RECAPP Facility Evaluation Report

Calgary School District #19



Capitol Hill Elementary School B2565A Calgary

Report run on: February 23, 2010 10:22 AM

Calgary - Capitol Hill Elementary School (B2565A)

Facility Details		Evaluation Details		
Building Name:	Capitol Hill Elementary Scho	Evaluation Company:	Golder Associates Ltd.	
	2210 - 18 Street N. W.	Evaluation Date:	June 5 2009	
Location:	Calgary	Evaluator Name:	Brittney Sammons	
Building Id:	B2565A			
Gross Area (sq. m):	2,739.70			
Replacement Cost:	\$7,664,993			
Construction Year:	1950	Total Maintenand	ce Events Next 5 years:	\$1,793,950
General Summary:		5 year Facility Co	ondition Index (FCI):	23.40%

Capitol Hill Elementary School is a K-6 school with current enrollment of approximately 180 students. The school building is described as an inverted 'U' shape with the open end facing south. The original 1,931 m2 one storey building with a partial basement was constructed in 1953 and occupies the north end and the west wing of the building.

A 682 m2 1-storey addition was constructed in 1954 and occupies the east wing of the building. The total gross area of the school is reported to be about 2613 m2 and the school capacity is reported to be about 375 students.

Because the two building sections were constructed in consecutive years, this report refers to the 1953 and 1954 Sections as one, therefore grouping building materials from both Sections having an install year as 1953.

Structural Summary:

Structural drawings were not available for review during the assessment; however, the foundations of both Sections of the building likely consist of cast-in-place concrete spread footings with a sunken boiler room and basement storage area under the north part of the original 1953 building and excavated crawl space service tunnels around the perimeter of the building.

The building superstructure consists of wood and concrete framed floor constructions, with sections of load bearing masonrv block.

The roof consists of wood decking supported by engineered wood trusses or steel joists.

The main floor above the partial basement and crawl space service tunnels have suspended structural concrete slabs bearing on poured concrete foundations.

The structure of the building is in acceptable overall condition.

Envelope Summary:

The exterior walls are primarily clad with painted stucco on all elevations and masonry brick veneer accents at each of the school's 6 entrances.

Exterior standard windows were replaced in 2004 with fixed insulated glazing units (IGUs) in aluminum frames set above hopper-type operable sections.

Exterior entrance doors are steel-framed metal doors and are presumed to have been replaced at the same time as the windows in 2004. None of the doors are equipped with barrier free accessible (BFA) door openers.

All roof sections have modified bitumen membrane (aka SBS) assemblies with granular surfaced capsheet and flashing. According to a roof plan provided by CBE representative, all roofing systems were replaced in 2000.

The envelope of the building is in acceptable overall condition.

Interior Summary:

Interior flooring consists of: painted concrete slab on grade in the boiler room and unfinished concrete slab on grade in the basement storage under the north wing of the 1953 Section, in the crawl space service tunnels along the building periphery, and in caretaker storage rooms throughout; 1" X 1" ceramic tile in the student washrooms; resilient tile and sheet flooring in the classrooms and corridors; wood flooring in the gymnasium and stage; and carpet in the library and administration offices.

Interior wall finishes include: painted concrete in the boiler room and unpainted concrete in the basement, service tunnels, and janitorial closets; clear erethane finished wood wall paneling in the gymnasium; painted wood paneling in parts of the corridors; ceramic wall tile in the student washrooms; and, painted plaster and gypsum walls throughout the remainder of the school.

Ceiling finishes include: plaster stippling in the gymnasium and library; and, both 12"x12" and 24"x48" acoustic ceiling tiles in various classrooms and corridors.

The majority of interior doors are solid wood in wood frames.

The Interior finishes are in acceptable overall condition.

Mechanical Summary:

Plumbing piping appeared to be original to its particular section of the building and appeared to be in acceptable condition. Domestic water supply is carried by copper pipes and sanitary/storm water piping is cast iron.

Domestic water is supplied to the building at ambient pressure via the municipal supply system and the waste water is discharged to the municipal sewer system. Domestic hot water is provided by a John Woods model JWE402NA-04 gas fired water heater manufactured in 1997. The heater is rated at 32,400 BTU/hr. With a recovery rate of 103.1 L/hr.

Heating for the building is supplied an original INGLIS CANADA cast iron sectional plate low-pressure steam boiler converted from original coal fuel source to natural gas with 3 burners (year unknown). The steam is provided to heating coils / fins in unit ventilators and a small number of other common area terminal units and heat exchangers. Due to the current age of the mechanical heating plant, replacement of the system is likely required over the initial 5-year term of this study. An energy efficiency upgrade of the entire heating system is recommended during this replacement.

The building is ventilated by perimeter unit ventilators and exhaust fans located in the washrooms and classrooms. This system does not meet current ASHRAE standards. There is no cooling or humidification in the building. All of the Univents are original and are in marginal condition with frequent maintenance and breakdowns reported. Replacement is recommended.

Controls are pneumatic with a new Quincy compressor (2007), AirTek air dryer (1996) and Honeywell thermostats of varying ages due to on-going replacements as needed.

Fire protection is provided by a standpipe and hose system in combination with wall mounted fire extinguishers located throughout the building.

The mechanical systems are in marginal overall condition.

Electrical Summary:

Main electrical switchboard is rated for 400 Amp, 120/208 Volts, 3-phase 4-wire service (upgraded in 1995). The school is equipped with branch circuit panel boards throughout and the distribution wiring is copper.

The interior florescent lighting is primarily T-12 with energy saving T-8 fixtures in the Library/Computer Resource room. An upgrade of the remaining T-12 fixtures is recommended during the next lifecycle replacement occurrence. Emergency lighting is provided by original Emergi-Lite battery pack lighting. Some did not illuminate when tested.

Repalcement of all fixtures with currently technology is recommended.

Exit signage is provided by original incandescent fixtures. Replacement with energy efficient LED fixtures is recommended.

The fire alarm control panel was reportedly new in 2003 and is a Mircom FX-2000 multi-zone that is integrated with a Silent Knight intrusion detection system.

The electrical systems are generally in acceptable overall condition.

Rating Guide			
Condition Rating	Performance		
1 - Critical	Unsafe, high risk of injury or critical system failure.		
2 - Poor	Does not meet requirements, has significant deficiencies. May have high operating/maintenance costs.		
3 - Marginal	Meets minimum requirements, has significant deficiencies. May have above average operating maintenance costs.		
4 - Acceptable	Meets present requirements, minor deficiencies. Average operating/maintenance costs.		
5 - Good	Meets all present requirements. No deficiencies.		
6 - Excellent	As new/state of the art, meets present and foreseeable requirements.		

