

RECAPP Facility Evaluation Report

Edmonton School District No. 7



Rutherford Elementary School

B3267A
Edmonton

Facility Details

Building Name: Rutherford Elementary Sch
Address: 8620 - 91 Street
Location: Edmonton

Building Id: B3267A
Gross Area (sq. m): 0.00
Replacement Cost: \$5,660,676
Construction Year: 0

Evaluation Details

Evaluation Company: HENOCH ARCHITECT
Evaluation Date: October 18 2006
Evaluator Name: J. Henoach

Total Maintenance Events Next 5 years: **\$1,736,850**
5 year Facility Condition Index (FCI): **30.68%**

General Summary:

Rutherford Elementary School is a 3230m2 facility with a student capacity of 325. The first portion of the building was built in 1900 and comprises 2 floors and a basement totaling 722m2. In 1912 a single story plus basement addition was built to which a second story was added in 1946 for a total of 1785m2. In 1957 a single story addition including the gymnasium was built to provide an additional area of 723m2.

Structural Summary:

Concrete, basement foundation walls for the original and 1912 structures. Slab on grade with perimeter grade beams on piles for the 1957 addition, except crawl space under gymnasium and stage. Superstructure for the 1900 and 1912 portions is loadbearing tile walls. 1946 (upper floor) addition has loadbearing tile perimeter walls but wood stud interior partitions and a wood roof assembly. 1957 addition has loadbearing concrete block walls throughout; wood roof joists and glulam beams for the gymnasium roof. The condition of the structure is acceptable.

Envelope Summary:

Brick cladding on tile backup for Classroom Wing. Single wythe concrete block for 1957 Addition Vinyl windows. Wood entrance and utility doors. SBS roof membrane on insulation throughout. Although poorly insulated by current standards, the envelope is in acceptable condition.

Interior Summary:

Paint on plaster walls or on exposed concrete ceilings. Acoustic tiles in main and 2nd floor corirodors and Administration area. Floors have resilient finish or terrazzo or carpet or wood. The condition of the interior elements is acceptable.

Mechanical Summary:

The steam boilers were upgraded in 2005-2006 which included re-insulating the boiler shells and installing new gas burners with electronic controls. Lavatories in wash rooms were replaced in 2002. These are the major upgrades that were made in the last five years. The heating and ventilating systems and components are not up to current standards. The mechanical building systems are in poor condition.

Electrical Summary:

The school has two services: 120/240V single phase and 208V 3 phase. The building power distribution is single phase while the 208V system is used for 3 phase mechanical equipment. Interior lighting is predominantly fluorescent consisting of T12 lamps and magnetic ballasts, with half of the lighting fixtures de-lamped for energy conservation. Localized line switches control individual rooms and areas. Exterior lighting is mainly metal halide. Emergency lighting is from battery packs with integral and remote lighting heads. The fire alarm system is single stage, hard wired and supervised. The control panel is by EST (replaced in 2006), while the devices from the 1981Mirtone system remain. Communications and security systems intrusion alarm system using motion detectors, telephone system which doubles as a call system for the classrooms, and data distribution. While electrical services and some distribution equipment are in dire need of replacement to meet current standards, the electrical systems are generally 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* - 1900 and 1912 Additions**

Concrete strip footings.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	100	MAR-07

A1010 Standard Foundations* - 1957 Addition

Concrete strip footing at perimeter of gymnasium crawl space.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	100	MAR-07

A1030 Slab on Grade* - 1957 Addition

Concrete slab on grade supported throughout on concrete piles and on grade beams at the perimeter.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1957	100	MAR-07

A1030 Slab on Grade* - 1900 and 1912 Addition

Original slab on grade at 1st floor has heaved in many locations but is servicable.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	100	MAR-07

A2020 Basement Walls (& Crawl Space)* - 1900 and 1912 Addition

Concrete basement walls.

Previous (2000) evaluation refers to deterioration of foundation wall on north side of the building. No structural problems noted in 2006.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	100	MAR-07

A2020 Basement Walls (& Crawl Space)* - Gymnasium Crawl Space

Concrete walls at perimeter of crawl space.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	100	MAR-07

B1010.01 Floor Structural Frame*(Building Frame) - Gymnasium

Wood floor joists on steel beams.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1957	100	MAR-07

B1010.02 Structural Interior Walls Supporting Floors (or Roof)* - 1912 Addition

Masonry tile assumed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1912	100	MAR-07

B1010.02 Structural Interior Walls Supporting Floors (or Roof)* - 1946 Addition

Wood studs at corridor walls. Masonry tile at stairwell.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	100	MAR-07

B1010.03 Floor Decks, Slabs, and Toppings* - 1912 Addition

Cast in place concrete floor slabs with integral concrete joists assumed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	100	MAR-07

B1010.07 Exterior Stairs**

Concrete steps from grade to main floor on east and north sides of building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1912	40	MAR-07

Event: Replace Steps

Recommendation:

Replace exterior concrete steps. Cost based on \$600/m2

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$10,000	Low

Updated: MAR-07

B1020.01 Roof Structural Frame* - 1957 Addition

Glue-lam beams at gymnasium roof. Wood roof joists at washroom/entrance link.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	100	MAR-07

B1020.01 Roof Structural Frame* 1946 Addition

Sloping, built up timber trusses supporting wood roof joists.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	100	MAR-07

S2 ENVELOPE**B2010.01.02.01 Brick Masonry: Ext. Wall Skin*- 1900, 1912 and 1946 Additions**

Face brick on clay tile back-up

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1912	75	MAR-07

Event: Asses condition of brick.**Concern:**

Localized areas of brick and widow sills are deteriorating.

Recommendation:

Retain a specialist to assess and catalogue areas of brick and window sills which require remedial work.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2008	\$6,000	High

Updated: MAR-07**Event: Replace defective brick and window sills****Concern:**

Cursory inspection identifies localized areas of brick and widow sills which are deteriorating. Failure to make repairs promptly may contribute to accelorated deterioration and unnecessary costs

Recommendation:

Replace and/or repair defective brick and widow sills. Scope to be confirmed by a study.

Cost assumes 16 lintels to be replaced; 50m2 of repointing.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$40,000	High

Updated: MAR-07

B2010.01.02.02 Concrete Block: Ext. Wall Skin* - 1957 Addition

Single wythe, aggregate filled concrete block with "Spectra Glaze" finish to traffic areas on interior.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	75	MAR-07

Event: Install insulated cladding to gym**Concern:**

The uninsulated concrete block walls contribute to high energy costs.

Recommendation:

Install insulated cladding to gym walls.

Cost based on 530m2 EIFS.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2008	\$60,000	High

Updated: MAR-07

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

Sealant at perimeter of doors and windows.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	20	MAR-07

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

Painted concrete block - 1957 Addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1986	15	MAR-07

Event: Paint Exterior Concrete Block**Concern:**

Paint on concrete block is marred and has minor flaking. Some joints have opened up due to movement.

Recommendation:

Paint exterior concrete block. Repoint mortar joints where required.

