RECAPP Facility Evaluation Report

Calgary School District #19



Dr. E. P. Scarlett High School B2601A Calgary

Report run on: January 11, 2013 10:00 AM

Calgary - Dr. E. P. Scarlett High School (B2601A)

Facility Details		Evaluation Details		
Building Name:	Dr. E. P. Scarlett High Schor	Evaluation Company:	ARUP DATTA ARCHIT	ECT LTD.
	220 Canterbury Drive S. W.	Evaluation Date:	August 14 2012	
Location:	Calgary	Evaluator Name:	Brian Dennis	
Building Id:	B2601A			
Gross Area (sq. m):	16,579.30			
Replacement Cost:	\$53,154,000			
Construction Year:	1969	Total Maintenand	ce Events Next 5 years:	\$12,704,549
General Summary:		5 year Facility Co	ondition Index (FCI):	23.90%

The Dr. E.P. Scarlett High School is a two-storey, masonry block framed structure with a basement, and was constructed in 1969. The school building has a total floor area of approximately 17,218 square metres. General modernizations were conducted throughout the building interior over the past seven years.

Structural Summary:

Structural drawings were not available during the assessment, however the school foundations consist of a cast-in-place concrete assembly with grade beams and pad footings. The basement is constructed of cast-in-place concrete. All portions of the school have load-bearing masonry block walls and reinforced, cast-in-place concrete floors. The roof structural frame for all sections of the school is comprised of metal deck supported by open web steel joists and steel wide flange beams.

No major work associated with the school structure was identified during the assessment.

Overall, The structure is in acceptable condition.

Envelope Summary:

The exterior cladding of the school consists of clay brick veneer and stucco. The roof sections are protected with a modified bitumen membrane (SBS) assembly. Entrance doors are typically wood doors and exit doors are wood and metal doors set in painted metal frames. Windows on the exterior of the building consist of fixed and operable insulating glazing units set in aluminum frames.

Major work recommended includes:

- replace the caulking.
- replace the wood siding
- replace wood entrance doors

Overall, the envelope is in acceptable condition.

Interior Summary:

The library, some admin offices, some classrooms, and the music room have carpet flooring. The majority of the school has either vinyl sheet or vinyl tile flooring. The entrances and one washrooms are finished with quarry floor tiles. Mechanical spaces and storage rooms and students washrooms have painted/sealed concrete floors. The majority of the interior walls consist of painted masonry block and painted gypsum board walls. The majority of the building has either a suspended acoustic T-bar ceiling.

Major work recommended includes:

- replace the carpet flooring
- replace resilient stair finish

- upgrade four barrier-free washrooms on the main and second floor multi-purpose washrooms make barrier-free completely.

No minor work associated with the school envelope was identified during the assessment.

Overall, the interior finishes are in acceptable condition.

Mechanical Summary:

The ventilation in the school is provided by several air handling units and a make up air unit. An air cooled chiller was

installed in 2004. Heating of the building is provided by radiation heaters and tempered air through reheat coils. The building is not equipped with a sprinkler system. A fire department connection is provided on the exterior wall of the building. The BMCS was added in 2011 including energy efficiency measures such as solar heated domestic hot water and solar wall to preheat outside air.

The following are recommended actions for the next five years:

- -renovate the supply air distribution system
- -replace/repair failed heating piping distribution system equipment.
- -replace lab sinks in cooperation with lab modifications.
- -replace residential quality hot water heater with tank suitable for the solar system.
- -investigate modifications/repairs required to make art room meet code.
- -replace roof drain inlet strainers.

Overall the mechanical system is in acceptable condition.

Electrical Summary:

The main electrical service is 1600 Amps, 277/480 Volts, 3 Phase, 4 wire. The electrical sub-panels and wiring are combination of original and 2000 installation. Three motor control centers control the HVAC operations. T8 light fixtures installed throughout the school. Fire alarm system is reaching its theoretical life in 2013. Public address system and telephone system are operational. Computer network equipment are located in 11 rooms and interconnected via a fiber-optic backbone network. WIFI throughout the school. LED Exit signs and emergency lighting through T8 fixtures are connected to the emergency generator.

The following are recommended actions for the next five years:

- Replace remaining original 1969 panels.

-upgrade and replace the fire alarm system.

Overall the electrical systems in the building are in acceptable 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*

Construction drawings were not available for review however the assumption is that the foundations consist of cast-inplace concrete frost walls and strip footings.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

A1030 Slab on Grade*

The main floor and the basement floor consist of cast-in-place concrete slab-on-grade.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

A2020 Basement Walls (& Crawl Space)*

The basement has cast-in-place concrete foundation walls.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

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

Load-bearing cast-in-place concrete walls support the main floor over the basement area. Load-bearing masonry block walls throughout the building support the second floor and roof structure.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

B1010.03 Floor Decks, Slabs, and Toppings*

The second floor slab is, located on the east side of the school, consists of a reinforced suspended concrete floor slab.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

B1010.05 Mezzanine Construction*

Several mezzanines located throughout the school have concrete floor finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

B1010.09 Floor Construction Fireproofing*

Fire proofing of the floor structure is integral in the concrete slab.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

B1010.10 Floor Construction Firestopping*

mechanical and electrical through-slab conduit and pipe penetrations are sealed with a fire rated sealant.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

B1020.01 Roof Structural Frame*

The structural frame for the roof consists of metal decking supported by open web steel joists and steel wide flange beams.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	MAR-08

B1020.06 Roof Construction Fireproofing*

No fire proofing installed to roof which is exposed metal deck on steel structure.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

The majority of the school building is clad with clay brick. Staining were noticed mainly to the window sills and on front facade (next to the main entrance) and should be cleaned (maintenance item). Some portions of brick facade has paint finish due to grafiti.

There is a hole on north east facade, requires to be sealed.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

B2010.01.02.02 Concrete Block: Ext. Wall Skin*

Painted masonry blocks are provided on the three walls of a storage to the north east of building.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

B2010.01.06.03 Metal Siding**

Pre-finished metal siding is installed to south wall of north wing and west wing at upper level.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2009	40	JAN-13

Event: Replace metal siding (BOE 350 sqm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2049	\$122,500	Unassigned

Updated: JAN-13

B2010.01.06.04 Wood Siding**

Painted wood siding to the exterior louvers and to the higher parapet wall over mechanical room.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1969	40	JAN-13

Replace with pre-finished metal louvres to match Event: existing (BOE 16 sqm.)

Concern:

Painted wood siding to the parapet wall is stained and some rot and loose. **Recommendation:** Replace with Pre-finished metal louvers.

Consequences of Deferral:

Loss of aesthetic beauty.

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2013	\$5,600	Low

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

Stucco accents are provided on west facade of aux. Gymnasium and above entrance doors and windows around the perimeter of the building. A horizontal stucco band is provided in between two floors. Water stains were observed at the window sills of 2nd floor.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

B2010.01.09 Expansion Control: Ext. Wall*

Construction joints are provided at periodic intervals within the brick cladding system for expansion control. These joints are sealed with caulking which is deteriorated. Refer to B2010.01.11 Joint Sealers (caulking): Ext. Wall for replacement of caulking.