S1 STRUCTURAL

A1010 Standard Foundations*

Structural drawings were not available for review during the assessment; however, the foundations of the 1953 and 1954 Sections (hereinafter combined and referred to as the 1953 Section) likely consist of cast-in-place spread footings.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	100	FEB-10

A1030 Slab on Grade*

Concrete slab on grade in the sunken boiler room, basement storage under the student washrooms in the north wing, crawl space service tunnels along the building periphery and central corridors in the north, east and west wings of the building.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	100	FEB-10

A2020 Basement Walls (& Crawl Space)*

Reinforced concrete in the sunken boiler room and former coal bunker, basement storage under the student washrooms and in the crawl space service tunnels.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1953	100	FEB-10

B1010.01 Floor Structural Frame (Building Frame)*

Structural drawings for the school were not available for review. Suspended floors above the basement storage room under the student washrooms and over the crawl space service tunnels are structural reinforced concrete bearing on concrete foundation walls. The floor structures in perimeter classrooms and offices, library, etc., likely consists of wood joists and cross bracing supported on concrete foundations.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	100	FEB-10

B1010.02 Structural Interior Walls Supporting Floors (or Roof)*

Interior load-bearing walls are comprised of cast-in-place concrete or masonry block walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	100	FEB-10

B1010.03 Floor Decks, Slabs, and Toppings*

Portions of the building with basement levels have cast-in-place suspended slabs with conventional reinforcement.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1953	100	FEB-10

B1010.06 Ramps: Exterior*

A painted plywood ramp with painted wood guard rails is located at the south entrance to the east wing of the building.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
3 - Marginal	1953	40	FEB-10

Event: Replace Non-Slip Ramp Finish

Concern:

The non-slip sanded finish of the ramp has worn away. Surface is no longer safe in wet weather conditions. **Recommendation:**

Re-surface ramp with no-slip finish.

Туре	Year	<u>Cost</u>	Priority
Repair	2010	\$1,000	Medium

Updated: FEB-10

Event: Replace Wood Ramp

Concern: Delaminating plywood was observed. **Recommendation:** Replace exterior wood ramp.

Туре	Year	Cost	Priority
Failure Replacement	2012	\$4,000	Low

Updated: FEB-10

B1010.07 Exterior Stairs*

Concrete cast-in-place steps are present at four main entrances to the building (excluding entrances near the student washrooms). The steps were reportedly repair in 2008 using a concrete overlay.

Rating	Installed	Design Life	Updated
5 - Good	1953	40	FEB-10

B1010.08 Floor Construction Vapour Retarders, Air Barriers, and Insulation*

Floors over perimeter service tunnels and the basement storage under the student washrooms are constructed of noncombustible materials and not insulated.

Floor construction vapour retarders, air barriers and insulation that may be present on the underside of wood framed floor structures are concealed.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1953	0	FEB-10

B1010.09 Floor Construction Fireproofing*

Floors over perimeter service tunnels and the basement storage under the student washrooms are constructed of noncombustible materials and not insulated.

Floor construction fireproofing that may be present on the underside of wood framed floor structures are concealed.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	50	FEB-10

B1010.10 Floor Construction Firestopping*

Concealed.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	50	FEB-10

B1020.01 Roof Structural Frame*

Concealed (based on age of construction, likely to contain wood or steel joists supporting lumber roof decks).

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1953	100	FEB-10

B1020.05 Roof Construction Vapor Retarders, Air Barriers, and Insulation*

Concealed.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	0	FEB-10

B1020.06 Roof Construction Fireproofing*

Concealed.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	50	FEB-10

B1020.07 Roof Construction Firestopping*

Concealed.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	0	FEB-10

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

Brick cladding is present at all entrances to the building.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	75	FEB-10

B2010.01.08 Cement Plaster (Stucco): Ext. Wall*

The majority of the building is clad with painted stucco (reportedly refinished in 2004 during exterior door and window replacement).

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
5 - Good	2004	75	FEB-10

B2010.01.11 Joint Sealers (caulking): Ext. Wall**

Caulking is present around window and door units and at construction joints (approx. 350m).

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	0	20	FEB-10

Event: Replace Exterior Caulking

Concern:

Adhesion and cohesion failure of exterior caulking at construction joints.

Recommendation:

Replace external caulking at construction joints between brick cladding and stucco finishes (approx. 100m).

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2011	\$23,600	Low

Updated: FEB-10

B2010.01.13 Paints (& Stains): Exterior Wall**

Exterior stucco finishes are painted.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2004	15	FEB-10

Event: Repaint Exterior Walls

Туре	Year	Cost	Priority
Lifecycle Replacement	2019	\$9,500	Unassigned

B2010.02.01 Cast-in-place Concrete:Ext.Wall Const*

Cast-in-place concrete walls extend above the roof level at the junction of the east and west wings to the north wing of the building. It appears the recommended repairs from the 2004 assessment has since been completed.

Rating	Installed	Design Life	Updated
5 - Good	2000	100	FEB-10

B2010.03 Exterior Wall Vapor Retarders, Air Barriers, and Insulation*

Concealed.

Rating	Installed	Design Life	Updated
4 - Acceptable	2004	100	FEB-10

B2010.05 Parapets*

Prefinished metal siding parapets extend 10" to 24" above roof drainage planes.

<u>Rating</u>	Installed	Design Life	Updated
5 - Good	2000	50	FEB-10

B2010.06 Exterior Louvers, Grilles, and Screens*

Louvers and grilles provide supply air for the mechanical systems and ventilation for the perimeter crawl space service tunnels around the building. Bug screens are provided for exterior operable window sections.

Rating	Installed	Design Life	Updated
5 - Good	2004	50	FEB-10

B2020.01.01.02 Aluminum Windows (Glass & Frame)**

Exterior windows consist of fixed double-glazed window units set in metal frames. Each window unit contains 3 sets of 6 window sections, two of which are operable (approx. 190 m2 total).

<u>Rating</u>	Installed	Design Life	Updated
5 - Good	2004	40	FEB-10

Event: Replace Aluminum Windows

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2044	\$254,000	Unassigned

B2030.01.02 Steel-Framed Storefronts: Doors**

Steel-framed storefront doors are located at the 6 school entrances. All entrances are double doors except for the main entrance near the northwest corner of the building which has 3 doors.

Rating	Installed	Design Life	Updated
4 - Acceptable	2004	30	FEB-10

Event: Replace Steel-Framed Doors

Туре	Year	Cost	Priority
Lifecycle Replacement	2034	\$36,800	Unassigned

Updated: FEB-10

B2030.02 Exterior Utility Doors**

One 0.5x0.5m steel door provides emergency egress from the sunken boiler room on the north elevation of the building.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	40	FEB-10

Event: Replace Exterior Utility Door

Туре	Year	Cost	Priority
Lifecycle Replacement	2013	\$2,000	Unassigned

Updated: FEB-10

B3010.01 Deck Vapor Retarder and Insulation*

Concealed.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	25	FEB-10

B3010.04.04 Modified Bituminous Membrane Roofing (SBS)**

All sections of the roof have modified bitumen membrane roof assemblies with granular finished capsheet and flashing.