Coordinate with B2010.02.01.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$4,000	Unassigned

Updated: MAR-07

B2010.06 Exterior Louvers, Grilles, and Screens*

Metal supply and exhaust air louvres in both 1912 and 1957 additions.
Galvanized mesh protection to all windows facing play areas.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	30	MAR-07

B2020.01.01.06 Vinyl, Fibreglass & Plastic Windows**

Vinyl windows with double, insulated glazing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	40	MAR-07

B2020.04 Other Exterior Windows - Glass Block**

Glass block windows at upper portion of gymnasium walls. Glass block on east wall has been covered with painted plywood on the exterior.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	40	MAR-07

Event: Replace Glass Block

Recommendation:

Replace glass block windows in gymnasium.
Cost based on 42m2.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$5,000	Low

Updated: MAR-07

B2030.01.10 Wood Entrance Door -**

Painted, solid core wood entrance doors at north, south and east entrances.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1988	30	MAR-07

Event: Replace wood doors

Recommendation:

Replace wood entrance doors. Cost based on \$1400/door.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$8,400	Low

Updated: MAR-07

B2030.01.10 Wood Entrance Door 1912 Addition**

Carved heavy timber, double doors at original north entrance.
Doors are no longer used and have been walled in on the interior.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1912	30	MAR-07

B2030.02 Exterior Utility Doors - 1912 Addition**

Painted wood doors to basement; one on south side of building and the other at the east. South door has glazing.
Similar door to gymnasium.
19mm plywood door at rooftop access.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1970	40	MAR-07

Event: Replace exterior utility doors.**Concern:**

Surface veneers of basement doors are lifting. Doors are unsightly.

Door at roof access has similar defects, has inadequate insulation and provides inadequate security.

Recommendation:

Replace doors with insulated steel doors and refinish existing wood frames. Replace roof access door with an insulated steel door and steel frame. Cost based on \$700/door; \$700 for frame.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2009	\$3,500	High

Updated: MAR-07

B3010.01 Deck Vapor Retarder and Insulation*

SBS vapour retarder assumed with fibreboard insulation.
Gym roof replaced in 1993. Lower roof of 1957 addition - 1989. Original facility approximately 1988.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	25	MAR-07

B3010.04.04 Modified Bituminous Membrane Roofing (SBS) - Gym Roof**

SBS membrane.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	25	MAR-07

B3010.04.04 Modified Bituminous Membrane Roofing (SBS) - 1946 Addition**

SBS Membrane

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1988	25	MAR-07

B3010.04.04 Modified Bituminous Membrane Roofing (SBS) - 1957 Addition - Lower Roof**

SBS membrane apparently installed on original deck without slope to drains. At time of inspection roof was entirely covered by approximately 70mm water.
See B3010.08.02

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1989	25	MAR-07

B3010.08.02 Metal Gutters and Downspouts**

Light gauge metal rain water leaders drain both north and south canopy roofs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1957	30	MAR-07

Event: Modify north canopy drain.

Concern:

The rain water leader at the north canopy discharges adjacent to the door forming ice on the pavement and a hazard to pedestrians. The situation is aggravated by water from the main roof which discharges onto the canopy from a scupper.

Recommendation:

Consider remedial work in conjunction with improvements to drainage of main roof. (see B3010.09). Tie downspout into adjacent downspout from gymnasium roof.
Cost based on tie-in and installation of horizontal metal shield to prevent climbing.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$1,000	Unassigned

Updated: MAR-07

B3010.09 Roof Specialties and Accessories - Roof Drain - 1957 Addition - Lower Roof

Drawings indicate single roof drain with internal drain pipe.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1989	25	MAR-07

Event: Assess Drainage Problem**Concern:**

Roof completely flooded to a depth of approximately 70mm, indicates inadequate roof drainage. The problem may be related to the roof drain but suggests inadequate provisions for secondary drainage including scupper and downspout at north side. Roof membrane is not intended to accommodate a consistently ponded roof. This could lead to premature membrane failure and leakage.

Recommendation:

Retain a building inspector to assess and make recommendations for improved roof drainage.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2007	\$1,200	Unassigned

Updated: MAR-07

Event: Repair Roof Drainage**Concern:**

Roof completely flooded to a depth of approximately 70mm, indicates inadequate roof drainage. The problem may be related to the roof drain but suggests inadequate provisions for secondary drainage including scupper and downspout at north side. Roof membrane is not intended to accommodate a consistently ponded roof. This could lead to premature membrane failure and leakage.

Recommendation:

Allowance for Roof Drains and contouring. \$70,000

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2007	\$70,000	Medium

Updated: MAR-07

S3 INTERIOR**C1010.01 Interior Fixed Partitions* - 1912 Addition**

Clay tile walls with plaster finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	50	MAR-07

C1010.01 Interior Fixed Partitions* - 1946 Addition

Wood stud partitions with plaster finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	50	MAR-07

C1010.01 Interior Fixed Partitions* - 1957 Addition

Concrete block.

Some movement and opening of joints noted at girls washroom. This is not considered a problem but joints should be repointed and condition monitored.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	50	MAR-07

C1010.06 Interior Glazed Partitions and Storefronts*

Wired glass in steel frames at office/reception area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1990	30	MAR-07

C1020.01 Interior Swinging Doors - 1957 Addition**

Solid core wood. 6 with glazing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	40	MAR-07

Event: Replace wood doors**Recommendation:**

Replace solid core wood doors. Cost based on replacing 26 doors and hardware.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$23,400	Low

Updated: MAR-07

C1020.01 Interior Swinging Doors - 1900, 1912 and 1946 Additions**

Painted, solid core wood or panel doors, typical throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	40	MAR-07

Event: Replace interior doors

Recommendation:

Replace Interior wood doors. Cost based on 48 new solid core doors and hardware.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$43,000	Low

Updated: MAR-07

C1020.03 Interior Fire Doors*

Fire doors include steel doors to basement mechanical rooms, and wood, glazed doors separating the main corridors from the stairs. While the doors to mechanical rooms are in acceptable condition they are obsolete, therefore do not conform to current code standards. Similarly, doors to spaces such as coat rooms, now used for storage, generally do not have the fire rating required by current standards. Upgrade will be required if these areas are renovated.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	50	MAR-07

C1030.01 Visual Display Boards**

Tack boards and blackboards in classrooms and corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1975	20	MAR-07

Event: Replace tack boards and blackboards

Recommendation:

Replace tack boards and blackboards. Cost based on \$86/lin. m

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$17,000	Low

Updated: MAR-07

C1030.02 Fabricated Compartments(Toilets>Showers) - 1957 Addition - Girls' Washroom**

Painted steel toilet partitions.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	30	MAR-07

Event: Replace toilet partitions**Recommendation:**

Replace metal toilet partitions.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$1,200	Low

Updated: MAR-07

C1030.02 Fabricated Compartments(Toilets>Showers) - 1912 Addition**

Painted plywood partitions in girls' and boys' washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1955	30	MAR-07

Event: Replace plywood toilet partitions**Recommendation:**

Replace plywood toilet partitions with wood or metal. Cost based on \$450/ stall.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$4,500	Low

Updated: MAR-07

C1030.02 Fabricated Compartments(Toilets/Showers) - 1957 - Boys' wash room**

Metal toilet partition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1957	30	MAR-07

Event: Replace toilet partitions**Concern:**

As a result of vandalism, partitions are bent and unsightly.

Recommendation:

Replace metal toilet partitions at both stalls in boys' washroom.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$1,350	High

Updated: MAR-07

C1030.08 Interior Identifying Devices*

Various directional and information signs at entrances to rooms and in corridors. Embossed plastic or paper.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1960	20	MAR-07

Event: Replace signage**Concern:**

Signs are worn and inconsistent in design.