Rating	Installed	Design Life	<u>Updated</u>
3 - Marginal	1969	0	JAN-13

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

Joint sealant is applied to control joints and around the perimeters of exterior window units and doors on all sides of the building. Flashing on roof is also sealed with caulking.

Rating	Installed	Design Life	<u>Updated</u>
3 - Marginal	1980	20	JAN-13

Event: Replace caulking (BOE 1250 lm.)

Concern:

Sealant around window units and exterior doors on the school perimeter, in control joints is cracked, de-bonded and non-pliable. In some locations caulking started coming off.

Recommendation:

Replace all caulking in control joints and around windows and doors.

Consequences of Deferral:

Potential moisture ingress to the building envelope.

Туре	Year	Cost	Priority
Failure Replacement	2013	\$36,400	High

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

Exterior doors have paint finish.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2006	15	JAN-13

Event: Repaint exterior 44 doors

Туре	Year	Cost	Priority
Lifecycle Replacement	2021	\$17,200	Unassigned

Updated: JAN-13

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

Cast-in-place concrete walls at lower portion above grade.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

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

Exterior back up walls are load-bearing masonry block walls.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

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

Architectural drawings were not available for review as part of the assessment; however the exterior wall assembly for the school is presumably equipped with insulation. The type and extent of materials used could not be reviewed visually, and exterior wall cavities were not accessed during the site visit. It is unlikely that a vapour retarder was used in this age of building and this style of construction.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

B2010.06 Exterior Louvers, Grilles, and Screens*

Pre-finished metal louvers are located in exterior walls around building's perimeter to support air flow and ventilation within the school. Pre-finished metal screens are provided to the lower exterior windows for impact protection.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

B2010.09 Exterior Soffits*

The soffits to the entrance doors canopies painted-stucco.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

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

Exterior windows on the building consist of fixed and operable, sealed insulating glazing units set in pre-finished aluminum frames. Wood trim is around the windows to the interior. Loose seal and missing operated handle were observed in second floor classrooms. Should be repaired as maintenance item (estimate less than \$1000). For wood trim around windows refer to C3010.13 Wall Trim and Decoration.

Clearstory windows in lunch room and mechanical room are fixed, sealed and insulating glazing units set in pre-finished aluminum frames.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	40	JAN-13

Event: Replace the exterior windows (BOE 275 sqm.)

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2016	\$317,000	Unassigned

Updated: JAN-13

B2030.01.02 Steel-Framed Storefronts: Doors**

Painted wood doors in pressed steel frames with sidelites or transom, are located in the main entrance on the south side, other entrances on north side, east side of the building and consists of painted steel doors with adjacent glazing set in painted pressed steel frames.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1969	30	JAN-13

Event: Replace with 11 metal doors

Concern:

Exterior wood doors and hardware are past life cycle and increased maintenance is required. Weather stripping at the bottom of doors are missing. Faded paint was observed and wood is delaminated.

Recommendation:

Replace doors with metal doors

Consequences of Deferral:

Further deterioration poor air seal and poor visual image.

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2014	\$11,000	Low

B2030.02 Exterior Utility Doors** - Metal

Painted metal doors set in painted pressed steel frame are located to the several rooms on main floor and one in mechanical room to roof.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	40	JAN-13

Event: Replace 15 metal doors

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2040	\$18,000	Unassigned

Updated: JAN-13

B2030.02 Exterior Utility Doors** - Wood

Painted wood doors set in painted pressed steel frame are located to the exits and storage. Some exit doors include glazed sidelites and wood sidelites. Loose kickplates were observed on some doors.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	40	JAN-13

Event: Replace with 20 metal doors

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2016	\$20,000	Unassigned

Updated: JAN-13

B2030.03 Large Exterior Special Doors (Overhead)*

Three steel sectional rolling overhead doors are located in the automotive shop and electrical shop and shop no. 140. One door is a new insulated door

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

Event: Replace with 2 insulated steel overhead doors

Concern: Overhead doors in electrical shop and shop no. 140 are not insulated. Recommendation: Replace with steel insulated doors. Consequences of Deferral: Poor air quality in the interior and also consumes more

energy.

Туре	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Energy Efficiency Upgrade	2013	\$12,800	High

B3010.01 Deck Vapour Retarder and Insulation*

drawings were not reviewed during the assessment and no ceiling cavities were entered as part of the site visit, however the roof system is presumed to have a vapour retarder and insulation.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

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

Roofing consists of a modified bitumen membrane (SBS) assembly. No roof leaks were reported. Water ponding and bubbles were observed in several locations; which need to be monitored.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1991	25	JAN-13

Event: Replace the SBS roofing system (BOE 13895 sqm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$2,450,000	Unassigned

Updated: JAN-13

B3010.07 Sheet Metal Roofing** - Flashing and Sheet Metal

Pre-finished sheet metal and flashing is provided to parapet wall (upto 8' high). Caulking at flashing joint has failed. Foe caulking refer to B2010.01.11 Joint Sealers (caulking) : Ext. Wall.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1969	40	JAN-13

Event: Replace flashing and sheet metal (BOE 180 msq sheet metal, 435 lm flashing)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$19,500	Unassigned

Updated: JAN-13

B3010.08.02 Metal Gutters and Downspouts**

A metal gutter and downspout is located on the southwest corner of the building to drain the roof over the stairwell.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	30	JAN-13

Event:	Replace the metal gutter	and de	ownspout (BOE 20	2
	Type	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
	Lifecycle Replacement	2016	\$4,000	Unassigned

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

An interior metal roof hatch and fixed (wall-mounted) internal ladder provide access to the school roof from the operator's facility room on the second floor.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1969	0	MAR-08

S3 INTERIOR

S3 INTERIOR			
C1010.01 Interior Fixed Pa	rtitions* - M	lasonry	
Partition walls in the basem	ent and on th	ne main floor	mainly consist of load-bearing masonry block walls.
Rating 4 - Acceptable	Installed 1969	Design Life 0	Updated JAN-13
C1010.01 Interior Fixed Pa			
The remainder of the interio	r walls on the	e main and se	econd floor are steel stud framed walls.
Rating 4 - Acceptable	Installed 1969	Design Life 0	<u>Updated</u> JAN-13
C1010.01.01 Cast-in-place	Concrete: F	Partitions	
The basement partition wall	s consist of o	cast-in-place	concrete walls.
Rating 4 - Acceptable	<u>Installed</u> 1969	Design Life 0	Updated MAR-08
C1010.02 Interior Demoun Demountable partitions are			chool separating classrooms and offices.
Rating 4 - Acceptable		Design Life 0	
C1010.03 Interior Operable	Folding Pa	anel Partition	I <u>S**</u>
A folding wood partition is lo	cated in the	gymnasium.	It is no longer in used reported by school board representative.
Rating 3 - Marginal	Installed 1969	Design Life 30	Updated JAN-13
Event: Replace with drop	o down curt	ain (BOE 220	<u>) sqm.)</u>
Concern: Wood folding partit Recommendation Replace with a dro	:	-	l.
Type Failure Replacement	Yea 201		Priority Low
Updated: JAN-13			

C1010.04 Interior Balustrades and Screens, Interior Railings*

Painted metal railings are provided along the open perimeters of all of the mezzanines throughout the school.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1969	0	MAR-08

C1010.05 Interior Windows*

Interior windows are located throughout of the school: eg. in the library, in classrooms, shops and offices, etc. The windows are single glazed or tempered glazing set in painted metal frames.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

C1010.07 Interior Partition Firestopping*

ce rooms.