Rating	Installed	Design Life	Updated
5 - Good	2000	25	FEB-10

Event: Replace SBS Roofing

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2025	\$539,300	Unassigned

B3020.02 Other Roofing Openings (Hatch, Vent, etc)*

One roof hatch is located on the west end of Roof Area B (as identified on roof plan provided by CBE personnel) is accessed from the Caretaker storage room. Other openings include mechanical curbs, soil vents, roof drains and ceiling vents.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	25	FEB-10

S3 INTERIOR			
C1010.01 Interior Fixed P	artitions*		
Interior partitions consist of	f painted maso	onry block or	painted gypsum board walls.
Rating 4 - Acceptable	Installed 1953	Design Life 0	Updated FEB-10
C1010.05 Interior Window	<u>/S*</u>		
Interior aluminum fixed win facing the corridors from va			office/administration area, the main entrance and near the ceiling
Rating 4 - Acceptable	Installed 1953	Design Life 80	Updated FEB-10
C1010.07 Interior Partitio	n Firestopping	<u>g*</u>	
			the Electrical room; however, no firestopping is present around ping in the computer cable ports (<\$1000).
<mark>Rating</mark> 3 - Marginal	Installed [0	Design Life 50	Updated FEB-10
C1020.01 Interior Swingir	ng Doors (& H	ardware)*	
Classroom and interior util handsets and hinges.	ity room doors	s generally co	onsist of solid core wood doors in wood frames with original brass
Rating 4 - Acceptable	Installed 1953	Design Life 40	Updated FEB-10
C1020.02 Interior Entranc	e Doors*		
Vestibule doors at each er crash bar handsets and Ge			ble or tripe swing-type wood doors in wood frames with emergency sets.
Rating 4 - Acceptable	Installed 1953	Design Life 0	Updated FEB-10

C1020.03 Interior Fire Doors*

Fire doors located in the common corridors separate the central portion of the building from its east and west wings.

<u>Rating</u>	Installed	Design Life	Updated
2 - Poor	1953	50	FEB-10

Event: Adjust doors to ensure proper function.

Concern:

Friction marks observed on floor beneath fire doors. **Recommendation:** Adjust door length to allow for improved range and ease of motion.

Туре	Year	<u>Cost</u>	Priority
Repair	2010	\$1,000	Low

Updated: FEB-10

Event: Provide Automated Door Hold Open Device

Concern:

Fire doors were held open by hooks and door stops. **Recommendation:**

Install automated door hold open devices that close when alarm is activated.

Туре	Year	Cost	Priority
Code Repair	2010	\$7,000	Low

Updated: FEB-10

C1020.04 Interior Sliding and Folding Doors*

Classroom closets are equipped with wooden folding doors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	25	FEB-10

C1030.01 Visual Display Boards**

A combination of original blackboards (1953) and tackboards, whiteboards, and projector screens (circa 1995) are situa

situated	in each classroom.	Tackboards w	vere also ob	served in	the corridor	s		,	,
Rating		Installed D	esign Life	Updated	1				
4 - Acce		1995	20	FEB-1	_				
Event:	Replace All Visual	Display Boa	<u>rds</u>						
	Type Lifecycle Replacemen		<u>Cost</u> \$75,000		Priority Unassigned				
	Updated: FEB-10								
Event:	Replace Chalkboar	ds with Whi	<u>teboards</u>						
	Concern: Chalkboards are no longer recommended for use in public buildings. Recommendation: Replace approximately 10 original chalkboards with whiteboards (approx. \$ 7,900).								
	Type Repair	<u>Year</u> 2011	<u>Cost</u> \$7,900		Priority ∟ow				
	Updated: FEB-10								
<u>C1030.</u>	02 Fabricated Compa	artments(Toi	lets/Showe	ers)**					
	shed painted and unp is = \$12,300).	painted metal	l washroom	stall par	titions are lo	ocated in e	each studer	nt washroor	n (approx. 8
<u>Rating</u> 4 - Acce		Installed D 1953	esign Life 30	Updated FEB-10	-				
Event:	Replace Toilet and	Shower Cor	npartments	5					
	Туре	Year	<u>Cost</u>		Priority				

Eve

<u>Type</u>	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2013	\$12,300	Unassigned

Updated: FEB-10

C1030.05 Wall and Corner Guards*

Polished stainless steel wall and corner guards are located on drywall partition corners in corridors and the administrative offices. Metal kick plates are also installed on the lower section of both the metal and wood entrance doors. Installation date is approximated based on appearance and ware.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1995	15	FEB-10

C1030.08 Interior Identifying Devices*

There are very few signs denoting room number or room use through out the school. The few noted were printed on paper and affixed to the doors with tape.

Rating	Installed	Design Life	Updated
3 - Marginal	1953	20	FEB-10

Event: Place Identifying Devices on Interior Doors

Concern:

Rooms are not clearly identified in a permanent manner. **Recommendation:** Place laminated cardstock, engraved plastic or wood

identification cards on all doors through the school including corresponding classroom number or room use.

Туре	Year	Cost	Priority
Repair	2010	\$2,500	Low

Updated: FEB-10

C1030.12 Storage Shelving*

Unpainted wood storage shelving is located on the gymnasium stage; laminate shelving units in the art storage room; birch veneer wood shelving in the photocopying room; and, mobile storage shelving located in classrooms throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	30	FEB-10

C2010 Stair Construction*

Stairs leading to the mechanical room in the basement consist of cast-in-place concrete construction, while those leading to the gymnasium stage and basement storage room are painted wood-framed.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	100	FEB-10

C2020.08 Stair Railings and Balustrades*

Base-mounted painted metal tube railings are provided at stairs leading to the gymnasium stage and the stair railings to the basement consist of painted, wall-mounted metal railings.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	40	FEB-10

C2020.10 Stair Painting*

Wood stairs leading to the stage are painted with a clear verethane. Wood stairs to the basement storage area and concrete stairs to the boiler room and service tunnels are painted with latex paint.

Rating	Installed	Design Life	Updated
3 - Marginal	1953	0	FEB-10

Event: Repaint wood stairs to Basement

Concern:

Paint is significantly worn on wood stairs leading to the basement storage area.

Recommendation:

Repaint wood stairs to basement storage area.

Туре	Year	<u>Cost</u>	Priority
Repair	2011	\$1,000	Low

Updated: FEB-10

C3010.01 Concrete Wall Finishes (Unpainted)*

Concrete walls in the basement have a combination of painted and unfinished surfaces.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	100	FEB-10

C3010.02 Wall Paneling**

Clear finish plywood panels are installed on the lower portions of the gymnasium periphery walls. Painted wood paneling is located along the lower half of some corridor walls (approx 320m2).

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	30	FEB-10

Event: Replace Wall Paneling

Туре	Year	Cost	Priority
Lifecycle Replacement	2013	\$31,800	Unassigned

C3010.06 Tile Wall Finishes**

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1953	40	FEB-10

Event: Replace Ceramic Tile

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2013	\$1,600	Unassigned

Updated: FEB-10

C3010.09 Acoustical Wall Treatment** - Classrooms

Sound deadening fabric acoustical wall treatment installed in upper panels of exterior windows in some classrooms (approx. 75 m2).

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2004	20	FEB-10

Event: Replace Acoustical Wall Treatment

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2024	\$19,000	Unassigned

Updated: FEB-10

C3010.09 Acoustical Wall Treatment** - Gymnasium

Sound deadening fabric acoustical wall treatment installed around the upper portion of the gymnasium walls (approx. 125 m2).