Recommendation:

Install new signs throughout the school.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$2,800	Unassigned

Updated: MAR-07

C2010 Stair Construction* - 1900, 1912 , 1946 Additions

Concrete stairs from basement to main floor. All other stairs are steel and terrazzo except stair to roof which is wood.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	100	MAR-07

C2020.02 Terrazzo Stair Finishes*

Terrazzo treads on steel stairs and terrazzo finish to stairs linking 1957 Addition to classroom wing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1912	60	MAR-07

C2020.05 Resilient Stair Finishes**

Sheet rubber to stage stairs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	20	MAR-07

C2020.08 Stair Railings and Balustrades* - Classroom Wing

Steel balusters and pipe handrails built in 1900, 1912 and 1946.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1912	50	MAR-07

C2020.11 Other Stair Finishes*

Painted concrete to basement stairs in classroom wing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	10	MAR-07

C3010.01 Concrete Wall Finishes*

Paint finish to basement walls where concrete is exposed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1912	100	MAR-07

Event: Paint concrete basement walls.**Concern:**

Basement walls in service areas have exposed, painted concrete. Surface of concrete is spalling possibly as a result of sulfate attack and/or moisture. Walls are unsightly and the source of dust and debris.

Recommendation:

Paint walls after stabilizing or covering deteriorating surface. Cost includes parging and painting to 65m² of foundation wall.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2009	\$4,000	High

Updated: MAR-07

C3010.03 Plaster Wall Finishes*

Plaster on clay tile or wood stud walls constructed from 1900 to 1957.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	60	MAR-07

C3010.04 Gypsum Board Wall Finishes*

Gypsum board wall finishes to administration area and renovated basement classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1990	60	MAR-07

C3010.06 Tile Wall Finishes - 1912 Addition**

Ceramic wall tiles in boys' and girls' basement washrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1950	40	MAR-07

Event: Replace ceramic wall tiles (70m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$14,000	Low

Updated: MAR-07

C3010.11 Interior Wall Painting - 1957 Addition**

Painted wall surfaces.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1985	10	MAR-07

Event: Repaint wall surfaces**Concern:**

Painted wall surfaces are mared, faded and unsightly.

Recommendation:

Repaint block walls in 1957 Addition. Cost based on 780m2.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$6,500	High

Updated: MAR-07

C3010.11 Interior Wall Painting - Basement (except service areas)**

Painted wall surfaces.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2002	10	MAR-07

Event: Repaint wall surfaces**Recommendation:**

Repaint basement walls (except service spaces). Cost based on

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2012	\$7,500	Low

Updated: MAR-07**C3010.11 Interior Wall Painting** - Main and 2nd floor Classrooms**

Painted wall surfaces.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1980	10	MAR-07

Event: Repaint wall surfaces**Concern:**

Wall surfaces and millwork items are marred, faded and unsightly.

Recommendation:

Paint wall surfaces and millwork items. Cost based on \$3000/classroom.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$18,000	High

Updated: MAR-07

C3020.01.02 Paint Concrete Floor Finishes**

Painted concrete floor.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1990	10	MAR-07

Event: Paint concrete floors**Concern:**

Paint is worn.

Recommendation:

Paint concrete floors.

Cost based on \$160m2

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$3,200	High

Updated: MAR-07**C3020.03 Terrazzo Floor Finishes***

Terrazzo stair treads and washroom floors in classroom wing and 1957 Addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	75	MAR-07

C3020.04 Wood Flooring**

Maple flooring on gym and stage floors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	30	MAR-07

Event: Replace gym floor**Recommendation:**

Replace gym and stage floor.

Cost based on 460m2

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$100,000	Low

Updated: MAR-07**C3020.07 Resilient Flooring****

Sheet vinyl at main and 2nd floors of classroom wing

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
6 - Excellent	2003	20	MAR-07

C3020.07.01 Resilient Tile Flooring -

Vinyl asbestos tile in original dressing rooms - 1957 Addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	0	MAR-07

C3020.08 Carpet Flooring**

Carpet in Administration areas, selected classrooms and east stair landing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2003	15	MAR-07

C3030.03 Plaster Ceiling Finishes*

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	60	MAR-07

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

T-bar system with acoustic tiles at main and 2nd floor corridors and Administrative Offices -Classroom Wing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	25	MAR-07

C3030.07 Interior Ceiling Painting**

Includes painted plaster or concrete in Classroom Wing and 1957 Addition.
Note that ceilings in the 1900 portion of the building have a stippled finish containing asbestos.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	20	MAR-07

Event: Repaint ceilings

Recommendation:

Repaint ceilings.
Cost based on 2000m2.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$16,000	Low

Updated: MAR-07

C3030.09 Other Ceiling Finishes* - Gymnasium

Fibre acoustic tiles glued to underside of wood roof deck.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1967	50	MAR-07

C3030.09 Other Ceiling Finishes* - Underside of Stage

Exposed structure to underside of stage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1957	50	MAR-07

Event: Install gypsim board underside of stage.

Concern:

Area under stage is used for miscellaneous storage instead of for chairs. Code requires that storage spaces be separated from adjacent spaces by fire separations.

Recommendation:

Install gypsum board to underside of stage floor.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2007	\$1,000	Unassigned

Updated: MAR-07

S4 MECHANICAL**D2010.01 Water Closets**-1946 Construction**

There are approximately nineteen (19) floor mounted water closets with lever operated flush valves and five (5) floor mounted tank type water closets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	35	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Water Closets**Concern:**

The concern is that the water closets will ultimately start to fail because the china is crazed and stained in some fixtures which are indicators that the fixtures should be replaced.

Recommendation:

The recommendation is to replace all floor mounted water closets c/w flush valves and all tank type water closets.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2007	\$29,800	Unassigned

Updated: MAR-07

D2010.01 Water Closets-1957 Addition**

The water closets are wall hung with lever operated flush valves.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1957	35	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Water Closets**Recommendation:**

Replace wall hung water closets c/w flush valves and carriers. It is estimated that the cost to replace a water closet, flush valve and carrier is \$1,800.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$9,000	Unassigned

Updated: MAR-07

D2010.02 Urinals-1946 Construction**

There are eleven (11) stall urinals. Flushing of the urinals is activated with motion sensors and timers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1946	35	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Urinals

Concern:

Some urinals are stained and at least two (2) are cracked. Replacement is necessary to reduce health problems and odors from cracked fixtures.

Recommendation:

The recommendation is to replace all urinals in the 1946 constructed wing. The estimated cost to replace a single urinal is \$1,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2007	\$16,500	Unassigned

Updated: MAR-07

D2010.02 Urinals-1957 Addition**

Urinals are stall type and the flushing is activated with a motion sensor and timer.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1957	35	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Urinals

Concern:

One (1) of the four (4) urinal is cracked. This will result in odors and unacceptable hygiene conditions.

Recommendation:

It is recommended to replace all urinals in the Gymnasium Wash Room. It is estimated the cost for replacing a single urinal is \$1,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$6,000	Unassigned

Updated: MAR-07

D2010.03 Lavatories**

Lavatories are stainless steel with slow closing push button faucets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2002	35	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D2010.04 Sink-Staff Room**

The counter sink in the Staff Room is enameled steel with a stainless steel rim and swing spout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Enameled Steel Sink

Concern:

The sink is stained and the enamel is crazed.