Interior	partition firestopping is g	generally ir	nstalled arou	ind conduit and pipir	ng penetrations in	firewalls and s	service
<u>Rating</u> 3 - Margi		stalled <u>D</u> 1969	e <mark>sign Life</mark> 0	<u>Updated</u> JAN-13			
Event:	Repair penetration th (BOE 10 locations)	rough the	fire sepera	ition			
	Concern: The firewall penetratic second floor were lack Recommendation : Seal or repair the voic proper firestopping bar Consequences of De Potential accelerated r of a fire emergency.	ing require Is and gap rier. f erral:	ed firestoppin os as neces	ng. ssary to provide a			
	Type Repair	<u>Year</u> 2013	<u>Cost</u> \$1,200	<u>Priority</u> Medium			
	Updated: JAN-13						

C1020.01 Interior Swinging Doors (& Hardware)*

The majority of the interior swing doors throughout the school consist of painted wood doors set in painted metal frames with wired glass inserts and/or glazed sidelites.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1969	0	MAR-08

C1020.03 Interior Fire Doors*

Interior fire doors throughout the building are painted wood/ metal doors with wired glass inserts and/or glazed sidelites set in painted metal frames.

<u>Rating</u>	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

C1030.01 Visual Display Boards**

Whiteboards, blackboards and tackboards are provided in the classrooms, tackboards are provided in corridors throughout the school.

Rating	Installed	Design Life	Updated
3 - Marginal	1969	20	JAN-13

Event: Replace blackboards with whiteboards (BOE 16)

Concern: Obsolete. Recommendation:

Replace blackboards with whiteboards.

Туре	Year	Cost	Priority
Failure Replacement	2013	\$10,500	Low

Updated: JAN-13

Event: Replace the visual display boards (BOE whiteboards 190, tackboards 250)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$288,200	Unassigned

Updated: JAN-13

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

Stainless steel and painted metal stall partitions are provided in students' washrooms and in the girls' shower room in the basement.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace with painted metal stall partitions (Toliets/ Showers) (BOE 56)

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2016	\$78,700	Unassigned

C1030.08 Interior Identifying Devices*

Plastic identification labels are mounted on office, classrooms, washrooms doors.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

C1030.10 Lockers** - 1969 Section

Pre-finished metal lockers are provided in change rooms, wood shop, mechanical room, phys. Ed. instructor's room and second floor corridor. The majority of the lockers are built-into the load-bearing masonry concrete block walls. The remainder of the lockers are free standing. Some lockers are stacked vertically in 2 levels and in 6 levels.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace metall lockes (BOE 125)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$68,200	Unassigned

Updated: JAN-13

C1030.10 Lockers** - 2009 Section

Pre-finished metal lockers are provided in main floor, second floor and basement corridors, change rooms. The majority of the lockers are built-into the load-bearing masonry concrete block walls. The remainder of the lockers are free standing. Some lockers are stacked vertically in 2 levels and in 6 levels.

<u>Rating</u>	Installed	Design Life	Updated
5 - Good	2009	30	JAN-13

Event: Replace metal lockers (BOE 653)

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2039	\$458,600	Unassigned

Updated: JAN-13

C1030.12 Storage Shelving*

Metal cabinets are provided in some classrooms and metal racks are provided in some storage rooms.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

C1030.14 Toilet, Bath, and Laundry Accessories*

Wall-mounted mirrors, soap and paper towel dispensers are provided in each washroom. Toilet paper dispensers are also provided in each washroom stall. There are residential quality, washer/dryer combinations in the kitchen area, home economics classroom and a storage room on the second floor.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

C2010 Stair Construction* - Concrete

The stairs leading up to the second floor and leading to the basement are cast-in-place concrete stairs.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

C2010 Stair Construction* - Metal

The stairs leading up to the mezzanine are painted steel pan stairs in shops and mechanical room.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

C2010 Stair Construction* - Wood

The stairs leading up to the stage area are wood stairs.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

C2020.05 Resilient Stair Finishes**

The cast-in-place concrete stairs throughout the school have a vinyl sheet finish.

Rating	Installed	Design Life	Updated
3 - Marginal	1969	20	JAN-13

Event: Replace the vinyl stair finish (BOE 45 sqm.)

Туре	<u>Year</u>	Cost	<u>Priority</u>
Lifecycle Replacement	2016	\$4,800	Unassigned

Updated: JAN-13

Event: Replace vinyl sheet stair finish (BOE 25 sqm.)

Concern:

Vinyl sheet finish on stairs to the south west (leading to the second floor), to the north west (leading to the basement) and to the north east (leading to the main floor is deteriorating. Nosings are damaged.

Recommendation:

Replace with new vinyl sheet stair finish.

Consequences of Deferral:

Further deterioration and tipping hazard.

Туре	<u>Year</u>	Cost	<u>Priority</u>
Failure Replacement	2013	\$2,200	Low

Updated: JAN-13

C2020.08 Stair Railings and Balustrades*

The cast-in-place concrete stairs are equipped with painted wood railings. The painted steel pan stairs are equipped with painted metal railings.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1969	0	MAR-08

C3010.06 Tile Wall Finishes**

The walls in the shower areas of the change rooms (upto 7' high), in kitchen and at the urinal of boys washrooms (upto 4' high) are finished with 6x6 ceramic tiles. One boys wash room to the north west has 2x2 ceramic tile.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	40	JAN-13

Event: Replace the ceramic tile wall finish (BOE 75 sqm.)

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2016	\$22,200	Unassigned

Updated: JAN-13

C3010.09 Acoustical Wall Treatment**

The majority of the walls (above door height) in the music room have an acoustic fabric wall finish. Fabric covered acoustic panels are installed along the walls in main and aux. gymnasium and music room.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	20	JAN-13

Event: Replace the acoustic wall treatment (BOE 180sqm.)

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2016	\$48,600	Unassigned

Updated: JAN-13

C3010.11 Interior Wall Painting*

The majority of the interior walls throughout the school are painted.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	MAR-08

C3010.13 Wall Trim and Decoration*

Painted wood trim to the inside of exterior windows are typical.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1969	0	JAN-13

 Event:
 Replace wood trim around exterior windows (BOE 210 lm.)

 Concern:
 Painted wood trim around exterior windows to the west side of second floor and several windows in main floor are deteriorating. Chips and rotten woods are evidence.

 Recommendation:
 Replace with painted wood trim.

 Consequences of Deferral:
 Further deterioration may lead bacterial growth and loss of aesthetic appeal.

 Type
 Year Cost
 Priority

Туре	Year	Cost	Priority
Failure Replacement	2013	\$21,000	Low

Updated: JAN-13

C3010.14 Other Wall Finishes*

Exposed clay brick veneer wall finishes are located in the lunch room and the corridor outside of the music and auditorium rooms.

