

RECAPP Facility Evaluation Report

Calgary School District #19



Brentwood Elementary School

B2549A

Calgary

Facility Details

Building Name: Brentwood Elementary Scho
Address: 1231 Northmount Drive N. W
Location: Calgary

Building Id: B2549A
Gross Area (sq. m): 5,305.40
Replacement Cost: \$14,890,000
Construction Year: 1962

Evaluation Details

Evaluation Company: ARUP DATTA ARCHITECT LTD.
Evaluation Date: September 8 2011
Evaluator Name: Brian Dennis

Total Maintenance Events Next 5 years: **\$3,762,773**
5 year Facility Condition Index (FCI): **25.27%**

General Summary:

The Brentwood Elementary School, is a two storey structure with partial basement that was originally constructed in 1963. An addition of 1691.4 m² of similar construction was erected in 1966 at the southwest corner of the original building. The school is a concrete/masonry block structure with clay brick and exposed aggregate precast concrete panels as cladding and the school currently has a total floor area of 5305.4 m².

Current student enrolment is 565 students in grades Kindergarten to Grade 4. Three classrooms are used by CSSI

Structural Summary:

Structural drawings were not available for review during the assessment, however, the school's foundations reportedly consist of cast-in-place concrete strip footings with concrete frost walls. The main floor of the school consists of a concrete slab-on-grade. The second floor is a concrete slab supported by load-bearing concrete/masonry block walls.

The structural framing of the roof is comprised of metal decking on open-webbed steel joists spanning between load-bearing masonry block walls.

No building structure issues were identified during the site review.

Structural elements are in acceptable condition.

Envelope Summary:

Exterior cladding of the school consists of clay brick with exposed aggregate, precast concrete panels located above and below most windows. Metal brise-de-soleil panels are affixed above the second floor classroom windows. The building has several flat roof sections covered with a built-up asphaltic membrane and gravel ballast assembly (BUR).

Main entrance doors are solid wood set within steel frames. Windows are fixed and operable with double-glazed, sealed units set in aluminum frames.

The main entrance doors and the windows have surpassed their theoretical lives and are due for replacement. There are reportedly significant leaking problems at present with the BUR roofing assembly. The roofing system will surpass its theoretical life with the evaluation period and will require replacement.

The remainder of the school's envelope and exterior components are generally acceptable, overall.

Interior Summary:

Classrooms and corridors typically have resilient sheet and tile flooring. Carpeting is provided in the library and administration area. Wood flooring is provided in the two gymnasiums and the stage. The majority of the interior walls consist of painted masonry block. The majority of the building has either a suspended acoustic panel ceiling system or glued-on, acoustic ceiling tiles.

Major remedial work recommended is to install firestopping at all penetrations through firewalls. Additionally, it is recommended that lifts be installed to the second floor and the Stage, an automatic entrance door opener be installed, and that washrooms be renovated to permit barrier free access to the school.

The building's interior finishes are in generally acceptable condition, overall.

Mechanical Summary:

Plumbing fixtures including water closets, urinals, lavatories, sinks, and drinking fountains have exceeded theoretical design lives, however are in acceptable condition.

Hot water heating through convectors, force flow convectors and baseboard heating is provided to the building via two

new (2009) Hot water heating boilers.

There are four air handling systems: one for the 1963 school, one for the 1966 addition and each gym has a dedicated system. All units consist of intakes, mixing sections, hot water reheat coils, supply fans and swamp coolers.

There are two Carrier roof top units that supply cooling to the library and the computer room. The units each have a cooling capacity of 4 tons.

The building has a standpipe system with fire extinguishers located at fire hose stations throughout the building.

The following recommendations have been made:

Replace three badly damaged roof top exhaust fans

Install a BMCS system

Repair pipe insulation\

Comb out condenser fins.

Overall the mechanical system is in acceptable condition.

Electrical Summary:

Main service is 800 Amp, 120/208 volt three phase. Lighting is 50% T8 and 50% T12 light fixtures. Fire alarm system and EXIT/Emergency lighting are located as required. Telephone handsets and PA speakers are in classrooms and other administration areas.

The following is required:

- 1- Replace Public Address System.
- 2- Add Bell / Strobe in public wash rooms and Music Room.
- 3- Upgrade 50% of the lighting system.
- 4- Add 50 new receptacles in classrooms.

Overall the electrical rating is acceptable.