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1953	20	FEB-10

Event: Replace Acoustical Wall Treatment

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2013	\$31,600	Unassigned

C3010.11 Interior Wall Painting*

Painted interior walls include: painted concrete walls in the boiler and service rooms; painted gypsum board in the gymnasium, administrative rooms and some classrooms; and, painted masonry block walls in the corridors and classrooms.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
3 - Marginal	1953	10	FEB-10

Event: Repaint Concrete walls in Boiler Room

Concern:

Peeling paint on the boiler room concrete walls. **Recommendation:** Repaint walls.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Repair	2010	\$8,000	Medium

Updated: FEB-10

C3010.14 Other Wall Finishes*

Painted coarse textured walls are located in the staff room.

Rating	Installed	Design Life	Updated
5 - Good	2008	0	FEB-10

C3020.01.02 Paint Concrete Floor Finishes*

Painted/sealed concrete floors are situated in the boiler room, basement storage room, main mechanical room and in several janitorial/storage closets.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1953	0	FEB-10

Event: Re-paint concrete floors.

Concern:

The concrete floors on the basement level exhibit moderate amounts of peeling and flaking painted/sealed surface. Localized staining was also observed. The age of the concrete floor finish is unknown, however it appears to have surpassed its expected lifecycle.

Recommendation:

Re-paint concrete floors

Туре	Year	Cost	<u>Priority</u>
Failure Replacement	2010	\$8,000	Medium

C3020.02 Tile Floor Finishes**

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1953	50	FEB-10

Event: Replace Ceramic Tile Floor Finish

Туре	Year	Cost	Priority
Lifecycle Replacement	2013	\$13,000	Unassigned

Updated: FEB-10

C3020.04 Wood Flooring**

The gymnasium and associated stage have hardwood floor finishes (approx. 340 m2 total).

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1953	30	FEB-10

Event: Refinish Stage Wood Flooring

Concern:

Finishes on the wood flooring on the stage is worn and scarred. **Recommendation:** Refinish stage flooring.

Туре	Year	Cost	Priority
Repair	2011	\$3,000	Low

Updated: FEB-10

Event: Replace Wood Flooring

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2013	\$101,300	Unassigned

Updated: FEB-10

C3020.07 Resilient Flooring** - 1953 Sheet Vinyl Flooring

Original sheet vinyl flooring (approx. 605 m2) is located in several classrooms (see further comments in F2020.01 Asbestos).

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	20	FEB-10

Event: Repalce Original Sheet Vinyl Flooring

Туре	Year	Cost	Priority
Lifecycle Replacement	2013	\$60,100	Unassigned

C3020.07 Resilient Flooring** - 1953 Vinyl Tile Flooring

Vinyl tile flooring (approx. 540 m2) is located in the common corridors throughout the school (see F2020.01 Asbestos).

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1953	20	FEB-10

Event: Replace Vinyl Tile Flooring

Concern:

Localized areas of damaged (i.e., chipped, cracked, etc.) vinyl tile flooring in the common area corridors was observed, most noticeably adjacent to the gymnasium (approx. 120 m2). No lifting or loose pieces of tile were noted during the assessment.

Recommendation:

Replace approximately 150 m2 of damaged vinyl tile flooring.

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2010	\$34,800	Low

Updated: FEB-10

C3020.07 Resilient Flooring** - 2008 Sheet Vinyl Flooring

Original sheet vinyl flooring in two classrooms and the staff room (General Purpose room) (approx. 220 m2) in the northwest corner of the school was reportedly replaced in 2008.

<u>Rating</u>	Installed	Design Life	<u>Updated</u>
5 - Good	2008	20	FEB-10

Event: Replace Resilient Sheet Flooring

Туре	Year	Cost	<u>Priority</u>
Lifecycle Replacement	2028	\$21,900	Unassigned

Updated: FEB-10

C3020.07 Resilient Flooring** - 2008 Vinyl Tile Flooring

Original sheet tile flooring in the north and east section corridors was reportedly replaced in 2008 (approx. 355 m2).

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2008	20	FEB-10

Event: Replace Vinyl Tile Flooring

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2028	\$21,700	Unassigned

C3020.08 Carpet Flooring**

Carpet flooring is located in the office/administration areas, library and adjacent reading room (approx 210 m2 total).

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	2003	15	FEB-10

Event: Replace medium to High Traffic Area Carpeting

Туре	Year	Cost	Priority
Lifecycle Replacement	2018	\$16,100	Unassigned

Updated: FEB-10

C3030.05 Veneer Plaster Finishes (Stipple)*

The gymnasium and part of the Library have stippled ceilings. Recommend refinishing cracking sections of ceiling stucco in library (<\$1000).

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1953	0	FEB-10

C3030.06 Acoustic Ceiling Treatment (Susp.T-Bar)** - 12"x12" Concealed Grid

Suspended concealed grid 12"x12" acoustic ceiling tiles are located in most of the classrooms and in corridors (approx. 1850 m2). It appears that selective replacement of tiles has occurred overtime (<10%).

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1953	25	FEB-10

Event: Replace 12"x12" Acoustic Ceiling Tile

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2013	\$98,200	Unassigned

Updated: FEB-10

C3030.06 Acoustic Ceiling Treatment (Susp.T-Bar)** - 24"x48" Suspended T-Bar

24"x48" suspended T-bar acoustic ceiling tiles are located in the administration offices and in the library (approx. 230 m2).

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	25	FEB-10

Event: Replace 24"x48" Acoustic Ceiling Tile

Туре	Year	Cost	Priority
Lifecycle Replacement	2013	\$12,200	Unassigned

C3030.07 Interior Ceiling Painting*

Painted gypsum ceilings are located in the staff room, the common washrooms and the administrative offices.

<u>Rating</u>	Installed	Design Life	Updated
5 - Good	2003	20	FEB-10

S4 MECHANICAL

D2010.04 Sinks** - Caretaker Service Sinks

Original wall mounted enamel cast iron service sinks in the caretaker cleaning supply rooms (2) and in the sunken boiler room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	30	FEB-10

Event: Replace Enamel Cast Iron Servcie Sinks

Туре	Year	Cost	<u>Priority</u>
Lifecycle Replacement	2013	\$7,500	Unassigned

Updated: FEB-10

Event: Replace Wall Servcie Sinks With Floor Sinks

Concern:

Frequent complaints of back strain when lifting to empty mop pails into cleaner's service sinks. **Recommendation:** Replace with floor mounted models to relieve back strain.

Туре	<u>Year</u>	Cost	<u>Priority</u>
Program Functional Upgrade	2010	\$2,500	Low

Updated: FEB-10

D2010.04 Sinks** - Stainless Steel Service Sinks

Stainless steel service sinks are provided in every classroom and the staff lounge.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
5 - Good	1995	30	FEB-10

Event: Replace Stainless Steel Service Sinks

Туре	Year	Cost	Priority
Lifecycle Replacement	2025	\$28,600	Unassigned

D2010.08 Drinking Fountains / Coolers**

Two non-refrigerated drinking fountains are located in each of the boys and girls washroom vestibule area, plus one in each of the classroom wings.