Recommendation:

Remove the enameled steel counter sink and replace it with a stainless steel counter sink. It is estimated that the cost for replacing the sink is \$1,100.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2007	\$1,100	Medium

Updated: MAR-07

D2010.04 Sinks **

There are two (2) cast iron floor standing service sinks. They each have hot and cold faucets. A third service sink is a counter mounted single compartment stainless steel sink. It has a swing spout and individual hot and cold faucets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Provide Backflow Protection

Concern:

All three (3) service sinks lack backflow protection. Hoses are connected to faucets and stored in the sinks. This is a code issue which should be corrected. Failure to correct this condition can result in contaminated water being siphoned from the sinks into the domestic water system, contaminating the domestic water system in the facility and possibly the municipal system..

Recommendation:

Replace existing service sink faucets with suitable mixing faucets having approved backflow protection. The estimated cost to replace one (1) faucet is \$500. To replace all three (3) faucets is \$1,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Upgrade	2007	\$1,500	Unassigned

Updated: MAR-07

Event: Replace Service Sinks.

Concern:

Enamel on the service sinks is severely crazed which is not hygienic and the stainless steel counter mounted sink is not suitable for filling and emptying cleaning buckets of water.

Recommendation:

Replace the service sinks. It is estimated that the cost to replace one sink is \$1,500 for a total of \$4,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2007	\$4,500	Medium

Updated: MAR-07

D2010.04 Sinks**

Counter top sinks are stainless steel with swing spouts and hot and cold operating faucets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2002	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D2010.08 Drinking Fountains / Coolers-1946 Construction**

There are four (4) wall mounted china drinking fountains in the classroom wing. It is estimated they were installed in 1946.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	35	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Drinking Fountains

Concern:

The china drinking fountains have minor chips which is not hygienic.

Recommendation:

Replace all drinking fountains with stainless drinking fountains. It is estimated that the replacement cost of single a drinking is \$1,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2008	\$6,000	High

Updated: MAR-07

D2010.08 Drinking Fountains / Coolers-1957 Addition**

A double bubbler wall hung china drinking is located in the Foyer to the Gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1957	35	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Drinking Fountain

Concern:

The drinking fountain has minor chips which is unacceptable for good hygiene.

Recommendation:

Replace the drinking fountain with a new one. It is estimated that the cost to replace the drinking fountain is \$1,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$1,500	Medium

Updated: MAR-07

D2020.01.01 Pipes and Tubes: Domestic Water*-1946 Construction

Domestic water piping consists of a mixture of galvanized iron and copper piping. It is estimated that the galvanized iron piping was installed in 1946 and that portions of it have been replaced with copper piping.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	40	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

Event: Assess condition of piping.

Concern:

The domestic water piping includes both galvanized iron and copper. This piping combination will result in electrolytic action and cause premature pipe failure. Pipe deterioration is more rapid in the hot water piping than in cold water water, but it does accelerate deterioration of the cold water piping as well.

Recommendation:

Since it is impossible to assess the piping condition from the exterior unless there is a failure or failures, a study should be undertaken to do tests and establish the piping condition. It is estimated that such a study will cost \$1,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2007	\$1,500	Low

Updated: MAR-07

Event: Replace Domestic Water Piping.

Concern:

Since the domestic water piping consists of a combination of galvanized and copper piping, electrolysis occurs, but the rate of piping deterioration may not be apparent from external observation.

Recommendation:

Replace all domestic water piping. An estimated lump sum cost for replacing the domestic water piping is \$70,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2008	\$70,000	Unassigned

Updated: MAR-07

D2020.01.01 Pipes and Tubes: Domestic Water*-1957 Addition

Domestic water piping is copper.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	40	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

Event: Replace Domestic Water Piping.**Concern:**

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Recommendation:

Replace the domestic water piping. It is estimated that the cost for this is \$15,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$15,000	Low

Updated: MAR-07

Event: Study Domestic Water Piping Condition**Concern:**

The condition of the piping cannot be accurately determined from external observation, however, past experience indicates that copper piping used for domestic hot water can have a life expectancy from twenty-five (25) to fifty (50) years. This will vary considerably depending conditions such as water temperature, usage and water hardness.

Recommendation:

A study should be undertaken to determine the piping condition. The cost for such a study is \$1,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2009	\$1,500	Low

Updated: MAR-07

D2020.01.02 Valves: Domestic Water -1957 Addition**

Domestic water valves are predominantly bronze material. It is estimated the majority of the valves were installed in 1957.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1957	40	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Preventative Maintenance

Concern:

Valves tend to "freeze" if not operated frequently. This could result in the valves being inoperable in an emergency which can have disastrous results.

Recommendation:

Replace valves. It is estimated that the cost for replacing a single valve is \$200.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2010	\$2,000	Low

Updated: MAR-07

D2020.01.02 Valves: Domestic Water-1946 Construction**

Valves are predominantly bronze construction. It is estimated that the majority were installed in 1946.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	40	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

Event: Replace Valves

Concern:

Valves tend to "freeze" in the normal position which makes them inoperable. In an emergency this can have disastrous results.

Recommendation:

It is estimated that there are twenty valves. At an estimated cost of \$250 to replace a valve, the total cost will be \$5,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2010	\$5,000	Unassigned

Updated: MAR-07

D2020.01.03 Piping Specialties (Backflow Preventors)**

A pressure reducing backflow prevention device is installed in the boiler makeup water piping. Backflow prevention is also installed in the water line to the fire hose stations upstream of the water meter. It is estimated that these backflow prevention devices were installed in about 1995.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1995	20	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D2020.02.02 Plumbing Pumps: Domestic Water**

The domestic hot water circulation pump is a bronze body Bell & Gossett Model SLC 25E. It is estimated that this pump was installed in 1995.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1995	20	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D2020.02.06 Domestic Water Heaters**

The domestic water heater is a natural gas fired State Model No.;SBT 75 155 NE 7DF with a storage capacity of approximately 284 liters. It has a recovery of 7.4 l/min through a temperature rise of 55.5C with an input of 41 kW.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1995	20	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	41 kW	N/A	

D2020.03 Water Supply Insulation: Domestic* -1957 Addition

Piping insulation is fibreglass.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Insulation

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$5,000	Low

Updated: MAR-07

D2020.03 Water Supply Insulation: Domestic*-1946 Construction

New water piping from the water entry into the building and around the water meter is insulated with 25mm fibreglass insulation which has a canvas covering. The remainder of the piping is not insulated.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Varies	N/A	

D2030.01 Waste and Vent Piping* -1957 Addition

Waste piping is primarily cast iron and vent piping is copper and cast iron.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	50	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Varies	N/A	

Event: Replace Waste and Vent Piping

Recommendation:

An estimated cost for replacing the waste and vent piping is \$10,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$10,000	Low

Updated: MAR-07

D2030.01 Waste and Vent Piping*-1946 Construction

Plumbing waste and vent piping is predominantly cast iron.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	50	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Varies	N/A	

Event: Assess condition of piping.**Concern:**

The waste and vent drainage piping cannot be determined only from an exterior observation. Because of the piping age, there is concern that there may be some internal piping deterioration.

Recommendation:

Because of the piping age, a study should be made to determine the internal pipe condition from which an assessment can be made for the required action. It is estimated the cost for such a study is \$2,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2008	\$2,500	Low

Updated: MAR-07

Event: Replace Waste and Vent Piping**Concern:**

In some locations waste piping shows signs of external corrosion indicating that the piping has some deterioration.