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*

The foundation reportedly consists of cast-in-place concrete strip footings and concrete frost walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

A1030 Slab on Grade*

The main floor and the basement floor are comprised of conventionally reinforced concrete slabs-on-grade.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

A2020 Basement Walls (& Crawl Space)*

Basement foundation walls consist of cast-in-place concrete.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

B1010.01 Floor Structural Frame (Building Frame)*

The structural framing consists of load-bearing concrete block walls supporting the suspended concrete slab of the second floor and the open web steel joists of the roof.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

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

Interior supporting walls in the school consist of load-bearing concrete block.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

B1010.03 Floor Decks, Slabs, and Toppings*

The second floor and the portion of the main floor over the partial basement consist of a suspended concrete slabs. The Stage floor consists of open web steel joists with wood decking.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

B1010.09 Floor Construction Fireproofing*

Floor slab over basement and second floor slab are concrete providing the required fire rating.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

B1010.10 Floor Construction Firestopping*

Penetrations through floor slabs sealed with fire stop material, two locations of questionable firestopping at ducts through basement storage ceiling.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

B1020.01 Roof Structural Frame*

The roof framing for the school is open-web steel joists supporting T&G wood decking.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

B1020.04 Canopies*

Canopies are located over all entrance/exit doors and are presumably of wood frame construction. The canopies on the 1966 are cantilevered concrete.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

B1020.06 Roof Construction Fireproofing*

Wood deck on steel joists with no additional fireproofing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

S2 ENVELOPE

B2010.01.01 Precast Concrete: Exterior Wall Skin*

Exposed aggregate, precast concrete panels are located above and below most windows in the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

Event: Clean rust and seal precast concrete panels (BOE 10 sq m)

Concern:

Several observed areas of rust staining on the face of the precast panels indicate rusting of the internal reinforcing steel.

Recommendation:

Clean rust stains and seal the face of the precast concrete panels.

Consequences of Deferral:

Loss of aesthetics and potential for spalling of panels due to accelerated moisture penetration.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2013	\$14,000	Low

Updated: FEB-12

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

The majority of the school building is clad with clay brick. Several broken bricks in various locations were noted within the brick cladding. Repair damaged brick (estimate less than \$1000).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

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

A caulking compound is present around all door frames, window frames, and other building envelope penetrations.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	20	FEB-12

Event: Replace Exterior Joint Caulking BOE 800 Im

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$25,000	Unassigned

Updated: FEB-12

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

The brise-du-soleil panels over the windows have a painted finish. Significant peeling of finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	2001	15	FEB-12

Event: Refinish wall panels (BOE 82 sq m)

Concern:

The brise-du-soleil panels over the windows have significant peeling of the finish which can allow rust and deterioration of panels

Recommendation:

Refinish panels

Consequences of Deferral:

Continued deterioration of the panel finish

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$8,000	Medium

Updated: FEB-12

Event: Repaint exterior painted doors BOE 85 sq m

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$4,000	Unassigned

Updated: FEB-12

B2010.02.02 Precast Concrete: Ext. Wall Const.*

Precast architectural feature panels above and below linear windows

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

B2010.02.03 Masonry Units: Ext. Wall Const.*

Exterior masonry unit wall construction.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

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

The internal construction of the exterior wall assembly was not readily visible during the assessment, however, it is assumed that the exterior wall assemblies of the school contain a vapor retarder membrane and insulation. The type and extent of these materials is unknown.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

B2010.06 Exterior Louvers, Grilles, and Screens*

Louvers, vents, etc. are located in the exterior walls in various locations around the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

B2010.09 Exterior Soffits*

The soffits of the entrance/exit door canopies consist of pre-finished metal panels.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

B2020.01.01.02 Aluminum Windows (Glass & Frame) - 1963 Section**

The exterior windows are mainly operable, double-glazed sealed units set in aluminum frames, with several fixed windows in various locations around the school building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	40	FEB-12

Event: Replace Aluminum Windows (Glass & Frame)
(BOE =610 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$805,200	Unassigned

Updated: FEB-12

B2020.01.01.02 Aluminum Windows (Glass & Frame) - 1966 Section**

The exterior windows are mainly operable, double-glazed sealed units set in aluminum frames, with several fixed windows in various locations around the school building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1966	40	FEB-12

Event: Replace Aluminum Windows (Glass & Frame)
(BOE = 100 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$132,000	Unassigned

Updated: FEB-12

B2030.01.02 Steel-Framed Storefronts: Doors**

Exterior entrance/exit doors are of painted wood construction set within painted steel frames. Double-door entrances are located on all building elevations except for the main entrance on the north elevation which is a triple-door entry.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Lifecycle Replacement - Wood Entrance Doors (BOE 18 doors)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$38,000	Unassigned

Updated: FEB-12

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

SBS membrane roof all sections, original roof skylights removed and roofed over.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2007	25	FEB-12

Event: Replace SBS membrane roof (BOE = 3027 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2032	\$750,000	Unassigned

Updated: FEB-12

B3010.08.02 Metal Gutters and Downspouts**

Scuppers and metal down spouts to grade from canopy roofs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: replace metal gutters and downspouts (BOE = 36 m)

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

Updated: FEB-12

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

A steel roof access hatch is located near the east end of the school roof.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Interior fixed partitions within the school are comprised of painted concrete block walls and painted gypsum board walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