Decorative vertical wood panels are installed to the walls in the teaching room and the walls above stage in gymnasium, .

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

C3020.01.02 Painted Concrete Floor Finishes*

The majority of the storage rooms, the mechanical rooms, auto shop, printing shop and the majority of students washrooms have painted concrete floors.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

C3020.02 Tile Floor Finishes** - Ceramic Tile

The showers throughout the school are finished with 2X2 ceramic floor tile.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	50	JAN-13

Event: Replace the ceramic floor tile (BOE 45 sqm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2019	\$9,050	Unassigned

C3020.02 Tile Floor Finishes** - Quarry Tile

Main entrance, entrance to the east side corridors, boys' washroom to the west, kitchen storage of main floor and art rooms of second floor have quarry tile floor finish. Missing quarry tiles were observed in art room and damaged tiles at the entrances.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	50	JAN-13

Event: Replace quarry tile floor finish (BOE 275 sqm.)

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2019	\$88,800	Unassigned

Updated: JAN-13

C3020.04 Wood Flooring** - 1969 Section

Main gymnasium, aux. Gymnasium, stage and dance room has hardwood strip flooring.

Rating	Installed	Design Life	Updated
3 - Marginal	1969	30	JAN-13

Event: Re-finish hard wood floor on stage (BOE 87 sqm.)

Concern:

Hardwood strip flooring on stage is deteriorating. **Recommendation:** Re-finish hardwood strip floors. **Consequences of Deferral:** Further deterioration may increase the cost of maintenance.

Туре	Year	Cost	Priority
Failure Replacement	2013	\$6,100	Medium

Updated: JAN-13

C3020.04 Wood Flooring** - 2008 Section

Hardwood strip flooring is provided at the front desk area in library. Nothing was reported in previous report about refinish. Assuming, wood floor has been refinished within last five years.

Rating	Installed	Design Life	Updated
5 - Good	2008	30	JAN-13

Event: Re-finish hardwood flooring (BOE 77 sqm.)

Туре	Year	Cost	<u>Priority</u>
Lifecycle Replacement	2038	\$7,550	Unassigned

C3020.04 Wood Flooring** - Parquet Flooring

Wood parquet flooring is provided in the Shop room (rm no. 142) on the north side of the building. Chips in parquet flooring were observed; to be monitored.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace the wood parquet flooring (BOE 130 sqm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$34,000	Unassigned

Updated: JAN-13

C3020.04 Wood Flooring** - Sport Floor

Main gymnasium, aux. Gymnasium and dance room has hardwood sport flooring. Nothing was reported in previous report about the age of the flooring. Assuming the wood flooring has been re-finished within last five years.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2008	30	JAN-13

Event: Re-finish hardwood flooring (BOE 1155 sqm.)

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2038	\$412,300	Unassigned

Updated: JAN-13

C3020.07 Resilient Flooring** - Sheet (1969 Section)

Staff room and kitchen on main floor and classrooms, staff washrooms of second floor have resilient sheet flooring. Resilient sheet in kitchen has started peeling.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	20	JAN-13

Event: Replace resilient sheet flooring (BOE 1150 sqm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$70,400	Unassigned

C3020.07 Resilient Flooring** - Sheet (2000 Section)

Industrial art room(rm no. 121), room no. 122, science rooms (rm no. 154 & 153), gymnasium office has resilient sheet flooring.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	20	JAN-13

Event: Replace resilient sheet flooring (BOE 490 sqm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2020	\$30,000	Unassigned

Updated: JAN-13

C3020.07 Resilient Flooring** - Sheet (2008 Section)

Majority of admin. Offices, home economic rooms, classrooms and corridor (next to library) have resilient sheet flooring. Nothing was reported regarding replacement. Assuming the flooring in specified areas have been replaced at same period of time.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good	2008	20	JAN-13

Event: Replace resilient sheet flooring (BOE 1000 sqm.)

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2028	\$71,400	Unassigned

C3020.07 Resilient Flooring** - Tile

Classrooms of main floor, corridors, stair landing, common areas and some storage rooms are finished resilient tile flooring. damaged tiles were observed in corridors and several classrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	20	JAN-13

Event: Install resilient tile to match existing tile (35 sqm.)

Concern:

There are areas of exposed concrete in rm no. 108,109,112 & 113;

Recommendation:

Install resilient tile to match existing tile of rooms.

Consequences of Deferral:

Exposed concrete is tough to keep clean and also poor visual image.

Туре	Year	Cost	Priority
Repair	2013	\$1,800	Low

Updated: JAN-13

Event: Replace resilient flooring (BOE 7300 sqm.)

Туре	Year	Cost	<u>Priority</u>
Lifecycle Replacement	2016	\$446,100	Unassigned

Updated: JAN-13

C3020.08 Carpet Flooring**

Some admin offices including pricipal's rm, vice principal's rm, staff work room, music room, library,electrical work shop (rm no. 142) and, rm no 120 are finished with carpet flooring. Most of admin offices have been replaced with resilient sheet flooring.

Rating	Installed	Design Life	Updated
3 - Marginal	1990	15	JAN-13

Event: Replace the carpet flooring (BOE 1210 sqm.)

Concern:

The carpet flooring showed evidence or ripped, torn and stained areas.

Recommendation:

Replace the carpet flooring throughout the school.

Consequences of Deferral:

The carpet will continue to deteriorate.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Failure Replacement	2013	\$88,000	Low

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

The majority of the ceilings in the classrooms, corridors, library, lunch room, admin offices, some storage rooms, wash rooms and girls change room throughout the school consist of suspended 2x4 and 2x2 T-bar systems with inlaid acoustic tiles. There are some damaged and stained tiles were observed in several locations. Need to be replaced; part of maintenance item.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	25	JAN-13

Event: Replace the acoustic ceiling (BOE 9800 sqm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$540,772	Unassigned

Updated: JAN-13

C3030.07 Interior Ceiling Painting*

The basement ceilings, storage rooms and some washrooms throughout the school have painted gypsum board ceilings.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	MAR-08

C3030.09 Other Ceiling Finishes*

The ceiling in basement is basement corridor and boys locker room ceiling is painted metal screen. Fitness room in basement and work shops and mechanical room in main floor have precast double T-joist ceiling. Pre-finished metal deck veiling is supported by open steel truss in main and aux. gmnasium and some storage rooms.

<u>Rating</u>	Installed	Design Life	Updated
3 - Marginal	1969	0	JAN-13

Event:	Remove the rust and repaint the metal screen ceiling (BOE 160 sqm.)
	Concern:
	Metal screen ceiling in boys' change room is rusted. Recommendation:
	Remove the rust and repaint the metal screen ceiling. Consequences of Deferral:
	Loss of aesthetic appeal.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Repair	2013	\$4,000	Low

D1010.01.02 Hydraulic Passenger Elevators**

One hydraulic passenger elevator (a Concord model with 454 kg. capacity) is located off of the home economics classroom on the northeast side of the building. The main purpose of the elevator is to provide people with disabilities access to the second floor.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	2000	30	JAN-13

Event: Replace the elevator (BOE 1)

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$90,000	Unassigned

S4 MECHANICAL

D2010.04 Sinks** - Lab

There are 50 lab sinks using small black epoxy coated tubs. There is also a section of a lab that is using gas cocks for water fixtures.