Rating	Installed	Design Life	Updated
5 - Good	1995	35	FEB-10

Event: Replace Drinking Fountains

Туре	Year	Cost	Priority
Lifecycle Replacement	2030	\$11,100	Unassigned

Updated: FEB-10

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - 1995 Renovations

Floor mounted flush tank toilets in staff washrooms and kindergarten washroom. Stainless steel counter top lavatories in staff and student washrooms.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	1995	35	FEB-10

Event: Replace Flush Tank Toilets and Stainless Steel Lavatories

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2030	\$21,900	Unassigned

Updated: FEB-10

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - Original

Original tankless floor mounted china toilets with manual flush values and floor mounted china urinals with gravity dump tanks above in student washrooms.

Stainless steel counter top lavatories in staff and student washrooms (see Washroom Fixtures - 1995 Renovations)

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1953	35	FEB-10

Event: Replace Toilets and Urinals

Туре	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2013	\$27,800	Unassigned

Updated: FEB-10

D2020.01.01 Pipes and Tubes: Domestic Water*

All domestic water supply piping, where visible was copper. Random sections have been replaced during washroom and classroom renovations in 1995 but most is original.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1953	40	FEB-10

D2020.01.02 Valves: Domestic Water**

Gate valves on hot and cold domestic water lines in service tunnels to isolate classroom and washroom water supply. Blow-off pressure relief valve on domestic hot water heater. Frost free breaker valves on exterior faucets. (approx. 35 in total)

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1953	40	FEB-10

Event: Replace Domestic Water Valves

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2013	\$46,100	Unassigned

Updated: FEB-10

D2020.01.03 Piping Specialties (Backflow Preventors)** - 1993

Backflow prevention double check valves on boiler feed water installed in 1993.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1993	20	FEB-10

Event: Replace Backflow Prevention

Туре	<u>Year</u> Cost	Priority
Lifecycle Replacement	2013 \$6,30	0 Unassigned

Updated: FEB-10

D2020.01.03 Piping Specialties (Backflow Preventors)** - 2006

Backflow prevention is installed on domestic cold water and fire prevention water systems (replaced 2006)

Rating	Installed	Design Life	<u>Updated</u>
5 - Good	2006	20	FEB-10

Event: Replace Backflow Prevention

Туре	Year	Cost	Priority
Lifecycle Replacement	2026	\$19,600	Unassigned

D2020.02.02 Plumbing Pumps: Domestic Water**

Grundfos 1/8 hp in-line circulation pump on domestic hot water distribution.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1995	20	FEB-10

Event. Replace Domestic Flumping Fump	Event:	Replace Domestic Plumbing Pumps
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Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$1,100	Unassigned

Updated: FEB-10

D2020.02.06 Domestic Water Heaters**

John Wood Limited, natural gas-fired 151 litre domestic hot water heater located in the sunken boiler room.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1995	20	FEB-10

Event: Replace Domestic Water Heater

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2015	\$4,500	Unassigned

Updated: FEB-10

D2020.03 Water Supply Insulation: Domestic*

An asbestos survey report dated 2008 identifies asbestos insulation and mudding compound on piping throughout the school but does not identify systems (i.e., domestic hot water, domestic cold water, low pressure steam supply/return, condensate, etc.) (refer to F2020.01 in the Functional Assessment portion of this report). Observed insulations were found to be in good condition with no damage to friable materials.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	40	FEB-10

D2030.01 Waste and Vent Piping*

All sanitary and storm water system piping is original cast iron. The waste piping is connected to the municipal system. The vent piping is through the roof of the building.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	50	FEB-10

D2030.03 Waste Piping Equipment*

Condensate tank with lifting pump (replaced 1999) discharges to municipal sanitary sewers.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1999	30	FEB-10

D2040.01 Rain Water Drainage Piping Systems*

The building has a combination of internal rain water piping and external scuppers and downspouts. Internal rain water leaders are original (1953) whereas external downspouts were replaced in 2001 when roofing was replaced.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	50	FEB-10

D2040.02.04 Roof Drains*

Roof drains with internal rainwater leaders with cast aluminum debris screens and flow control weirs.

Rating	Installed	Design Life	<u>Updated</u>
5 - Good	2001	40	FEB-10

D3010.02 Gas Supply Systems*

Natural gas piping runs underground to the meter located in the sunken boiler room. Piping feeds the boiler and the domestic hot water heater.

The heating systems were converted for coal-fired to natural gas but the year of occurrence is unknown, thus the install year of the gas supply systems is unknown. It is generally presumed to have been during the 1970s, thus nearing 40 years of age.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	60	FEB-10

D3020.01.01 Heating Boilers & Accessories: Steam**

The steam boiler is original to the building (56 years old); however, it is reported to currently perform adequately.

<u>Rating</u>	Installed	Design Life	Updated
3 - Marginal	1953	35	FEB-10

Event: Replace Steam Boiler & Accessories

Concern:

The steam boiler is original to the building (56 years old), is old technology and inefficient, and is the sole source of heat for this school. However, it is reported to currently perform adequately.

Recommendation:

Replace the boiler system with new, more efficient technology. The cost estimate provided herein allows for two heating hot water boilers (as opposed to steam) arranged in a lead-lag configuration to ensure constant heat supply should one boiler fail.

Consequences of Deferral:

Risk of failure of heating system with potential for damage to other systems; potential school shutdown; higher operating costs.

Туре	Year	Cost	Priority
Failure Replacement	2011	\$336,400	High

D3020.01.03 Chimneys (&Comb. Air) : Steam Boilers**

Original insulated steel breeching connected to a masonry chimney. Insulation on breeching was confirmed as asbestoscontaining and is in good condition with no visible damage to friable materials (see F2020.01). Original gravity down draft sheet metal combustion air ducting to baffle trap.

Conversion to Chimneys (&Comb.Air): H.W. Boiler during boiler replacement in 2011 is provided herein.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	30	FEB-10

Event: Replace Chimneys (&Comb. Air): Steam

Туре	Year	Cost	Priority
Lifecycle Replacement	2011	\$11,000	Unassigned

Updated: FEB-10

D3020.02.03 Water Treatment: H. W. Boiler*

Manual fed boiler water chemical treatment system.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1953	30	FEB-10

Event: **Replace Chemical Feed with Automated System** When Boilers Are Replaced.

Concern:

Current low pressure steam boiler system is obsolete and inefficient and is recommended for replacement in 2011.

Recommendation:

Upgrade to an automated chemical feed system during replacement of boilers in 2011.

Туре	Year	Cost	Priority
Operating Efficiency Upgrade	2011	\$15,000	Medium

D3040.01.02 Fans: Air Distribution (Remote from AHU)*

Original (56 years) centrifugal fan unit on upper level of the sunken boiler room provides ventilation for corridors. It is reported to currently perform reliably.

Rating	Installed	Design Life	Updated
3 - Marginal	1953	30	FEB-10

Event: Replace Air Distribution Fans

Concern:

Air distribution fan is original (56 years) and has surpassed its expected service life of 30 years. **Recommendation:**

Replace air distribution fan during boiler replacement in 2011.