C1010.03 Interior Operable Folding Panel Partitions**

Folding partitions between classrooms 111 and 112, classrooms 212 and 213 and classrooms 213 and 214.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Replace Folding Panel Partitions (BOE = 75 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$90,000	Unassigned

Updated: FEB-12

C1010.05 Interior Windows*

Interior windows are located in the office/administration and Library areas and consist of single-glazed units set in wood frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

C1010.07 Interior Partition Firestopping*

Interior partition firestopping is generally installed around conduit and piping penetrations in firewalls and service rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	0	FEB-12

Event: Install firestopping around all firewall penetrations (BOE estimate)

Concern:

Sealing of rated wall penetrations (i.e. piping, electrical conduit, etc.) in several areas is not complete

Recommendation:

All penetrations through rated wall to be reviewed and seal openings around penetrations as necessary to provide a proper firestopping barrier.

Consequences of Deferral:

Potential migration of smoke or flame in the event of a fire emergency.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2012	\$4,000	Medium

Updated: FEB-12

C1020.01 Interior Swinging Doors (& Hardware)*

The majority of interior swinging doors consist of stained, hollow core wood set in painted steel frames and are located in corridors, classrooms, storage rooms, utility rooms, etc. Wooden doors with safety glass inserts are located at stairwell entrances.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

C1020.03 Interior Fire Doors*

Interior fire doors, located in stairwells and the ends of corridors consist of double and single, painted, wood doors set in painted steel frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

C1020.04 Interior Sliding and Folding Doors*

Accordion folding door in library.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

C1030.01 Visual Display Boards**

Visual display boards consist of smart boards, white boards, black boards, and tack boards which are located in the classrooms and in some corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	20	FEB-12

Event: Replace visual display boards (BOE 27 tack, 43 white boards)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$49,000	Unassigned

Updated: FEB-12

C1030.02 Fabricated Compartments (Toilets/Showers)**

Pre-finished metal partitions are located in the washrooms of the school to separate the toilet stalls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Replace metal toilet partitions (BOE = 21 stalls)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$28,000	Unassigned

Updated: FEB-12

C1030.05 Wall and Corner Guards*

Metal corner guards at various locations of exposed gypsum board wall corners.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

C1030.06 Handrails*

Plastic/rubber-clad, steel handrails and painted steel pipe handrails are located along all interior stairs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

C1030.08 Interior Identifying Devices*

Room number and identification labels are mounted on the doors of classrooms, offices, utility rooms, etc.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

C1030.14 Toilet, Bath, and Laundry Accessories*

Washrooms are equipped with standard soap dispensers, mirrors, paper towel dispensers and garbage containers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

C2010 Stair Construction*

Interior stairs are typically painted concrete-framed structures.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

C2020.05 Resilient Stair Finishes**

Stairs are typically finished with resilient treads.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	20	FEB-12

Event: Replace resilient stair treads (BOE 36 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$4,000	Unassigned

Updated: FEB-12

C2020.08 Stair Railings and Balustrades*

Stair railings are typically painted pipe with painted wood panels.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

C3010.01 Concrete Wall Finishes (Unpainted)*

Concrete walls in the basement are both an exposed concrete finish and a painted finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

C3010.06 Tile Wall Finishes**

The finish on the lower part of the washroom walls is ceramic tile.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	40	FEB-12

Event: Replace ceramic wall tile in washrooms (BOE = 63 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$16,000	Unassigned

Updated: FEB-12

C3010.09 Acoustical Wall Treatment**

Acoustic, wooden wall paneling is located in the gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	20	FEB-12

Event: Replace Acoustical Wall Treatment (BOE = 300 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$72,000	Unassigned

Updated: FEB-12

C3010.11 Interior Wall Painting*

All areas of the school, with the exception of the classrooms, were repainted in 2006.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	0	JAN-07

C3010.14 Other Wall Finishes*

Brick veneer of original building retained as interior wall finish at connection to 1966 addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

C3020.01.02 Painted Concrete Floor Finishes*

some concrete floors in the basement have received a painted finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	FEB-12

C3020.02 Tile Floor Finishes**

The floor finish in the washrooms is quarry tile.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	50	FEB-12

Event: Replace Tile Floor (BOE =140 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$35,000	Unassigned

Updated: FEB-12

C3020.03 Terrazzo Floor Finishes*

The floor in the Music Room, work room and multi-purpose room is terrazzo.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

C3020.04 Wood Flooring**

The Stage in the original gymnasium and the Gymnasium in the 1966 addition have hardwood strip flooring (complete with sporting event lines).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	30	FEB-12

Event: Replace Gymnasium and Stage wood flooring (BOE =310 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$86,000	Unassigned

Updated: FEB-12

C3020.07 Resilient Flooring - Gym**

New sports floor in Aux. gym.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
6 - Excellent	2010	20	FEB-12

Event: Replace Gym Flooring (BOE 253 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$89,000	Unassigned