Rating	Installed	Design Life	Updated
3 - Marginal	1969	30	JAN-13

Event: Replace Sinks BOE (50)

Concern:

Lab sinks are damaging counter and many are not in use

Recommendation:

Remove and replace. In areas where labs are no longer conducted remove sinks.

Туре	Year	Cost	Priority
Failure Replacement	2013	\$74,200	Low

Updated: JAN-13

D2010.04 Sinks** - 1969

There are 57stainless steel sinks, kitchen and lab, and 10 iron enamel service sinks throughout the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace Sinks BOE (57) SS (10) Iron Enamel

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$106,500	Unassigned

Updated: JAN-13

D2010.04 Sinks** - 2006

Stainless Steel hand washing shop sinks have been added to several classrooms. A few have been added to washrooms. This effectively removes a number of lavatory fixtures and replaces them with multiple user tempered water wash stations.

Rating	Installed	Design Life	Updated
4 - Acceptable	2006	30	JAN-13

Event: Replace Sinks BOE (8)

Туре	Year	Cost	Priority
Lifecycle Replacement	2036	\$11,900	Unassigned

D2010.05 Showers**

There are showers in locker rooms and the physical education office. Some are stalls and some are gang showers.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace Showers BOE (13)

TypeYearCostPriorityLifecycle Replacement2016\$20,500Unassigned

Updated: JAN-13

D2010.08 Drinking Fountains/Coolers**

There are approximately 11 vitreous china, non-refrigerated, drinking fountains located throughout the school, and one stainless steel refrigerated drinking fountain.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	35	JAN-13

Event: Replace drinking fountains BOE (11) NR (1) REF

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2016	\$20,800	Unassigned

Updated: JAN-13

D2010.09 Other Plumbing Fixtures*

Eyewash stations in the science labs

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

D2010.10 Washroom Fixtures (WC, Lav, UrnI)**

From original construction there remains 2 vitreous china water closets, 22 floor-mounted vitreous china urinals, and 9 vitreous china lavatories in washrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	35	JAN-13

Event: Replace BOE (2) WC, (9) LAV, (22) URNL

TypeYearCostPriorityLifecycle Replacement2016\$42,100Unassigned

D2010.10 Washroom Fixtures (WC, Lav, Urnl)** - 2000

New fixtures consist of a combination of vitreous china water closets, and vitreous china/stainless steel/composite lavatories. There is no consistency in the choice of replacement lavatories.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	35	JAN-13

Event: Replace BOE (33) WC, (21) LAV

Туре	Year	Cost	Priority
Lifecycle Replacement	2035	\$68,800	Unassigned

Updated: JAN-13

D2020.01.01 Pipes and Tubes: Domestic Water*

Domestic piping is generally copper and original to the building.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	MAR-08

D2020.01.02 Valves: Domestic Water**

There are isolation valves in place on the domestic plumbing lines.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	40	JAN-13

Event: Replace Valves BOE (40)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$45,700	Unassigned

Updated: JAN-13

D2020.01.03 Piping Specialties (Backflow Preventers)**

There are backflow prevention devices on the domestic water lines, boiler feeds, and fire system. The backflow preventors for domestic water and fire protection system were installed in 2012.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2012	20	JAN-13

Event: Replace Blackfow Preventers BOE (5)

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2032	\$15,400	Unassigned

D2020.02.02 Plumbing Pumps: Domestic Water**

Armstrong recirculation pump is installed on the domestic hot water system.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	2004	20	JAN-13

Event: Replace Pumps BOE (1)

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2024	\$1,200	Unassigned

Updated: JAN-13

D2020.02.06 Domestic Water Heaters** -1998

A John Wood 35 gallon storage water heater provides hot water to a portion of the building. It may be tied to the solar heating system.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1998	20	JAN-13

Event: Replace hot water heater (1)

Concern:

This tank is likely part of a solar hot water heating system that was added in 2010. It may be used as a preheat tank for the system and the gas fired section may be disabled. If this is true the tank should be replaced with a proper storage tank. **Recommendation:**

Review system and replace tank with a proper solar storage tank.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Failure Replacement	2013	\$1,900	Medium

Updated: JAN-13

D2020.02.06 Domestic Water Heaters** - 2004

Two Lochinvar, 100 USG storage, 200 MBH input units.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	2004	20	JAN-13

Event: Replace DWH BOE (2)

Туре	Year	Cost	Priority
Lifecycle Replacement	2024	\$6,400	Unassigned

D2030.01 Waste and Vent Piping*

Waste and vent piping is generally cast iron and original to the building.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	MAR-08

D2030.02.04 Floor Drains*

Brass covered floor drains are located in service rooms and washrooms.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	JAN-13

D2030.03 Waste Piping Equipment*

A sump pump is provided in the pit at the lower floor.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1969	0	MAR-08

D2040.01 Rain Water Drainage Piping Systems*

Rain water and drainage piping within the building is generally cast iron. The system is connected to the city storm system.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1969	0	MAR-08

D2040.02.04 Roof Drains*

The roof system incorporates drains which are fitted with gravel/debris strainers. Some roof drain strainers are missing, require replacement.

<u>Rating</u>	Installed	Design Life	Updated
3 - Marginal	1969	0	JAN-13

Event: Replace roof drain strainers BOE (5)

Concern: Roof drains are missing and require replacement Recommendation: Replace strainers Consequences of Deferral: Debris can enter drain and plug drain

Туре	Year	Cost	Priority
Failure Replacement	2013	\$1,000	Low

D3010.02 Gas Supply Systems*

Natural gas is supplied to a gas meter room. The piping feeds the central heating boilers, domestic hot water heaters, emergency generator and the science labs.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	MAR-08

D3020.01.01 Heating Boilers & Accessories: Steam**

A Bryan boiler provides steam for the humidifiers. The distribution system was upgraded at the Air Handlers in 2011.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2004	35	JAN-13

Event: Replace boiler BOE (1)

Туре	Year	Cost	Priority
Lifecycle Replacement	2039	\$15,773	Unassigned

Updated: JAN-13

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

Venting for Steam (humdifier) Boiler

Rating	Installed	Design Life	Updated
4 - Acceptable	2004	35	JAN-13

Event: Replace chimney (BOE 1)

<u>Type</u>	Year	Cost	Priority
Lifecycle Replacement	2039	\$2,700	Unassigned

Updated: JAN-13

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

There are two natural gas fired boilers located in the boiler room. They are manufactured by Cleaver Brooks, each with a capacity of 12,550 MBH.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	35	JAN-13

Event: Replace boilers BOE (2)

Туре	Year	Cost
Lifecycle Replacement	2016	\$281,652

Priority Unassigned

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

The heating system has combustion air supply and an exhaust flue which extends through the roof.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	35	JAN-13

Event: Replace chimney BOE (12m)

TypeYearCostPriorityLifecycle Replacement2016\$15,500Unassigned

Updated: JAN-13

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

Pot feeders for chemcial treatment are connected to the boilers. A water treatment program is provided for heating hot water system.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

D3030.04 Rotary-Screw Water Chillers**

A McQuay packaged air cooled screw compressor chiller with 250 ton cooling capacity was installed on the roof in 2004. The unit provides chilled water to the air handling units. It utilizes 134a refrigerant.