Туре	<u>Year</u>	Cost	Priority
Failure Replacement	2011	\$25,000	Medium

Updated: FEB-10

D3040.01.03 Air Cleaning Devices: Air Distribution*

Disposable non-pleated filter packs changed quarterly.

Rating	Installed	Design Life	Updated
5 - Good	2009	30	FEB-10

D3040.01.04 Ducts: Air Distribution*

Original (1953) sheet metal ducting throughout.

Rating	Installed	Design Life	Updated
3 - Marginal	1953	50	FEB-10

Event: Clean and Sanitize Air Distribution Ducting Following Boiler Replacement

Concern:

The last year ducts were cleaned and sanitized, if ever, is unknown.

Recommendation:

Clean and sanitize air distribution ducting following boiler replacement in 2011.

Туре	<u>Year</u>	Cost	Priority
Preventative Maintenance	2011	\$3,500	Medium

D3040.01.07 Air Outlets & Inlets: Air Distribution*

Original rectangular directional air outlets in classroom bulkheads.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	30	FEB-10

D3040.02 Steam Distribution Systems: Piping/Pumps**

The heating distribution piping is original (56 years old) and has surpassed its theoretical design life of 30 years. The heating system has water treatment.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1953	30	FEB-10

Event: Inspect Heating Piping

Concern:

The heating piping is aged and should be inspected to determine its condition. **Recommendation:**

Inspect heating piping.

Туре	Year	Cost	Priority
Study	2011	\$9,500	High

Updated: FEB-10

Event: **Replace Steam Piping and Pumps During Boiler** Replacement

Concern:

The age of the steam system supply/return pumps is unknown and were last rebuilt in approximately 2006. The steam system has chemical water treatment but wall thickness of the piping has not been tested. **Recommendation:**

Replace pumps and piping during boiler system replacement and energy upgrades in 2011 (approx. 700 m)

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2011	\$56,200	High

D3040.04.01 Fans: Exhaust**
Building exhaust is accomplished with individual washroom and classroom exhaust fans. (Cost estimate based on 2846 m2/gfa)
RatingInstalledDesign LifeUpdated4 - Acceptable195330FEB-10
Event: Replace Exhaust Fans
TypeYearCostPriorityLifecycle Replacement2013\$45,600Unassigned
Updated: FEB-10
D3040.04.03 Ducts: Exhaust*
Original sheet metal ducts from exhaust inlets in classrooms and corridors to rooftop exhaust fans.
RatingInstalledDesign LifeUpdated4 - Acceptable195350FEB-10
D3040.04.05 Air Outlets and Inlets: Exhaust*
Eggcrate exhaust inlets throughout.
RatingInstalledDesign LifeUpdated4 - Acceptable195330FEB-10
D3040.05 Heat Exchangers**
Steam-hot water and steam-glycol heat exchangers are located in the sunken boiler room.
RatingInstalledDesign LifeUpdated3 - Marginal195330FEB-10
Event: Replace Heat Exchangers During Boiler Upgrades & Replacement Concern: Original heat exchangers have surpassed their expected useful lifecycle (EUL) and are unreliable. Recommendation: Replace during boiler upgrades and replacement in 2011.
TypeYearCostPriorityFailure Replacement2011\$16,600High
Updated: FEB-10

D3050.03 Humidifiers**

No humidification provided.

Rating	Installed	Design Life	<u>Updated</u>
2 - Poor	0	25	FEB-10

Event: Provide Humidifiers

Concern:

No humidification provided at this facility. **Recommendation:** Install humidifiers during boiler upgrades and replacement in 2011.

Туре	Year	<u>Cost</u>	Priority
Code Repair	2011	\$10,000	High

Updated: FEB-10

D3050.05.01 Convectors**

Steam convectors are located at the entrances to the building and are controlled by line voltage switches.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
3 - Marginal	1953	35	FEB-10

Event: Replace Convectors

Concern:

Convectors are original (56 years), have surpassed their EUL of 35 years, and are unreliable. **Recommendation:**

Replace during boiler system upgrades and replacement in 2011.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Failure Replacement	2011	\$4,900	Medium

Updated: FEB-10

D3050.05.02 Fan Coil Units**

Original fan coil units are located in the sunken boiler room and the basement storage under student washrooms (3 total).

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1953	30	FEB-10

Event: Replace Fan Coil Units

Туре	Year	Cost	Priority
Lifecycle Replacement	2013	\$18,100	Unassigned

D3050.05.03 Finned Tube Radiation**

Bare finned tube radiation units in the crawl space service tunnels and main floor caretaker storage rooms.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	40	FEB-10

Event: Replace Finned Tube Radiation

TypeYearCostPriorityLifecycle Replacement2013\$3,600Unassigned

Updated: FEB-10

D3050.05.07 Unit Ventilators**

Original unit ventilators (UniVents) are distributed throughout the building on periphery walls.

<u>Rating</u>	Installed	Design Life	Updated
3 - Marginal	1953	30	FEB-10

Event: Replace Unit Ventilators

Concern:

The UniVents reportedly do not supply sufficient air volume to meet current ASHRAE standards. The UniVents are original (56 years) and are generally not operating efficiently.

Recommendation:

Replace the UniVents (approx. 45) in conjunction with boiler system replacement in 2011.

Туре	Year	Cost	Priority
Failure Replacement	2010	\$46,100	High

D3060.02.02 Pneumatic Controls**

There are original pneumatic controls on the boiler system and terminal units. Original Honeywell controllers with a Quincy air compressor (replaced 2007) and AirTek air dryer (1996).

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	40	FEB-10

Event: Replace Pneumatic Controls

TypeYearCostPriorityLifecycle Replacement2013\$18,500Unassigned

Updated: FEB-10

Event: Upgrade Pneumatic System to a Digital BMCS During Boiler System Upgrades/Replacement

Concern:

Current pneumatic system is inefficient.

Recommendation:

Upgrade control systems to a digital BMCS in conjunction with boiler system upgrades and replacement in 2001 to achieve greater efficiency and reduce maintenance and operating costs.

Туре	Year	Cost	Priority
Operating Efficiency Upgrade	2011	\$150,000	Low

Updated: FEB-10

D4020 Standpipes*

There are standpipe systems with backflow prevention throughout the school building. They are complete with fire hoses which are inspected annually.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1953	60	FEB-10

D4030.01 Fire Extinguisher, Cabinets and Accessories*

Portable ABC-type fire extinguishers (5# and 10#) are provided near hose spindles and in maintenance rooms as needed.

Fire extinguishers are inspected annually and replaced as required.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	30	FEB-10

S5 ELECTRICAL

D5010.03 Main Electrical Switchboards (Main Distribution)**

Main disconnect switchboard upgraded to 400 Amp, 120/208 Volts 3-phase 4-wire in 1995. Main switchboard is manufactured by Square D.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	40	FEB-10

Event: Replace Main Electrical Switchboard

Туре	Year	Cost	Priority
Lifecycle Replacement	2035	\$50,800	Unassigned

Updated: FEB-10

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1995

Electrical sub-panels have been added over the last 10 to 15 years (approximate), as required because of the addition of computers.