Updated: FEB-12

C3020.07 Resilient Flooring - Sheet flooring**

Approximately one half of the corridors in the school are finished with resilient sheet flooring.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	20	FEB-12

Event: Replace resilient sheet flooring in corridors (BOE = 790 sq m)

Recommendation:

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<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$75,000	Unassigned

Updated: FEB-12

C3020.07 Resilient Flooring - Tile flooring**

Resilient tile flooring is located in approximately one half of the corridors and in the classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	20	FEB-12

Event: Replace resilient tile flooring in corridors and classrooms with sheet flooring.(BOE = 3900 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$320,000	Unassigned

Updated: FEB-12

C3020.08 Carpet Flooring**

Carpet is located in the library and the office area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	15	FEB-12

Event: Replace carpet flooring (BOE = 30 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$30,000	Unassigned

Updated: FEB-12

C3030.01 Concrete Ceiling Finishes (Unpainted)*

The Storage Room in the basement is an exposed concrete finish. The remainder of the ceilings in the basement area are a painted finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

C3030.06 Acoustic Ceiling Treatment (Susp. T-Bar)**

Suspended T-bar ceilings with acoustic tiles are located throughout approximately one half of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	25	FEB-12

Event: Replace Acoustic Ceiling (Susp.T-Bar) (BOE = 3000 sq m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$135,000	Unassigned

Updated: FEB-12

C3030.07 Interior Ceiling Painting*

Painted gypsum board ceilings are mainly located in utility rooms, closets, and washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	0	JAN-07

S4 MECHANICAL

D2010.04 Sinks** - Janitors Sinks

Iron enamel, original wall mounted / pedestal type Janitors sinks, 4 in total are located in Custodial closets on the main and second floors (2 per floor).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Replace Janitors Sinks BOE 4 sinks

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$8,496	Unassigned

Updated: FEB-12

D2010.04 Sinks** - Stainless Steel

Stainless Steel sinks located in classrooms and staff lounge.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

<u>Capacity Size</u>	<u>Capacity Unit</u>
Large single tub	N/A

Event: Replace sinks BOE (35)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$50,400	Unassigned

Updated: FEB-12

D2010.05 Showers**

A single shower stall is located on the second floor in the staff bathroom.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Replace Shower BOE (1)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$2,500	Unassigned

Updated: FEB-12

D2010.08 Drinking Fountains/Coolers**

There are 10 non-refrigerated vitreous china drinking fountains in the building. Evidence that these fountains have been replaced in the past is apparent. Best estimate is 2005.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2005	35	FEB-12

Event: Replace drinking fountains BOE (10)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2040	\$15,750	Unassigned

Updated: FEB-12

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

There are 29 vitreous china lavatories in various bathrooms throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	35	FEB-12

Event: Replace lavatories BOE (29)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$35,860	Unassigned

Updated: FEB-12

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

There are 19 floor-mounted vitreous china urinals in the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	35	FEB-12

Event: Replace urinals - BOE (19)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$29,640	Unassigned

Updated: FEB-12

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

There are 29 vitreous china water closets in the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	35	FEB-12

Event: Replace water closets BOE (29)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$45,950	Unassigned

Updated: FEB-12

D2020.01.01 Pipes and Tubes: Domestic Water*

Domestic water piping is copper throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

D2020.01.02 Valves: Domestic Water**

Domestic water valves of sizes up to 2" are installed for isolation at the water meter and BFP devices. Various ball valves have been installed on the copper water lines throughout the building. Exact age of the valves is not know, but all seem to be in Good condition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	40	FEB-12

Event: Replace DW valves - BOE (24)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$26,185	Unassigned

Updated: FEB-12

D2020.01.03 Piping Specialties (Backflow Preventers)**

Backflow prevention devices (5 in total) are installed for the domestic water supply, (2 @ 2"), boiler feed water supply BFP device installed in 2003 (1 @ 3/4"), the main fire protection standpipe system(1 @ 2") and the irrigation system(1 @ 3"). The second floor mechanical rooms that house swamp coolers also have back flow prevention devices (2 in total).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1995	20	FEB-12

Event: Replace Backflow Prevention BOE (7)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$20,375	Unassigned

Updated: FEB-12

D2020.02.02 Plumbing Pumps: Domestic Water**

A Grundfoss (Type UP 15-42SF) hot water recirculation pump is installed on the piping next to the DHWT in the mechanical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2002	20	FEB-12

Event: Replace Pumps: Domestic Water Recirc. BOE (1)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2022	\$1,250	Unassigned

Updated: FEB-12

D2020.02.06 Domestic Water Heaters**

Domestic hot water is provided by a natural gas (42000BTUH input) fired John Wood (model: JW502NA) tank with a volume of 189 L, and a recovery rate of 135 liters / hour.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2002	20	FEB-12

Event: Replace Domestic Water Heater BOE (1)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2022	\$1,750	Unassigned

Updated: FEB-12

D2020.03 Water Supply Insulation: Domestic*

Most of the exposed piping throughout the building is insulated with canvas backed insulation. The piping at the main DW tree has not been re-insulated since this service was upgraded.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	0	FEB-12

Event: Replace Water Supply Insulation: Domestic BOE (20M)

Concern:

Un-insulated portions of the piping can cause condensation.