Rating	Installed	Design Life	Updated
4 - Acceptable	2004	25	JAN-13

Event: Replace Chiller BOE (1)

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2029	\$85,200	Unassigned

Updated: JAN-13

D3040.01.01 Air Handling Units: Air Distribution** - 1969

Ventilation in the building is provided by 6 original air handling units located in the boiler room and fan rooms. The indoor air handling units are manufactured by Sheldons and are equipped with cooling coils, heating coils, preheat coils, supply fans, return fans, filter sections and steam humidifiers. The units were renovated in 2011 to provide new humidifier sections and new motor drives with VFD's. New controls were also added. Fans and coils are still original.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace Chillers BOE (6)

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2033	\$529,300	Unassigned

D3040.01.03 Air Cleaning Devices: Air Distribution*

A dust collector is provided for the workshop.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

D3040.01.04 Ducts: Air Distribution*

The air distribution ductwork is located in the ceiling space and is equipped with a number of reheat coils. Some RTU's have preheated air supplied by a solar walls located on the roof.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

D3040.01.07 Air Outlets & Inlets: Air Distribution*

Air enters the space through modulating ceiling troffers. They were originally designed to modulate the air entering the space for heating and cooling. They require manual switch over to change from heating to cooling and many of the operators have been removed or have failed.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1969	0	JAN-13

Event: Replace BOE (17218m2/gfa)

Concern:

Units have failed and require replacement. **Recommendation:**

Redesign the supply air system to utilize a proper terminal unit and diffuser system. Ensure it integrates well with the needs of the space and the Air Handler.

Туре	Year	Cost	Priority
Failure Replacement	2013	\$315,451	High

D3040.03.01 Hot Water Distribution Systems**

Hot water heating distribution is through original insulated steel piping to finned tube radiators, reheat coils, air handling units and fan coil units in the building. A renovation was conducted in 2011 that replaced several pumps.

<u>Rating</u>	Installed	Design Life	Updated
3 - Marginal	1969	40	JAN-13

Event: Replace BOE (5% of 1,7218m2/gfa)

Concern:

Even though renovations were conducted there are several pumps and gate valves that have either failed or are leaking. **Recommendation:**

Conduct a full service/repair program to replace and repair failed components.

Туре	<u>Year</u>	<u>Cost</u>	Priority
Failure Replacement	2013	\$81,405	Medium

Updated: JAN-13

Event: Replace hot water distribution system BOE (95% of 17,218m2/gfa)

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2016	\$1,628,100	Unassigned

Updated: JAN-13

D3040.03.02 Chilled Water Distribution Systems**

Chilled water distribution is through original insulated steel piping to air handling units in the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	40	JAN-13

Event: Replace BOE (10% of 17,217.5 m2)

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2016	\$87,670	Unassigned

D3040.04.01 Fans: Exhaust**

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace Fans BOE (27)

TypeYearCostPriorityLifecycle Replacement2016\$49,500Unassigned

Updated: JAN-13

D3040.04.03 Ducts: Exhaust*

Exhaust ductwork connected with exhaust fans is provided above the ceiling.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	MAR-08

D3040.04.05 Air Outlets and Inlets: Exhaust*

Sidewall mounted grilles serve as exhaust air inlets.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	MAR-08

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)** - 1985

Three Engineered Air roof top units supply heating and cooling (chiller water) to the school. They are badly rusted and appear to be reaching the end of their lifecycle.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1985	30	JAN-13

Event: Replace BOE (3) RTU's

Concern: Units are showing signs of age and maintenance and service costs will rise. Recommendation: Replace RTU's. Consequences of Deferral: Unit failure during school year will be much more costly than a planned replacement.

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2016	\$99,800	Low

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)** - 1994

Engineered Air unit on roof provides heating to facility and ventilation.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1994	30	JAN-13

Event: Replace BOE (1) RTU

TypeYearCostPriorityLifecycle Replacement2024\$33,300Unassigned

Updated: JAN-13

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)** - 2003

A Trane AHU supplies heating and cooling to the school. The unit is charged with R-22.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	2003	30	JAN-13

Event: Replace BOE (1) RTU

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2033	\$33,300	Unassigned

Updated: JAN-13

D3050.02 Air Coils**

There are reheat coils serving temperature controlled zones in the building.

Rating	Installed	Design Life	Updated	
4 - Acceptable	1969	30	JAN-13	

Event: Completed 2012 - Replace heating coil in gym unit

Concern: Heating coil in gym has broke down Recommendation: replace Consequences of Deferral: no heat in gym

Туре	Year	Cost	<u>Priority</u>
Lifecycle Replacement	2012	\$9,436	High

Updated: AUG-12

Event: Replace BOE (50) Coils

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2016	\$97,000	Unassigned

D3050.03 Humidifiers**

Steam humidifiers are installed in the air handling units. Steam is generated from the boiler located in the boiler room.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	25	JAN-13

Event: Replace humidifiers BOE (6)

TypeYearCostPriorityLifecycle Replacement2016\$68,000Unassigned

Updated: JAN-13

D3050.05.02 Fan Coil Units**

Wall mounted fan coil units are provided in the entrances of the building. They are located in ceilings and on the walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace fan coil units BOE (7)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$37,000	Unassigned

Updated: JAN-13

D3050.05.03 Finned Tube Radiation**

Baseboard and wall mounted finned tube radiation units are provided throughout the school.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	40	JAN-13

Event: Replace finned tube radiation BOE (17,218 m2/gfa)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$801,600	Unassigned

D3060.02.05 Building Systems Controls (BMCS, EMCS)**

A BMCS was added to interface with the pneumatic and electronic actuators. Control is now substantial through the BMCS.

Rating	Installed	Design Life	Updated
4 - Acceptable	2011	20	JAN-13

Event: Replace Controls BOE (17,218 m2/gfa)

Concern:

Recommendation:

<u>Type</u> Lifecycle Replacement

<u>Year</u> <u>Cost</u> 2031 \$450,900 Priority Unassigned

D3090 Other Special HVAC Systems and Equipment*

A paint booth does not appear to be operating properly as there is plastic wrap across the front to help capture fumes. Recommend investigation to determine proper systems.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1969	0	JAN-13

Event: Evaluate space utilization.

Concern:

Depending on the type of activities in the art room it is possible that fumes from the art activities could be entering the classroom. In addition if activities have changed since initial construction a code upgrade may be required.

Recommendation:

Evaluate space to determine where modifications are required or recommended.

Туре	<u>Year</u>	Cost	Priority
Study	2013	\$8,000	High

Updated: JAN-13

Event: Repair paint booth (BOE 1 unit)

Concern:

Address issues determined by study of paint booth **Recommendation:**

Repair or remove paint booth dependant on result of study. Cost based on replacement of paint booth and exhaust fan. Costs may be higher if other code issues are discovered during investigation.