Recommendation:

Replace waste and vent piping. It is estimated the cost to replace waste and vent piping above ground will be \$20,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2008	\$20,000	High

Updated: MAR-07

D2040.01 Rain Water Drainage Piping Systems* - 1957 Addition

Storm water is collected from the flat roof with roof hoppers and from the slopping roof with eaves troughs. Cast iron piping collects the storm water which is piped underground connecting into the 1946 storm drainage system on the school property.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	50	MAR-07

<u>Capacity Size</u>	<u>Capacity Unit</u>
Varies	N/A

Event: Replace Rainwater Drainage Piping

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$5,000	Low

Updated: MAR-07

D2040.01 Rain Water Drainage Piping Systems*-1946 Construction

Rain water drainage piping collects the rain water from the roof and continues underground to the City service in 86th Avenue, south of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	50	MAR-07

<u>Capacity Size</u>	<u>Capacity Unit</u>
Varies	N/A

Event: Replace Rainwater Drainage Piping

Recommendation:

It is estimated that the cost of replacing the rain water drainage piping above grade is \$50,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$50,000	Low

Updated: MAR-07

Event: Study Rainwater Piping Condition

Concern:

A study will reveal the interior condition of the piping.

Recommendation:

It is estimated the cost for the study will be \$2,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2008	\$2,000	Low

Updated: MAR-07

D2040.02.04 Roof Drains -1957 Addition**

Roof drains have cast iron bodies and aluminum dome strainers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	40	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Roof Drains

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$1,600	Low

Updated: MAR-07

D2040.02.04 Roof Drains -1946 Construction**

Roof drains are cast iron with aluminum dome strainers. It is estimated they were installed in 1989.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1989	40	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

D3010.02 Gas Supply Systems*

It is estimated that the natural gas service was installed in about 1960.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1960	60	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D3020.01.01 Heating Boilers & Accessories: Steam**

There are two (2) natural gas fired low pressure steam boilers which have been operating since 1946. They are identical boilers, manufactured by Reliance Welding Works and were originally coal fired and later converted to natural gas fuel. Each boiler is rated to operate at a pressure of 103 kPa and a temperature of 121C, generating 3,149 kg of steam per hour. ABSA certification is provided every second year, alternating between boilers. Both boilers have gone through extensive upgrading including repairs to the brick bases, re-insulation of the boiler shells, replacing gas burners with electronic ignition burners and operating controls. It is estimated that these upgrades were made between 2005 and 2006.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	35	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	See Element Discription	N/A	

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

Each boiler has a 710mm breeching. They are combined into a 1067mm x 915mm size before connecting into a masonry chimney. Combustion air is provided through a louver in the outside wall opening which is ducted to the proximity of the boiler gas burners. The combustion air duct has a motorized damper at the terminal opening which is activated to the open position before either boiler fires. It is estimated that the combustion air system was installed between 2005 and 2006.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	35	MAR-07

<u>Capacity Size</u>	<u>Capacity Unit</u>
1067mm x 915mm chimney	N/A

Event: Replace Chimney

Recommendation:

It is estimated that it will cost \$18,500 to replace the chimney.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$18,500	Low

Updated: MAR-07

D3020.01.04 Water Treatment: Steam Boilers*

Chemicals are introduced into the condensate receiver for boiler water treatment. The condensate pump feeds the chemically treated condensate into the boilers. Makeup water to the boilers is made up directly to the boilers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	35	MAR-07

<u>Capacity Size</u>	<u>Capacity Unit</u>
N/A	N/A

D3040.01.01 Air Handling Unit: Air Distribution-1946 Construction**

It is estimated that the air handling system for the classrooms was installed in 1946. It is a built-up air system with outdoor air and return air provision. Mixing ratios of the two air streams is achieved by manually adjusting the amount of exhaust air from a controller which adjusts the outdoor and return air dampers accordingly. After the two air streams mix the air is filtered with a replaceable filter media, the air is then heated with a steam coil and supplied to the classrooms at a preset temperature which can be adjusted from a controller. The air supply fan is a size 16 Sheldons Silavent with single inlet fan wheel.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Not Known	N/A	

Event: Replace Heating and Ventilation System

Concern:

The existing ventilation system in the classroom wing may not provide adequate ventilation for the occupancy. The air temperature is not zoned, compromising space comfort. Air filtering quality is sub-standard based on current standards and air distribution is not adequate to provide suitable ventilation in occupied spaces. Internal ductwork is extremely dusty and this may contain bacteria and molds.

Recommendation:

The ventilation system for the classroom wing should be replaced with a system that will provide suitable ventilation, temperature zone control and humidity control. It is estimated the cost for such a system will be approximately \$325,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2009	\$325,000	Unassigned

Updated: MAR-07

Event: Study

Concern:

The concern is that the heating and ventilation system may not provide adequate outdoor air requirements at all times for the occupants because the outdoor air adjustment is done by manually resetting the dampers. There is also concern that the ventilation rates may not be sufficient for a healthy classroom environment. Other concerns are humidity levels, air cleanliness and air distribution.

Recommendation:

Do a study to determine if the existing system provides adequate outdoor air to present code requirements, if the system can be upgraded or whether it has to be replaced to meet code and recommended standards. The estimated cost for such a study is \$5,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2007	\$5,000	High

Updated: MAR-07

D3040.01.01 Air Handling Units: Air Distribution-1957 Addition**

The air handling unit for the gymnasium is manufactured by Canadian Blower Sirocco and is a size 2V13. The unit has motorized outdoor and return air mixing dampers, filters, heating coil and a fan.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	See Element Discription	N/A	

Event: Replace Heating & Ventilation Unit**Recommendation:**

Replace the heating and ventilation unit.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$35,000	Low

Updated: MAR-07

D3040.01.03 Air Cleaning Devices:Air Distribution* -1957 Addition

The air filters consist of replaceable filter media mounted in metal frames.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1957	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Not Known	N/A	

Event: Replace Filters**Recommendation:**

Install medium efficiency filters to provide higher quality air filtration. It is estimated that this can be done for about \$2,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2008	\$2,000	High

Updated: MAR-07

D3040.01.03 Air Cleaning Devices:Air Distribution*-1946 Construction

The air system serving the school classrooms has replaceable air filter media mounted in metal frames. The filter media is approximately 50mm deep. It is estimated that these filter frames date back to about 1946.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Not Known	N/A	

Event: Replace Filters

Recommendation:

Replace air filters with a pre-filter and a secondary medium efficiency filter..

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$25,000	Low

Updated: MAR-07

D3040.01.04 Ducts: Air Distribution*

Ducts are galvanized steel construction. In some places they are painted externally. Ducts in the Classroom Wing were installed in 1946 and in the Gymnasium in 1957.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1946	50	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

Event: Clean and Repair Ductwork

Concern:

The internal ducts are very dusty. This has a negative impact on the cleanliness of the classrooms, gymnasium and housekeeping. It could also result in bacteria growth and molds developing with the right conditions.

Recommendation:

Clean internally the supply air ducts. Seal ductwork so more air is directed into the classrooms. This work can be done by a service company specializing in cleaning duct systems. It is estimated that the cost for cleaning the internal ductwork and repairing ductwork is \$10,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2007	\$10,000	High

Updated: MAR-07

D3040.01.07 Air Outlets & Inlets:Air Distribution*

Supply air grilles are made of steel with punched openings in the grille face.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

Event: Replace Supply Grilles**Concern:**

The supply air grilles do not distribute air efficiently in the classrooms leaving some spaces with inadequate ventilation.