Recommendation:

Insulate all exposed DW piping in the mechanical room and DW meter room.

Consequences of Deferral:

Condensation on DW piping and longer waiting times for cold water at faucets.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$1,500	Low

Updated: FEB-12

D2030.01 Waste and Vent Piping*

Waste and vent piping is generally cast iron and original to the construction of the building. A new portion of sanitary line under the aux. gym was replaced in 2010, and partially rerouted through the ceiling space of the mechanical room..

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

D2030.02.04 Floor Drains*

Brass Floor Drain grates in bathrooms are clear and free of debris.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

D2030.03 Waste Piping Equipment*

Sanitary sump and pump is located in the mechanical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

D2040.01 Rain Water Drainage Piping Systems*

Rain water drainage piping is generally cast iron and original to the building construction.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	JAN-07

D2040.02.04 Roof Drains*

The roof incorporates roof drains which are each fitted with gravel/debris strainers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1987	0	JAN-07

D3010.02 Gas Supply Systems*

The natural gas supply is provided from a new meter and regulator assembly located on the north exterior and then feeds below grade on the west side of the building to the the boiler and domestic hot water tank in the basement mechanical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1963	0	FEB-12

D3020.02.01 Heating Boilers and Accessories: H.W.**

Heating is provided to the building via two newer Super Hot Boilers (Model number: AAE3000-N-E-MOD, 270,000 BTU/HR) hot water boilers for the entire school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2009	35	FEB-12

Event: Replace boilers BOE (2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2044	\$102,300	Unassigned

Updated: FEB-12

D3020.02.02 Chimneys (& Comb. Air): H.W. Boiler**

New breeching for the boilers and combustion air / relief air was upgraded during recent boiler upgrades.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2009	35	FEB-12

Event: Replace Boiler Venting BOE (12M)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2044	\$55,000	Unassigned

Updated: FEB-12

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

Side stream pot feeder and in line filter installed during recent boiler upgrade.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2009	0	FEB-12

D3040.01.01 Air Handling Units: Air Distribution**

Ventilation is provided by air handling systems for the original 1963 building, the 1966 addition and one for the aux. gym. All units consist of Outdoor air intakes plenums complete with pneumatic dampers, mixing sections, hot water preheat coils, supply fans and swamp coolers each with their own internal fans The DW to the swamp coolers is not being used, but the swamp cooler internal fans are being used as part of the ventilation / supply air system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Replace air handing systems BOE (3)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$263,446	Unassigned

Updated: FEB-12

D3040.01.03 Air Cleaning Devices: Air Distribution*

Filter banks are located in the intake air plenum rooms on the second floor fan rooms. Each filter rack is approximately 8' x 10' in size.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

D3040.01.04 Ducts: Air Distribution*

Supply air ducting where visible is galvanized steel with externally wrapped insulation.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

D3040.01.07 Air Outlets & Inlets: Air Distribution*

Supply air diffusers and return air / exhaust air grills and grates are metal / aluminum construction.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

D3040.03.01 Hot Water Distribution Systems**

Heating distribution is through original cast iron piping to fin tube convectors mostly located along perimeter walls, hydronic unit heaters and fan coil units located at entrance vestibules / interior corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	40	FEB-12

**Event: Replace Hot water Heating distribution system
BOE (5,305 m2)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$68,975	Unassigned

Updated: FEB-12

D3040.04.01 Fans: Exhaust**

Washroom exhaust is provided by roof mounted dome exhaust fans that seem to be newer than original. A second floor janitors room and the main floor Data / Storage Room each have an exhaust fan installed flush mounted in the ceiling that seem to be newer than original. The roof mounted dome exhausters seem to be original vintage but replacement motors for the fans may have been installed. Verification of this entails removal of access covers through the use of tools. Some of the domes on the roof exhausters are badly damaged / dented from the elements and years of maintenance. There are a total of 5 dome exhausters on the roof, varying in size from 1000 CFM to 2500 CFM.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1990	30	FEB-12

Event: Failure Replacement BOE (3)

Concern:

Three fans have heavy damage to the housing and are the covers are not capable of being properly secured. Highly possible that cover could blow off and create a hazard.