Туре	Year	<u>Cost</u>	Priority
Repair	2013	\$10,000	Medium

Updated: JAN-13

D4020 Standpipes*

The standpipe system supplies hose cabinets in the building and the fire department connection is located on the outside of the building by the north side mechanical room. The building does not contain a fire sprinkler system.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

D4030.01 Fire Extinguisher, Cabinets and Accessories*

Handheld fire extinguishers are located throughout the building and are checked annually.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	MAR-08

S5 ELECTRICAL
D5010.01.02 Main Electrical Transformers (Utility Owned)*
Enmax owned pad mounted transformer located on north east side of the school. S/N 98-95, inspected for PCB in 2004.
RatingInstalledDesign LifeUpdated4 - Acceptable19690JAN-13
D5010.02 Secondary Electrical Transformers (Interior)**
One 75kVA manufactured by Bemag. Nine 45 kVA and four 30 kVA transformers manufactured by Westinghouse. Primary is 480 volt, secondary is 120/208 volt.
RatingInstalledDesign LifeUpdated4 - Acceptable196940JAN-13
Event:Replace one 75kVA, nine 45kVA and four 30kVA transformersType Lifecycle ReplacementYear 2016Cost \$70,000Priority UnassignedUpdated:JAN-13
D5010.03 Main Electrical Switchboards (Main Distribution)**
Westinghouse main breaker rated at 1600 Amps, 277/480 Volts, 3 Phase, 4 wire. MDP bus is rated at 800 Amp.
RatingInstalledDesign LifeUpdated4 - Acceptable196940JAN-13
Event: Replace 1600 Amp main breaker and 800 Amp MDP with related breakers.
TypeYearCostPriorityLifecycle Replacement2016\$99,142Unassigned
Updated: JAN-13

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution) 1969 **

Nine Westinghouse panels rated at 480 volt and eleven Westinghouse panels rated at 208 volt are installed at various areas of the school. Panels are 80% full.

Rating	Installed	Design Life	Updated
3 - Marginal	1969	30	JAN-13

Event: Replace 9 panels rated for 480 volts and 11 rated for 208 volt with related breakers.

Concern:

Panels have exceeded their theoretical life. Spare parts not available.

Recommendation:

Replace 9 panels rated for 480 volts and 11 rated for 208 volt with related breakers.

Consequences of Deferral:

Possible loss of power. High maintenance costs.

Туре	Year	Cost	Priority
Failure Replacement	2013	\$60,000	Medium

Updated: JAN-13

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution) 2000 **

Ten Cutler Hammer panels rated for 208 volts are located in various areas of the school.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	2000	30	JAN-13

Event: Replace ten panels rated at 208 volt with related breakers.

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2030	\$30,000	Unassigned

Updated: JAN-13

D5010.07.01 Switchboards, Panelboards, and (Motor) Control Centers**

Three Cutler Hammer Motor centers located in mechanical room. First MCC has six tubs and 35 motor starters. Second MCC has two tubs and ten starters. Third MCC has one tub with four starters.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	30	JAN-13

Event: Replace three motor control centers with six tubs, two tubs and one tub. 49 starters in them.

Туре	Year	Cost	Priority
Lifecycle Replacement	2028	\$119,421	Unassigned

D5020.01 Electrical Branch Wiring*

The electrical wiring in the building is standard copper wire, and generally in conduit. Flexible conduit and cabling is provided to most of the motors and other mechanical equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

D5020.02.02.02 Interior Fluorescent Fixtures**

T8 fluorescent light fixtures with electronic ballasts located all over the school and the Gym area. Some fixtures are designated for emergency lighting and are connected to the emergency generator.

Rating	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2008	30	JAN-13

Event: Repalce lighting system for (17,217.5 m²/gfa).

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2038	\$950,750	Unassigned

Updated: JAN-13

D5020.02.03.03 Exit Signs*

LED exit signs are located as required through out the school.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	2008	0	JAN-13

D5020.02.05 Special Purpose Lighting*

Forty theater lighting fixtures are provided in the stage area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

D5020.03.01.03 Exterior Metal Halide Fixtures*

Exterior lighting around the building is provided by wall-mounted metal halide fixtures.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	2008	0	JAN-13

D5030.01 Detection and Fire Alarm**

Simplex 4002 fire alarm system is connected to bells, manual pull stations and detectors throughout the building.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1988	25	JAN-13

Event: Completed 2012 - ML-KS-06 Kitchen suppression and FA connection

Concern:

Equipment obsolete, parts were unavailable.

Recommendation:

Replace Kitchen Supression and FA Connection

Consequences of Deferral:

Failure in Kitchen Supression and FA connection could lead to significant building damage.

Туре	Year	Cost	<u>Priority</u>
Preventative Maintenance	2012	\$1,551	High

Updated: AUG-12

Event: Replace fire alarm system for (17,218 m²/gfa).

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$2,966,576	Unassigned

Updated: JAN-13

D5030.02.02 Intrusion Detection**

The building is equipped with a Regency security system connected to door contacts and motion sensors. Key access is installed at required exit.

Rating	Installed	Design Life	Updated
4 - Acceptable	1998	25	JAN-13

Event: Replace intrusion detection system for (17,217.5 m²/gfa).

Туре	Year	Cost	Priority
Lifecycle Replacement	2023	\$174,585	Unassigned

D5030.02.04 Video Surveillance**

A CCTV system is installed in the building, and 16 cameras are located throughout the inside and outside of the building. A Bosch digital video recorder is provided.

Rating	Installed	Design Life	Updated
4 - Acceptable	2005	25	JAN-13

Event: Replace CCTV system with DVR and 16 cameras

Туре	Year	Cost	Priority
Lifecycle Replacement	2030	\$34,924	Unassigned

Updated: JAN-13

D5030.03 Clock and Program Systems*

Simplex Master Clock system with slave units throughout the school. Battery operated units in classrooms.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	2005	0	JAN-13

D5030.04.01 Telephone Systems*

The building is served by the Nortel Norstar Meridian phone system. Handsets in classrooms are connected to public address system.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1997	0	JAN-13

D5030.04.05 Local Area Network Systems*

Network routers, hubs and switches are distributed over 11 rooms and interconnected through a fiber optics backbone network with Cat 5 cabling going to the various computer stations. WIFI installed all over the school.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	0	JAN-13

D5030.05 Public Address and Music Systems**

Rauland with 125 channels, tape, radio and CD player. Connected to the telephone system. Speakers located in classrooms and public areas.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1988	20	JAN-13

Event:	Replace PA system and m²/gfa).	ers for (17,217.5		
	Type	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
	Lifecycle Replacement	2016	\$71,797	Unassigned

D5090.02 Packaged Engine Generator Systems (Emergency Power System)**

Kohler gas fired 75 KW generator located in the boiler room. Tested annually. Has 350 hours. Rated for 480 volt three phase. Controlled by a 150 Amp transfer switch by Cutler Hammer.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	35	JAN-13

Event: Replace 75 KW packaged generator

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$41,684	Unassigned

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1030.01 Vehicle Service Equipment*

The three automotive and mechanical shop classrooms are equipped with hydraulic lifts, powered bench tools, etc.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	MAR-08

E1090.03 Food Service Equipment*

Commercial-grade food preparation equipment, including dishwashers, ovens, preparation tables, grills, fume hoods, etc. are located in the kitchen area. Equipment in this area generally has a stainless steel finish.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	MAR-08

E1090.04 Residential Equipment*

A home economics classroom on the main floor is fully equipped with residential equipment (i.e. fridges, stoves, etc.). The staff lounge, the custodial lunchroom and some offices have residential kitchen equipment.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

The school has two gymnasiums fully equipped with fixed and swing basket ball hoops, electronic score board. A fitness room in basement is equipped with exercise equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

E2010.02 Fixed Casework** - 1969 Section

Laminated wood top with stained wood cabinets, ovehead cabinets and/or open shelves generally are provided in shops, classrooms, office and administrative areas and kitchen. Science tables with transite finish are provided in science rooms. Full height stained/painted wood cabinets are provided in dance room. Wood shelving is provided in storage rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	35	JAN-13

Event: Replace the fixed casework (BOE 450 lm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$450,000	Unassigned

Updated: JAN-13

Event: Replace with chemical resistant laminate (BOE 100 Im.)