Recommendation:

Replace existing supply air grilles with grilles sized to provide better air distribution. The grilles should have double deflection adjustable face louvers. It is estimated that the cost for this improvement is \$6,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2008	\$6,500	Medium

Updated: MAR-07

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

Carbon steel piping is used for steam and condensate. Condensate is collected and stored in a central tank from which a pump transfers it back to the steam boilers. The condensate pump is manufactured by Darling Bros., Model No.: 62115, Type 20DC20. It is driven by a 0.56 kW, 1775 rpm motor. It is estimated that the steam distribution system for the classrooms was installed in 1946. The steam system for the Gymnasium is estimated it was installed in 1957. A condensate tank and pump is also located in the Gymnasium Mechanical room which returns the condensate from the Gymnasium H&V unit heating coil to the central condensate tank in the Boiler Room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

Event: Replace Steam and Condensate Piping

Concern:

Since the condition of the steam piping can not be determined from external observation only an internal observation must be made if a reliable assessment is to be made. However, since the piping has been in service for sixty years there is concern that the system likely has some weakness. The life of such a system is normally thirty years and with a good maintenance program the life can be extended. Sixty years of service certainly indicates that the maintenance of the system was very good.

Recommendation:

It is recommended that the condensate and steam piping be replaced. The estimated cost for replacement is \$200 per meter of pipe. To replace 150 meters is approximately \$300,000. The cost of insulating the piping is not included in this cost.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2009	\$300,000	Unassigned

Updated: MAR-07

Event: Study Steam and Condensate Piping Conditionm

Recommendation:

Undertake a study to verify the condition of the steam and condensate piping.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2007	\$4,000	Low

Updated: MAR-07

D3040.04.03 Ducts: Exhaust*

Exhaust systems consist of vertical shafts in which the air rises and is discharged above the roof. This is a pressured method of relieving the exhaust air.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	50	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

Event: Replace Gravity Exhaust with Mechanical**Concern:**

The concern is that there is insufficient air exhausted from wash rooms and storage rooms allowing odors to permeate into occupied spaces such as classrooms.

Recommendation:

Install exhaust fans over the gravity shafts on the roof and duct exhaust air from wash rooms for a positive exhaust system. The supply air must be adequate to offset the air being exhausted. It is estimated that considerable improvement can be made for \$10,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Indoor Air Quality Upgrade	2008	\$10,000	High

Updated: MAR-07

D3040.04.05 Air Outlets and Inlets: Exhaust*

Exhaust inlets are metal plates with punched holes. Most of them are painted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

Event: Replace Air Inlets and Outlets**Recommendation:**

Replace grilles with correctly sized grilles and velocities.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2009	\$5,000	Low

Updated: MAR-07

D3050.02 Air Coils**

Air coils in both air handling units are supplied with low pressure steam. It is estimated that the heating coils in the classrooms heating and ventilation unit were installed in 1946 and the heating coils in the gymnasium heating unit in 1957.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Steam Heating Coils

Recommendation:

Replace steam coils in both heating and ventilation units.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2010	\$12,000	Low

Updated: MAR-07

D3050.03 Humidifiers**

Humidification in the classroom wing was accomplished by introducing live steam directly into the air stream in the air handling down stream of the air heating coil. This is not used anymore. It is estimated that this system was installed in 1946. In the gymnasium, humidification was accomplished by injecting steam through a distributor pipe located in the air handling unit. This is not being used anymore. It is estimated that this system for the gymnasium was installed in 1957.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1946	25	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Assess condition of humidifiers

Concern:

The concern is that the humidifier steam distribution piping is extremely corroded and the controls are deteriorated, making it impossible to assess if these systems can be made to operate satisfactorily without a thorough review.

Recommendation:

It is recommended that a study be provided which will recommend the type of humidification system suitable for the occupants in this building with cost estimate. It is estimated that the cost for such a study is \$3,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2007	\$3,500	Low

Updated: MAR-07

Event: Replace Humidifiers

Concern:

The concern is that the humidifiers distribution systems are severely corroded and are not suitable for reusing. The humidity controls are deteriorated and may not be working.

Recommendation:

It is estimated that the cost for replacing each humidifier is \$9,000 for a total of \$18,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$18,000	Medium

Updated: MAR-07

D3050.05.01 Convector**

Steel convectors are surface mounted on the perimeter walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	40	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

Event: Assess condition of convectors.**Concern:**

The condition of the convectors can not be made only from an external observation. Since the convectors have been in service for sixty years there is concern for the internal condition.

Recommendation:

It is recommended that a study be made to determine the internal condition of the convectors from which an assessment can be made for action to be taken. It is estimated that such a study will cost \$3,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2008	\$3,500	Low

Updated: MAR-07

Event: Replace Convectors.**Concern:**

Subject to the results of further assessment, it is believed that the convectors are corroded.

Recommendation:

Replace steam convectors. It is estimated that it costs about \$600 to replace one convector. To replace them all will cost \$30,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2009	\$30,000	Low

Updated: MAR-07

D3050.05.03 Finned Tube Radiation**

Finned tube radiation is enclosed in a metal cabinet mounted on the walls.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	40	MAR-07

<u>Capacity Size</u>	<u>Capacity Unit</u>
N/A	N/A

Event: Assess condition of finned tube.**Concern:**

The condition of the finned tube radiation can not be made from external observation only. Since the radiation is sixty years in service there is some doubt about its integrity.

Recommendation:

It is recommended that a study be made to establish the internal condition of the radiation from which an assessment can be made for the course of action to take. It is estimated that the cost for such a study is \$2,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Preventative Maintenance	2008	\$2,000	Unassigned

Updated: MAR-07

Event: Replace Finned Tube Radiation**Concern:**

Subject to the findings of further assessment it is believed that the finned tube radiation has deteriorated.

Recommendation:

Replace finned tube radiation. There are approximately thirty (30) meters of finned tube radiation in the school.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2009	\$10,000	Low

Updated: MAR-07

D3050.05.07 Unit Ventilators**

There are two (2) unit ventilators. They operate on steam.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Unit Ventilators**Recommendation:**

Replace the two (2) unit ventilators. It is estimated that the cost to replace one (1) unit ventilator is \$3,000. To replace two (2) will be \$6,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2008	\$6,000	Low

Updated: MAR-07

Event: Study Alternatives to Unit Ventilators**Concern:**

The unit ventilators are not suitable for heating and ventilating the spaces they serve. There are better and more effective ways of heating and ventilating these spaces.

Recommendation:

It is recommended that a study be made, considering alternative systems of heating and ventilating the spaces served by the unit ventilators. It is estimated such a study will cost \$1,500.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2007	\$1,500	Low

Updated: MAR-07

D3060.02.02 Pneumatic Controls**

Pneumatic controls are supplied with instrument air from a Devilbiss air compressor Model No.; 220 driven with a 0.56 kW electric motor located in the Boiler Room. Pneumatic controls are Johnson Controls and it is estimated they were originally installed in 1946 with perhaps some components of a more recent vintage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1946	40	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Controls System

Concern:

The existing controls are not providing reliable and accurate control for the mechanical systems because of wear in the control components such as damper linkages, valve and damper operators, etc. Parts are no longer available for some of these components and failure could put operation of the mechanical systems in jeopardy.

Recommendation:

It is recommended to replace the pneumatic controls system with an Energy Management Control System. The estimated cost for such a system is \$80,000 starting at the lower end.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2009	\$50,000	Unassigned

Updated: MAR-07

D4010.01 Wet-Pipe Fire Sprinkler Systems

The building is presently not sprinklered. Based on the building occupancy and wood construction it must be sprinklered according to the current Building Code.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	0	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Install Fire Protection Sprinklers

Concern:

Since the building has three stories and is constructed of wood, the current Building Code requires that the building be sprinklered.

