastructure	P3		A fiber line has been run in to a main data switch. The bandwidth is adequate for the needs of the school at this time. There are several available ports for expansion as needs change throughout the school. Several of the older data lines were noted to be Cat 5, with the newer lines being Cat 6. Cat 5 cable may prove inadequate as technology evolves and bandwidth demands increase. The system does not require upgrading at this time, but ICS should be made aware that some of the lines may not support high data demands.	
Overal Electrical Systems Condition & Estim. Costs				**$ 4,000.00**

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