Recommendation:

Replace three fans.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$6,100	Medium

Updated: FEB-12

Event: Replace Fans: Exhaust (2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2020	\$2,950	Unassigned

Updated: FEB-12

D3040.04.03 Ducts: Exhaust*

Exhaust air ducting where visible is galvanized steel.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

D3040.04.05 Air Outlets and Inlets: Exhaust*

Exhaust air grills and grates are metal / aluminum construction. Some grills were covered in dust bunnies.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12



IMG_2772.jpg

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)**

There are two Carrier Cooling only roof top units (that supply cooling to the library and the computer room. The units each have a cooling capacity of 4 tons.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2001	30	FEB-12

Event: Preventative Maintenance BOE (5 hours labour)

Concern:

One of the two roof top units has a condenser coil that has the coil fins badly crushed on nearly the entire coil face. This greatly decreases the efficiency of the cooling and increases the chance of premature breakdown of this units cooling system.

Recommendation:

Comb all condenser coil fins to "as new" condition.

Consequences of Deferral:

Poor cooling efficiency and premature system breakdown.



IMG_2705.jpg

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2012	\$1,000	High

Updated: FEB-12

Event: Replace RTU BOE (2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2031	\$72,900	Unassigned

Updated: FEB-12

D3050.03 Humidifiers**

There are three swamp coolers that are located in the second floor fan rooms. Two in one fan room and a single unit in the other fan room. These units can be used for humidification but are not being used as such. The filter media and panels are encrusted with scale.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	25	FEB-12

Event: Install Humidifiers BOE (3) + 2 days labour removal costs

Concern:

Swamp coolers need to be removed and new steam humidifiers installed. The existing coolers restrict airflow and are a source of air contamination.

Recommendation:

Install three steam humidifiers and remove swamp coolers

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2015	\$37,300	Medium

Updated: FEB-12

D3050.05.01 Convectors**

There are approximately 100 convectors providing heat to classrooms, and specialty rooms throughout the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	40	FEB-12

Event: Replace convectors BOE (100)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$289,791	Unassigned

Updated: FEB-12

D3050.05.02 Fan Coil Units**

Fan coils units or Force flow Heating units / Hot water heating unit heaters are located in the foyer or close to the interior entrance doors to the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Replace Fan Coil Units BOE (4)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$22,339	Unassigned

Updated: FEB-12

D3050.05.03 Finned Tube Radiation**

Fin tube radiation is located in baseboard heating cabinets ran around the perimeter walls of the facility, in classrooms, storage rooms, gymnasiums and the like.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	40	FEB-12

Event: Replace Radiation BOE (5,305 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$247,000	Unassigned

Updated: FEB-12

D3060.02.01 Electric and Electronic Controls**

Electric controls consist of line voltage thermostats for the force flow heaters / fan coils and the various controls relays and contactors for the interconnection of the pneumatic and newer EMCS system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Replace Controls BOE (5305 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$8,900	Unassigned

Updated: FEB-12

D3060.02.02 Pneumatic Controls**

Building controls are electro pneumatic controls and provide little to no energy management functions. Control air is provided by a 1984 Honeywell compressor and air dryer located in the boiler room. HVAC control panels are located in Caretakers office on main and second floors. Unlike the majority of the schools there is no BMCS front end.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	40	FEB-12

Event: Install BMCS BOE (5,305 m2)

Concern:

Without a BMCS energy is wasted due to equipment operating on manual or time clock basis.

Recommendation:

Install a BMCS front end to interface with the pneumatic controls and HVAC equipment.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Energy Efficiency Upgrade	2012	\$133,200	Medium

Updated: FEB-12

Event: Replace building controls BOE (5305 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$30,900	Unassigned

Updated: FEB-12

D4020 Standpipes*

The building is equipped with a cast iron standpipe system connected to fire hoses throughout the building. Yearly inspections are carried out, last inspection completed 2011.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1963	0	FEB-12

D4030.01 Fire Extinguisher, Cabinets and Accessories*

Fire extinguishers are located at fire hose stations throughout the building. There are also pull stations located adjacent to main exits.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1998	0	JAN-07

S5 ELECTRICAL

D5010.01.02 Main Electrical Transformers (Utility Owned)*

Pad mounted transformer located at west side of school. Owned by Enmax.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

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

800 Amp, 120/208 Volt, 3 Phase main service by Federal Pioneer. Main bus is 1200 Amp and is 40% full.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	40	FEB-12

Event: Replace 800 Amp main service and 1200 Amp MDP.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2041	\$97,032	Unassigned

Updated: FEB-12

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

One Westinghouse CDP, 5 Westinghouse Panels, 7 Federal Pioneer Panels and 2 Square D panel. Panels are 80% full.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Replace 15 subdistribution panels and related breakers.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$45,000	Unassigned

Updated: FEB-12

D5010.07.02 Motor Starters and Accessories**

5 Allen Bradley, 3 General Electric and 7 Telemecanique stand alone starters.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	30	FEB-12

Event: Replace 15 motor starters.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$7,500	Unassigned

Updated: FEB-12

D5020.01 Electrical Branch Wiring*

Electrical wiring in EMT conduit and AC90 for final connection to motors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

Event: **Add 50 new receptacles in classrooms.**

Concern:

Shortage of receptacles in classrooms.