Rating	Installed	Design Life	Updated
5 - Good	1995	30	FEB-10

Event: Replace Computer Room Distribution Panelboard

<u>Type</u>	Year	Cost	Priority
Lifecycle Replacement	2025	\$5,500	Unassigned

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - Original

Original circuit breaker panelboards are located throughout the school and are fed by the 120/208 V main switchboard. Panelboards vary from 30 circuit to 42 circuit panelboards and are mostly used to capacity. Un-used breaker contacts have blank covers.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	30	FEB-10

Event: Conduct Infrared Scan of Distribution Panelboards

Concern:

Original sub-panels have surpassed their Expected Useful Lives and are at or near maximum capacity.

Recommendation:

Conduct an infrared scan of secondary switchboards to identify potential problem areas.

Туре	Year	<u>Cost</u>	Priority
Preventative Maintenance	2010	\$5,000	Low

Updated: FEB-10

Event: Replace Original Sub-panels

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2013	\$21,700	Unassigned

Updated: FEB-10

D5010.07.02 Motor Starters and Accessories**

Individual motor starters for pumps and fans are located in the boiler room and at building entrances. Motor starters are of mixed vintage due to partial replacement.

Rating	Installed	Design Life	Updated
3 - Marginal	0	30	FEB-10

Event: Replace Motor Starters

Concern:

Motor starters have surpassed their Expected Useful Lives. Partial replacement has already occurred due to failure. **Recommendation:** Replace all motor starters to achieve uniform stable performance throughout.

Туре	<u>Year</u>	Cost	Priority
Failure Replacement	2010	\$29,800	Low

D5020.01 Electrical Branch Wiring*

Electrical wiring throughout the building is mostly original to that part of the building with some replacements as needed over time. Wiring associated with the fire detection and alarm and the intrusion detection systems was new in 2003 when detection and alarming systems were reportedly replaced and upgraded (see D5030.01 and D5030.02.02).

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1953	50	FEB-10

Event: Inspect Building Wiring

Concern:

With few exceptions, the wiring throughout the building is mostly original to that part of the building and has surpassed its theoretical useful life. Overtime, the insulation becomes brittle and the potential for fire hazards, electrical shock and brown-outs increases.

Recommendation:

Inspect building wiring.

Туре	Year	Cost	Priority
Study	2010	\$3,500	Medium

Updated: FEB-10

Event: Replace Electrical Branch Wiring

Concern:

With few exceptions, the wiring throughout the building is mostly original to that part of the building and has surpassed its theoretical useful life. Overtime, the insulation becomes brittle and the potential for fire hazards, electrical shock and brown-outs increases.

Recommendation:

Replace the building wiring as per the results of the study.

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2010	\$237,500	Medium

Updated: FEB-10

D5020.02.01 Lighting Accessories (Lighting Controls)*

Lighting in the school is controlled by line voltage switches located throughout the school. Keyed switches are provided in student washrooms.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	30	FEB-10

D5020.02.02.01 Interior Incandescent Fixtures*

Located in caretaker/cleaner storage rooms, crawl space service tunnels and stage lighting.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	30	FEB-10

D5020.02.02.02 Interior Fluorescent Fixtures**

Fixtures are generally original and use T-12 technology. The Library has been upgraded to T-8 technology within the last five years. Light levels were not determined.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1953	30	FEB-10

Event: Replace Interior Fluorescent Fixtures with Energy Saving T-8s Throughout

Туре	Year	Cost	Priority
Lifecycle Replacement	2013	\$172,300	Unassigned

Updated: FEB-10

D5020.02.03.02 Emergency Lighting Battery Packs**

Original Emergi-Lite fixtures throughout

Rating	Installed	Design Life	Updated
2 - Poor	1953	20	FEB-10

Event: Replace Emergency Lighting Battery Packs

Concern:

Random battery packs were tested while on site and did not function.

Recommendation:

Replace battery packs throughout (6 total).

Туре	<u>Year</u>	Cost	Priority
Failure Replacement	2010	\$7,800	Medium

D5020.02.03.03 Exit Signs*

Original illuminated Exit signs with dual 15-watt incandescent bulbs located throughout the school.

Rating	Installed	Design Life	Updated
3 - Marginal	1953	30	FEB-10

Event: Replace Exit Signs with Energy Saving LED Fixtures

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Concern:

Exit signs an inefficient and require significant maintenance compared to newer LED type fixtures. **Recommendation:**

Replace exit signs with LED-type fixtures.

Туре	Year	<u>Cost</u>	<u>Priority</u>
Energy Efficiency Upgrade	2011	\$4,500	Low

Updated: FEB-10

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

Exterior lights are generally wall-mounted High Pressure Sodium fixtures.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1953	30	FEB-10

Event: Add New Exterior Fixtures and Relocate Existing

Concern:

Exterior lighting operation was not confirmed as the survey was conducted during daylight hours; however, there appears to be an insufficient number of fixtures to provide adequate lighting for security purposes. Some wallpacks are situated behind trees, thus further reducing illumination levels.

Recommendation:

Add new exterior fixtures and relocated existing fixtures away from nearby trees.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Repair	2010	\$7,500	Medium

Updated: FEB-10

D5020.03.02 Lighting Accessories: Exterior (Lighting Controls)*

Photovoltaic (PV) cell mounted near roof levels.

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	30	FEB-10

D5030.01 Detection and Fire Alarm**

Mircom FX-2000 multi-zone fire alarm control panel is located near the main (northwest) entrance. Devices include manual pull stations, strobe alarms, in-duct smoke alarms, rate of heat rise detectors and wired smoke alarms. Alarming is integrated with the Silent Knight intrusion detection system and automated dialer.

Replacement cost based on 2846 m2/gfa.

Rating	Installed	Design Life	Updated
5 - Good	2003	25	FEB-10

Event: Replace Detection and Fire Alarm

Туре	Year	Cost	Priority
Lifecycle Replacement	2028	\$87,000	Unassigned

Updated: FEB-10

D5030.02.02 Intrusion Detection**

The building has a monitored by a Silent Knight Regency model 4660C intrusion alarm system with remote motion sensors in corridors.

Systems is integrated with fire detection and alarm system and automated dialer.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2003	25	FEB-10

Event: Replace Intrusion Detection System

Туре	Year	Cost	<u>Priority</u>
Lifecycle Replacement	2028	\$10,500	Unassigned

Updated: FEB-10

D5030.03 Clock and Program Systems*

The building has a master and slave clock system, manufactured by Simplex.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	0	25	FEB-10

D5030.04.01 Telephone Systems*

The building has a Northstar Meridian telephone system equipped with intercom and PA modules.

Rating	Installed	Design Life	Updated
4 - Acceptable	1999	25	FEB-10

D5030.04.05 Local Area Network Systems*

The building has a LAN system maintained by another branch of the school system.

Rating	Installed	Design Life	Updated
4 - Acceptable	2003	15	FEB-10

D5030.05 Public Address and Music Systems**

The meridian telephony overrides the original Bogen Public Address system. The original Bogen system has speakers in hallways and intercom speakers in classrooms, library and staff rooms.