Concern:

Transite finish from science table are coming off; addressed by school board member.

Recommendation:

Remove transite finish (contains asbestos) with necessary

care and replace with new chemical resistant laminate.

Consequences of Deferral:

Hazardous material and loss of aesthetic appeal.

Туре	Year	Cost	Priority
Failure Replacement	2013	\$25,000	High

Updated: JAN-13

E2010.02 Fixed Casework** - 2008 Section

Laminated counter top with stained wood cabinets/ drawers and over head cabinets are installed in home economics rooms.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	2008	35	JAN-13

Event: Replace fixed casework (BOE 70 lm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2043	\$84,000	Unassigned

E2010.03.01 Blinds**

Manually-operated, horizontal/ vertical blinds are provided on the majority of exterior and interior window units throughout the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace the horizontal blinds (BOE 190 sqm.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2016	\$24,900	Unassigned

Updated: JAN-13

E2010.03.06 Curtains and Drapes**

Manually-operated curtains and drapes are provided on the theatre stage.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace Curtains (BOE 170 sqm.)

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2016	\$42,500	Unassigned

Updated: JAN-13

E2010.05 Fixed Multiple Seating**

Fixed seating is provided in the theatre auditorium.

<u>Rating</u>	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1969	35	JAN-13

Event: Replace the fixed multiple seating (BOE 227 seats)

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2016	\$142,300	Unassigned

Updated: JAN-13

E2020.02.03 Furniture*

Moveable furnishings in the school generally consist of desks for students and desks/chairs for teachers in each classroom, and tables/chairs and desks in teacher lounges, cafeterias, office and administrative areas, etc.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

F1010.02.05 Grandstands and Bleachers**

Fiber glass wall mounted folding bleachers are provided in the main gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	30	JAN-13

Event: Replace the wood bleachers (462 seats)

TypeYearCostPriorityLifecycle Replacement2016\$170,000Unassigned

Updated: JAN-13

F1030.05 Other Special Construction Systems*

Kilns are provided in the art room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

S7 SITE

G3020.03.02 Grease Interceptors

Rating	Installed	Design Life	Updated
5 - Good	2012	0	AUG-12

 Event:
 Completed 2012 - Replace in-floor grease trap in kitchen

 Concern:
 Concern:

 Grease trap is full
 Recommendation:

 need to be replaced
 Consequences of Deferral:

 could cause pipe blockage, cause lots of damage.

Туре	Year	Cost	Priority
Failure Replacement	2012	\$5,689	High

Updated: AUG-12

S8 SPECIAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance*

A barrier-free parking stall is provided in the parking lot south of the school. The access to the main entrance doors is provided by a concrete ramp leading from the parking lot.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	0	MAR-08

K4010.02 Barrier Free Entrances*

Exterior doors on the building perimeter have automatic door openers.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	MAR-08

K4010.03 Barrier Free Interior Circulation*

All areas of the school are generally accessible to handicapped persons through ramps and the elevator.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1969	0	MAR-08

K4010.04 Barrier Free Washrooms*

One barrier-free washroom stall is provided in students wash room to the east side of building on main and second floor, unisex barrier-free washroom is provided on the northeast side of the building on the main floor.

Rating	Installed	Design Life	Updated
3 - Marginal	1990	0	JAN-13

Event: Upgrade 1 sink in each washroom (BOE 3 sinks)

Concern:

Barrier free washroom stall is provided in students washrooms sink in one girls washroom on main floor is designed for barrier free but the sinks for 3 washrooms are not designed for barrier free.

Recommendation:

Upgrade one sink with lever handle in each washroom to make the facility completely barrier-free.

Consequences of Deferral:

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

Туре	Year	Cost	Priority
Barrier Free Access Upgrade	2013	\$3,000	Medium

K4030.01 Asbestos*

Asbestos is identified in materials in the majority of the school. The CBE has conducted testing and maintains a Facility Asbestos Management Binder on site.

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

K4030.04 Mould*

No suspected mould growth was observed or reported

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1969	0	JAN-13

K4030.09 Other Hazardous Materials*

No other hazardous building materials were observed or reported

Rating	Installed	Design Life	Updated
4 - Acceptable	1969	0	JAN-13

K5010.01 Site Documentation*

The prime consultant is ARUP DATTA ARCHITECT LTD. The evaluation date was September 14, 2012

Site description::

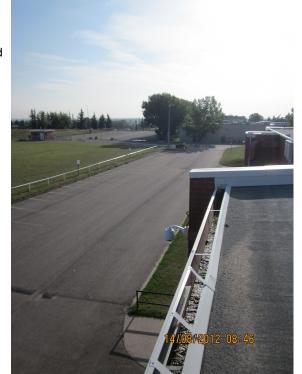
Dr. E.P. Scarlett High School is located at the centre of the property. The site features include asphalt paved parking lots on the east, south and north side and a grass surface surrounding the south and west side of the building. There are concrete sidewalks at the major entrances into the building. Metal out-storage shed is located on the north west side of building.Landscaped areas are reportedly not equipped with an in-ground irrigation system. Site drainage on asphalt paved surfaces is provided by catch basins.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	2012	0	JAN-13

Event: Drawings and Photos

Туре		
Study		

<u>Year</u> <u>Cost</u> 2012 \$0 Priority Unassigned



View of NE portion of rear parking and site

K5010.02 Building Documentation*

The prime consultant is ARUP DATTA ARCHITECT LTD. The evaluation date was September 14, 2012 The entire building was evaluated

The Dr. E.P. Scarlett High School located at 220 Canterbury Drive SW, is a two-storey, masonry block framed structure with a basement, and was constructed in 1969. The school building has a total floor area of approximately 17,218 square metres. General modernizations were conducted throughout the building interior over the past seven years.

Priority

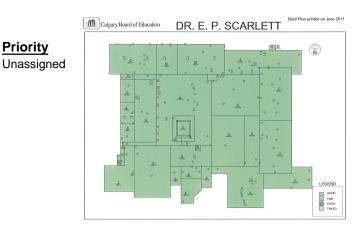
<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	2012	0	JAN-13

Event: drawings and Photos

Туре Study

Cost Year 2012 \$0

Updated: JAN-13



Roof plan (CBE)