Recommendation:

Install 50 new receptacles in classrooms.

Consequences of Deferral:

Possible loss of power to equipment. Tripping hazard due to over use of extension cords.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Program Functional Upgrade	2012	\$10,000	Medium

Updated: FEB-12

D5020.02.01 Lighting Accessories: Interior (Lighting Controls)*

Line voltage switches located in classrooms an administration areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

D5020.02.02.02 Interior Fluorescent Fixtures - 1963**

50% of the school is lit using pendant, 2x4 and 1x4 fluorescent light fixtures c/w T12 lamps.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	30	FEB-12

Event: **Replace 530 fluorescent light fixtures**

Concern:

Half the lighting system uses T12 lamps and magnetic ballasts. Lenses are yellowed.

Recommendation:

Replace 530 light fixtures with new T8 fluorescent light fixtures.

Consequences of Deferral:

Possible loss of lighting in some areas. High maintenance and operating costs.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$159,000	Medium

Updated: FEB-12

D5020.02.02.02 Interior Fluorescent Fixtures - 2002**

50% of the school is lit using pendant, 2x4 and 1x4 fluorescent light fixtures c/w T8 lamps.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2002	30	FEB-12

Event: Replace 530 light fixtures

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2032	\$159,000	Unassigned

Updated: FEB-12

D5020.02.03.02 Emergency Lighting Battery Packs**

Lumacell battery packs and related remote heads located as required.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	20	FEB-12

Event: Replace 20 Battery packs and 50 remote heads

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2018	\$20,000	Unassigned

Updated: FEB-12

D5020.02.03.03 Exit Signs*

Lumacell Led exit signs located as required.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	0	FEB-12

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

Wall packs located at required exits and common use areas around the school exterior.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	0	FEB-12

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

Photocell controlled.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	0	FEB-12

D5030.01 Detection and Fire Alarm**

Mircom FX2000 fire alarm control panel c/w 14 zones. Detection and initiating devices, Bells and strobes located as required.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2004	25	FEB-12

Event: Add five bell strobes in public washrooms and Music Room.

Concern:

Public wash rooms and music room do not have bells and strobes in them.

Recommendation:

Install five strobes and bells in Music room and Wash rooms.

Consequences of Deferral:

Possible loss of fire alarm notification due to ambient noise.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2012	\$2,000	Medium

Updated: FEB-12

Event: Replace fire alarm system for a 5305 m2/gfa

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2029	\$153,854	Unassigned

Updated: FEB-12

D5030.02.02 Intrusion Detection**

Silent Knight control panel. Card swipe access and detection sensors at required locations.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	25	FEB-12

Event: Replace security system for a 5305 m2/gfa.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2025	\$53,050	Unassigned

Updated: FEB-12

D5030.03 Clock and Program Systems*

Telequartz clock system controls the main clocks and bells.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1995	0	FEB-12

D5030.04.01 Telephone Systems*

Northern Telecom Meridian. Handsets in the classroom.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1995	0	FEB-12

D5030.04.05 Local Area Network Systems*

Cat5 cabling. Fiberoptic cable connects the two servers rooms. Supernet and WIFI in school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	0	FEB-12

D5030.05 Public Address and Music Systems**

48 Channel Bogen PA system c/w radio and tape player. Audio-Vox speakers in classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	20	FEB-12

Event: **Replace Public Address system for a 5305 m2/gfa.**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$21,916	Unassigned

Updated: FEB-12

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.03 Theatre and Stage Equipment*

Manually operated, folding curtains and drapes are provided for the gymnasium stage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

E1090.04 Residential Equipment*

A fridge, range, dishwasher and micro wave oven are located in the staff room. A clothes washer is located in the basement.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	0	FEB-12

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

The gymnasiums contain wall-mounted electronic scoreboards, wall-mounted basketball hoops, and ceiling-mounted (and operable) basketball hoops.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

Event: (Completed 2011) Code Upgrade

Concern:

Improve safety

Recommendation:

Improve safety

Consequences of Deferral:

Potential of injury to equipment user

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Upgrade	2011	\$3,300	Low

Updated: AUG-11

E2010.02 Fixed Casework**

Fixed wooden casework with laminated or painted finishes along walls, sink cabinets, wall mounted coat hook wood backing are typically installed in classrooms.

Library control desk, wood and metal wall and free standing book shelving, work counters and storage cabinets.

Staff room kitchen cabinets, wood storage shelving, work room counters and storage cabinets, coat closet rods and shelves.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	35	FEB-12

Event: Replace fixed casework (BOE 5000 m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$440,000	Unassigned

Updated: FEB-12

E2010.03.01 Blinds**

Metal slat, operable blinds are located over the exterior windows in the classroom and office areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	FEB-12

Event: Replace window blinds BOE 120 windows

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$80,000	Unassigned

Updated: FEB-12

E2020.02.02 Systems Furniture*

Moveable desks, chairs, and tables are located in all classrooms and office areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

S8 SPECIAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance*

No designated handicap stalls, drop-off areas, or signage are provided for the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1963	0	FEB-12

Event: Install a barrier free drop-off zone

Concern:

The parking lot has no designated handicap stalls and is gravel surfaced. There is no curb cut on Northmount Drive to provide a handicap drop-off zone.