<u>Rating</u>	Installed	Design Life	Updated
3 - Marginal	1953	25	FEB-10

Event: Replace Bogen PA System

Concern:

The original PA System is old and outdated. It is currently reported to be functional, but is obsolete. **Recommendation:** Replace the PA System near the end of the evaluation period.

Туре	<u>Year</u>	Cost	Priority
Failure Replacement	2011	\$15,250	Low

Updated: FEB-10

D5030.06 Television Systems*

Colour televisions with VHS/DVD players on carts are kept in the library audiovisual storage room for use in classrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	20	FEB-10

D5090.01 Uninterruptible Power Supply Systems**

Portable APC-brand uninterruptible power supply (UPS) for main computer server and server hubs (lifecycle replacement <\$1,000).

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2003	30	FEB-10

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.02 Library Equipment*

Movable desks, chairs, tables and shelving units are located in the library. Also, there are computers, tack boards, and a smart board.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	25	FEB-10

E1020.03 Theater and Stage Equipment*

Cloth drapery stage curtains include one U-track curtain, one front track curtain and two valences.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1953	25	FEB-10

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

A variety of sports equipment is located in a storage room at the west end of the gymnasium. There is one infirmary near the administration offices which has one bed.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	0	15	FEB-10

E2010.02 Fixed Casework** - Original Painted

Original painted wood casework with metal hardware is located in most of the classrooms (approx. 1,075 m2/gfa).

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	35	FEB-10

Event: Replace Original Painted Casework

Туре	Year	Cost	Priority
Lifecycle Replacement	2013	\$115,000	Unassigned

Updated: FEB-10

E2010.02 Fixed Casework** - Wood Veneer

A variety of wood veneer fixed casework is located in the administration offices, the library and staff room kitchen (approx. 305 m2/gfa). Install date is estimated based on date of administration renovation.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2003	35	FEB-10

Event: Replace Wood Vaneer Casework

Туре	Year	Cost	Priority
Lifecycle Replacement	2038	\$32,700	Unassigned

E2010.03.01 Blinds**

Venetian blinds on the interior of each window, are included in classrooms and office spaces. Pull-down blinds are located on the gymnasium windows (220 m2 total).

Rating	Installed	Design Life	Updated
4 - Acceptable	1953	30	FEB-10

Event: Replace Blinds

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2013	\$28,500	Unassigned

Updated: FEB-10

F2020.01 Asbestos*

A 2008 asbestos material survey reveals the detection of Chrysotile asbestos in the following building materials throughout the school: piping insulation, vinyl floor tiles, insulation paper, drywall joint compound, and both wall and ceiling acoustical textured coatings. No damaged friable materials were observed.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	FEB-10

Event: Continue Asbestos Managment Program

Concern:

Asbestos has been confirmed present is certain building materials throughout the school. No damaged friable materials were identified during this study. **Recommendation:** Continue periodic inspection and update the on-going

Asbestos Management program.

Туре	Year	Cost	Priority
Preventative Maintenance	2013	\$4,500	Medium

Updated: FEB-10

F2020.02 PCBs*

Based on the age of the building, sources of potential PCBs include old magnetic ballasts in T-12 fluorescent light fixtures.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	0	0	FEB-10

F2020.03 Mercury*

There is potential for mercury vapor in the fluorescent lamps throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	FEB-10

F2020.04 Mould*

None observed or reported.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1950	0	FEB-10

F2020.05 Lead*

Based on the age of the building, interior paint finishes and joint sealer on cast iron sanitary and storm waste water piping may contain lead.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	FEB-10

S8 FUNCTIONAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance*

The gravel parking lot near the northeast corner of the building is not equipped with a handicapped parking stall. The closest entrance to the parking lot has cast-in-place concrete stairs.

<u>Rating</u>	Installed	Design Life	Updated
2 - Poor	1953	0	FEB-10

Event: Provide Barrier Free Parking Stall and Route to School

Concern:

The gravel parking lot near the northeast corner of the building is not equipped with a barrier free parking stall. Wheelchair or handicapped users must therefore use other stalls, should they be available, or park along the roadside. The barrier free route from the parking lot to the nearest entrance does not provide a ramp for access.

Recommendation:

Provide a designated barrier free parking stall in the gravel parking lot, complete with appropriate international signage, separation from adjacent parking stalls, and located such that the distance from the parking lot to the building entrance is minimized. Build a barrier free access ramp at the north east entrance, which is closest to the parking lot location.

Consequences of Deferral:

Non-compliance with current barrier free standards.

Туре	Year	Cost	Priority
Barrier Free Access Upgrade	2010	\$9,500	Medium

K4010.02 Barrier Free Entrances*

A painted wood wheelchair ramp at the southeast entrance. The doors at this location is not equipped with automated entry.

Rating	Installed	Design Life	Updated
2 - Poor	1953	0	FEB-10

Event: Provide automated entry at main school entrance.

Concern:

No ramp or automated entry is provided at the entrance closest to the gravel parking lot near the northeast corner of the building.

Recommendation:

Equip the northeast entrance with a ramp (see K4010.01 Barrier Free Route) and automated door opener.

Consequences of Deferral:

Non-compliance with current barrier free standards and inaccessibility for handicapped or wheelchair users.

Туре	<u>Year</u>	Cost	Priority
Barrier Free Access Upgrade	2010	\$5,500	Medium

K4010.03 Barrier Free Interior Circulation*

No elevating devices or lifts are present to access the stage area in the gymnasium. Handsets at interior doors to classrooms are knob-type.

<u>Rating</u>	Installed	Design Life	Updated
2 - Poor	1953	0	FEB-10

Event: Add wheelchair lift.

Concern:

The school is not equipped with automated lifts, rendering certain portions of the school (i.e., the gymnasium stage) inaccessible to wheelchair users.

Recommendation:

Provide wheelchair lifts for the gymnasium stage.

Consequences of Deferral:

Non-compliance with current barrier free standards and inaccessibility for handicapped or wheelchair users.

Туре	Year	Cost	Priority
Barrier Free Access Upgrade	2010	\$19,500	Medium

Updated: FEB-10

Event: Replace Interior Door Handsets

Concern:

Interior door handsets are knob-type, non-BFA compliant. **Recommendation:**

Replace interior door handsets with BFA-compliant lever type.

Туре	<u>Year</u>	Cost	Priority
Barrier Free Access Upgrade	2010	\$9,000	Low

K4010.04 Barrier Free Washrooms*

No barrier free washrooms located at this facility.

Rating	Installed	Design Life	Updated
2 - Poor	1953	0	FEB-10

Event: Add Two Barrier Free Washrooms

Concern:

No barrier free washrooms located at this facility. **Recommendation:**

Redesign existing student washrooms with at least one barrier free accessible toilet stall and lavatory with BFA-compliant faucet and mirror, etc. Alternatively, provide a universal barrier free washroom. Cost estimating is provided for BFA toilet stalls and accessories in each of the student washrooms.

Consequences of Deferral:

Non-compliance with current barrier free standards and inaccessibility for handicapped or wheelchair users.

Туре	Year	Cost	Priority
Barrier Free Access Upgrade	2010	\$17,000	Medium