Recommendation:

It is recommended to sprinkler the building to code requirements. The estimated cost for this work is \$123,000.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Upgrade	2007	\$123,000	High

Updated: MAR-07

D4020 Standpipes*

The school is supplied with a wet stand pipe and hose system. The piping is carbon steel.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	60	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D4030.01 Fire Extinguisher, Cabinets and Accessories**

There are several portable type ABC extinguishers and hand water pumps located through the school. It is estimated that the oldest extinguishers were installed in 1946 with some extinguishers of more recent vintage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	Various	N/A	

S5 ELECTRICAL**D5010.03 Main Electrical Switchboards (Main Distribution)****

Main service of 250A, 120/240V, single phase, 3 wire is dropped from Utility's residential single phase distribution to a 300A, 120/240V service and distribution switchboard (FPE). All circuit breakers are thermal magnetic type of unspecified interrupting capacity.

By necessity, a second service is provided to serve the three phase equipment. This comes from a pole mounted transformer on the primary distribution and is brought in underground to a 100A disconnect switch - fused at 90A - and to a 208V, 3 phase, 3 wire "distribution" panelboard (Westinghouse), serving a heating pump, two AHU fans, a compressor and a welding outlet.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	40	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	250A, 120/240V 1 ph; 90A, 208V 3ph.	N/A	

Event: Replace Service Entrance Switchboard**Recommendation:**

Replace with new service and distribution switchboard, consolidating both the 120/240V single phase and 208V 3 phase services.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2010	\$45,000	Unassigned

Updated: MAR-07

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

Branch circuit panelboards from various manufacturers and from different periods are evident throughout the school. Through several renovations and upgrades (e.g., 1971, 1991, 2001), new panels have been added but those from the 1946 construction still exist - these are the recessed panels (FPE) in the hallways and the panel in the Boiler Room. The upgrade of the parking receptacles in 2006 also includes new panels for the thermostatically controlled and cycled parking receptacles.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace 1946 branch circuit panelboards**Recommendation:**

Replace the branch circuit panelboards from 1946 and all their circuit breakers.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2010	\$24,000	High

Updated: MAR-07

D5010.07.02 Motor Starters and Accessories**

Three phase full voltage magnetic starters with separate disconnect switches for three phase equipment. Toggle switches as manual starters for the control of single phase equipment.
There is no motor control centre.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	30	MAR-07

<u>Capacity Size</u>	<u>Capacity Unit</u>
N/A	N/A

Event: **Replace motor starters with combination type**

Recommendation:

Replace three phase magnetic starters and disconnect with combination magnetic starters. (Quantity: 4)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$2,000	Medium

Updated: MAR-07

D5020.01 Electrical Branch Wiring*

Wiring method is cables in conduits - also from different periods - and mostly recessed in finished areas (except additions for receptacles which use surface mounted conduits) and surface mounted in the basement utility rooms. The 1946 construction did not provide adequate receptacles for present day use, especially for use with computers; but they have been added in subsequent renovations to meet most requirements.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	50	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Failure Replacement - Branch Wiring

Recommendation:

Allowance for replacing deteriorated wiring detected by study

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2008	\$20,000	Low

Updated: MAR-07

Event: Study

Concern:

Cable insulation may have deteriorated after so many years although there may not be any sign of failure.

Recommendation:

Test cable insulation (meggar) of feeders of 1946 panelboards. Replace only if test results are unsatisfactory and do this with the replacement of panelboards. Price is for tests only.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2008	\$2,000	High

Updated: MAR-07

D5020.02.01 Lighting Accessories (Lighting Controls)*

Lighting is controlled by local line voltage switches. These switches vary in age from 1946 to 2001 - coincide with lighting renovation at various stages.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5020.02.02.01 Interior Incandescent Fixtures*

A 1946 incandescent lampholder still exist in the Boiler Room. Others are from the 1957 Gymnasium addition (floodlights and stage lights) and 1991 renovation of the Administration area and staff room (track lights in Principal's office).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5020.02.02.02 Interior Florescent Fixtures - Classroom Wing**

Fluorescent lighting is comprised of T12 lamps (34 W Watt Miser) and magnetic ballasts. Renovations from 1972 to 2001 see them upgraded in layout and fixtures, except the Gymnasium which retains its 1957 wire-guarded Gymnasium fixtures. Some time in the 1990's E.P.S.B. embarked on a de-lamping program - every other light is de-lamped - and the result is still evident today.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1972	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5020.02.02.02 Interior Florescent Fixtures - 1957 Addition**

The Gymnasium lighting retains the wire-guarded two-lamp strip fixtures. The system has also been undergoing the same de-lamping program as the main building, i.e., lamps in alternate fixtures are removed.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace Gymnasium Lighting

Concern:

The lighting system in the Gymnasium is an inferior lighting system - energy inefficient and poor performance.

Recommendation:

Replace the Gymnasium lighting system - wiring may be reused - with an energy efficient fluorescent lighting system - high performance fixtures with T5 or T8 lamps and electronic ballasts.

Payback period is expected to be 4 - 5 years.

Consequences of Deferral:

Continue operating in a deficient illumination and energy inefficient environment.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Energy Efficiency Upgrade	2008	\$25,000	Medium

Updated: MAR-07

D5020.02.03.02 Emergency Lighting Battery Packs**

Battery packs with remote lighting heads for emergency lighting in hallways and stairwells

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1981	20	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

Event: Replace batteries

Recommendation:

Replace batteries in battery packs.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$3,000	Medium

Updated: MAR-07

D5020.02.03.03 Exit Signs*

Internally illuminated exit lights, the incandescent lamps were changed to the energy efficient LED lamps, retaining the existing housing.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1996	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5020.02.05 Special Purpose Lighting*

Incandescent floodlights with removable filters as stage lighting in the Gymnasium

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5020.03.01.01 Exterior Incandescent Fixtures*

A weatherproof industrial fixture remains at the entrance to the Mechanical Room in the basement.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5020.03.01.03 Exterior Metal Halide Fixtures*

The security lighting upgrade in 2001 includes changing all entrance lighting to metal halide wall packs, individually controlled by photoelectric cells; and roof mounted floodlights illuminating the parking lot and the playground.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

Surprisingly, the entrance to the Day Care Centre uses high pressure sodium - a ceiling mounted surface fixture.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

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

Exterior lighting is photoelectric cell controlled - the roof mounted security lights are all energized together and the entrance lights are individually controlled.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.01 Detection and Fire Alarm**

The fire alarm system is a zoned and supervised hard wired system. The 1981 Mirtone control panel was replaced in the summer of 2006 with an EST panel and remote annunciator. There was no change in the design of the system nor equipment from the Mirtone system - still the same 8 zones, same detection devices of manual stations, heat and smoke detectors and signal bells.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	25	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.02.01 Door Answering*

Push button at the entrance initiating signal through the P.A system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1972	25	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.02.02 Intrusion Detection**

The intrusion alarm system (Magnum Alert 3000) uses infrared motion detectors in selected locations initiating an alarm to the security company. System includes two zones - Main Building and Gymnasium - and keypad activation.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2000	25	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.03 Clock and Program Systems**

Clocks are battery operated. The class change signals utilize the clock in the P.A. System and broadcast over the loudspeakers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2001	25	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.04.01 Telephone Systems**

The Nortel Norstar telephone exchange not only serves the needs of the administration office, it replaces the intercom system between the classrooms and the office as well as serving the telephone needs of the teachers outside the school. It also interfaces with the Public Address system that enables broadcasting through the telephone sets. The telephone service entrance is overhead.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2001	25	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.04.03 Call Systems**