Recommendation:

Install a curb cut on Northmount Drive at the main entrance (or at the northeast end of the school) and provide a designated drop-off zone for the handicapped complete with signage.

Consequences of Deferral:

Non-compliance with current barrier-free standards and poor accessibility for handicapped persons.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2012	\$8,000	Low

Updated: FEB-12

K4010.02 Barrier Free Entrances*

All entrances to the school are manually-operated (i.e., no automated door-openers).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1963	0	FEB-12

Event: Install automated entrance door opener.

Concern:

The main entrance doors are not equipped with an automatic door opener.

Recommendation:

Install automatic door opener at the main entrance on the north side of the school.

Consequences of Deferral:

Non-compliance with current barrier-free codes/standards and an impedance for handicapped users.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2012	\$4,000	Low

Updated: FEB-12

K4010.03 Barrier Free Interior Circulation*

There is no elevator or other mechanical means of vertical transportation to allow barrier free access to the second floor or to the stage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1963	0	FEB-12

Event: Install elevator to access second floor

Concern:

There is no elevator, lift, or other mechanical means of barrier free access to the second floor or the stage.

Recommendation:

Install hydraulic elevator to provide barrier free access to second floor and a barrier free lift to the stage.

Consequences of Deferral:

Non-compliance with current barrier-free codes/standards and an impedance for handicapped users.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2012	\$110,000	Low

Updated: FEB-12

K4010.04 Barrier Free Washrooms*

None of the washrooms in the building are equipped to accommodate barrier-free usage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1963	0	FEB-12

Event: Upgrade washrooms for barrier free usage

Concern:

Washrooms are not equipped with barrier-free stalls or accessories.

Recommendation:

Provide a boys and a girls barrier-free washroom on each floor of the school.

Consequences of Deferral:

Non-compliance with current barrier-free requirements and poor accessibility for handicapped persons.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2012	\$30,000	Medium

Updated: FEB-12

K4030.01 Asbestos*

No asbestos observed or reported. The school board conducts assessment reports and monitors conditions for any construction work.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

K4030.02 PCBs*

No PCB's were observed or reported.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

K4030.04 Mould*

No mould was reported or observed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12

K5010.01 Site Documentation*

Prime Consultant; ARUP DATTA ARCHITECT LTD.

Year of Evaluation: 2011

Site description::

The property is trapezoid-shaped and is bounded on the north by Northmount Drive NW, on the south by Burgess Drive NW, on the east by Brantford Drive NW, and on the west by residential development. The school sits on the west side of the property. Gravel surfaced parking areas are located on the west side and southwest corner of the property. Asphalt paved playgrounds are located on the south and east sides of the school building. Soft landscaping (consisting of grassed areas, trees, bushes, hedges) is located along the north side and the southwest corner of the school. Asphalt and concrete sidewalks are situated on the north and east sides of the school.

Storm water drains to the city from the parking lot and roof drains. Facility is connected to the city water and sewer system. All utilities enter the facility through underground lines The gas and water enter at the west side of the building. Irrigation is available and hose bibs are spaced around the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12



Parking lot at rear of building

K5010.02 Building Documentation*

Prime Consultant; ARUP DATTA ARCHITECT LTD.

Year of Evaluation: 2011

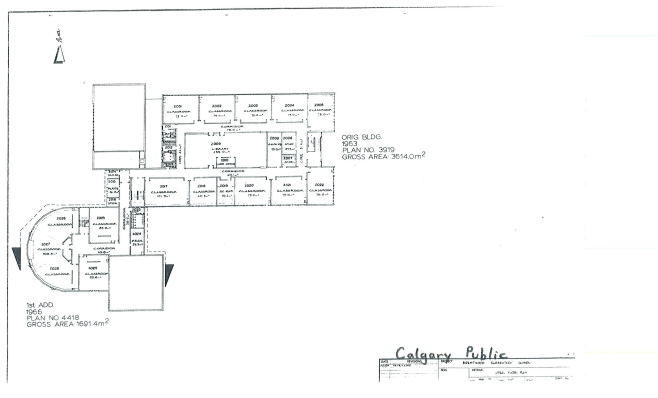
The Brentwood Elementary School, is a two storey structure with partial basement that was originally constructed in 1963. An addition of 1691.4 m² of similar construction was erected in 1966 at the southwest corner of the original building. The school has a total floor area of 5305.4 m².

Building area evaluated: All areas evaluated

Building /building sections not evaluated: None

Anomalies regarding evaluation environment, drawings or areas evaluated: None

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	FEB-12



Second floor plan