The call system for the classrooms uses the telephone system as intercom between classrooms and the General Office.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2001	25	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.04.04 Data Systems**

The present data distribution and LAN system is a result of numerous upgrades. 1991 saw the provision of a computer room, 2001a major upgrade of the data cabling and Local Area Network and 2005 saw the installation of the Supernet. Categories 5 and 5E cables are evident.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2001	25	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.05 Public Address and Music Systems**

The Public Address System was upgraded in 2001. The upgraded system, Bogen Multicom 2000, interfaces with the telephone system and provides public address and music (national anthem) throughout the school. It also provides class change signals through the same loudspeakers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2001	20	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.06 Television Systems*

An internally distributed television system serves educational programs and acts as bulletin boards. 48" LCD flat panels are provided in every classroom, including the Library, and Hallways.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	20	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5030.07 Other Communications and Security Systems*

A sound reinforcement system of wall amplifier and ceiling speakers is present in the Gymnasium for locally conducted functions. This is separate from the school P.A. System which is also present in the Gymnasium and has its own wall mounted loudspeaker.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1957	20	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

D5090.01 Uninterruptible Power Supply Systems**

Battery back up (UPS) for essential communication systems. These are self contained plug in units: 750VA (APC750) for the telephone system, 350VA (APC350) for the Supernet (Videotron panel) and 1000VA (SmartLink 1000).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	30	MAR-07
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	N/A	N/A	

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION**E2010.02 Fixed Casework** - Washroom counters.**

Plastic laminate counters and backslashes.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	1995	35	MAR-07

E2010.02 Fixed Casework - 2nd floor staff room**

Painted plywood upper and lower cabinets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1946	35	MAR-07

Event: Replace kitchen cabinets**Concern:**

Cabinets are worn, unsightly and difficult to keep clean..

Recommendation:

Replace cabinets and counter.

Cost based on 3m long counter.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2009	\$3,000	High

Updated: MAR-07

E2010.02 Fixed Casework Classrooms and Storage Rooms**

Bookshelves, cabinets and counters. Painted plywood with plastic laminate counter tops.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	35	MAR-07

Event: Replace bookshelves, cabinets and counters.**Recommendation:**

Replace bookshelves, cabinets and counters.

Cost based on 90lin m.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$60,000	Low

Updated: MAR-07

E2010.03.01 Blinds**

Roller type or vertical blinds in classrooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	30	MAR-07

Event: Replace blinds**Recommendation:**

Replace window blinds.

Cost based on 72 windows; each 2m2.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$8,000	Low

Updated: MAR-07

E2020 Moveable Furnishings*

Various desk/chair units and tables.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	20	MAR-07

Event: Replace furnishings**Recommendation:**

Replace classroom furnishings.

Cost based on \$3750/classroom

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2010	\$56,000	Low

Updated: MAR-07

F2020.01 Asbestos*

A description of asbestos containing materials in this facility is contained in a report dated November 28, 2001, prepared by PHH Environmental Ltd.,

This report indicates the presence of asbestos in floor tiles, ceiling finishes and insulation material on mechanical equipment. With the exception of some damaged material on mechanical equipment, the asbestos does present a hazard in its undisturbed form.

School Board records indicate approximately \$7000 was spent on asbestos remediation measures from 2001 to 2005.

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

F2020.02 PCBs*

No PCB's problems reported or noted.

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

F2020.03 Mercury*

No mercury problems reported or noted.

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

F2020.04 Mould*

No mould problems reported and noted.

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

S8 FUNCTIONAL ASSESSMENT**K4010.01 Barrier Free Route: Parking to Entrance**

There is a designated barrier free parking stall and curb cut but no signage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	0	MAR-07

K4010.02 Barrier Free Entrances

The grade level (west) entrance requires a power operator to conform to current barrier free standards.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	0	MAR-07

Event: Install power door operator**Concern:**

The entrance does not conform to barrier free standards.

Recommendation:

Install a power operator to one of the doors at the west entrance.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2008	\$2,500	High

Updated: MAR-07

K4010.03 Barrier Free Interior Circulation

Interior circulation in the classroom wing is deficient in the following aspects:

- no BF access from any entrance to any of the three floors.
- no BF access to girl's washroom

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	0	MAR-07

Event: Install elevator**Concern:**

There is no barrier free (BF) access to the classroom wing from any entrance.

Recommendation:

Install an interior elevator with stops at each floor. Install a lift to provide access from the grade level (west) entrance to the 2nd floor level.

Cost includes allowance for architectural and mechanical modifications.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2008	\$250,000	Unassigned

Updated: MAR-07

K4010.04 Barrier Free Washrooms

There are no barrier free washroom toilet stalls. The main girls' washroom is not accessible to persons in wheelchairs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	0	0	MAR-07

Event: Provide new BF washroom.

Concern:

There is no washroom with a barrier free toilet stall.

Recommendation:

Provide a new washroom to meet barrier free standards or reconfigure existing washrooms.

Cost based on new washroom. Work must be done in conjunction with K4010.03.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2008	\$14,000	High

Updated: MAR-07

RECAPP Facility Evaluation Report



Rutherford Elementary School

S3267
Edmonton

Facility Details**Building Name:** Rutherford Elementary Sch**Address:****Location:** Edmonton**Building Id:** S3267**Gross Area (sq. m):** 0.00**Replacement Cost:** \$0**Construction Year:** 0**Evaluation Details****Evaluation Company:** HENOCH ARCHITECT**Evaluation Date:** October 18 2006**Evaluator Name:** J. Henoch

Total Maintenance Events Next 5 years:	\$1,000
5 year Facility Condition Index (FCI):	0%

General Summary:

Paved parking and drop off area.
 Concrete walks and play area adjacent to entrances.
 Mature trees and shrubs and fenced lawns.
 The site is in good condition.

Structural Summary:**Envelope Summary:****Interior Summary:****Mechanical Summary:****Electrical Summary:****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.

S7 SITE**G2020.02.02 Flexible Paving Parking Lots(Asphalt)****

Student drop off area and staff parking at north side of building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2002	10	MAR-07

G2020.06.03 Parking Lot Signs*

Metal parking signs; either pole mounted or wall mounted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1985	25	MAR-07

Event: Replace parking signs**Concern:**

Signs are damaged or fades and obsolete. They are unsightly and ineffectual.

Recommendation:

Replace (or remove) parking restriction signs.
Cost base on installation of four new signs.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2007	\$1,000	Low

Updated: MAR-07

G2020.06.04 Pavement Markings*

Painted parking stall lines and barrier free designation.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2002	25	MAR-07

G2030.04 Rigid Pedestrian Pavement (Concrete) - North**

Concrete slab along north side of building.

There is limited slope away from the north entrance. This may contribute to buildup of ice in this area. The situation should be monitored and if necessary, a drain installed at this location.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	15	MAR-07

G2030.04 Rigid Pedestrian Pavement (Concrete) - South**

Concrete walks adjacent to parking. Pad for garbage bins.

Walk adjacent to building may be restricting water flow away from building. This situation should be monitored.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2002	15	MAR-07

G2030.06 Exterior Steps and Ramps*

Concrete entrance steps to east and north entrances.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1955	15	MAR-07

G2040.06 Exterior Signs*

Timber framed lawn sign with provision for changing notices.
Facility name painted on Gymnasium walls as well as applied in bronze lettering.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	25	MAR-07

G2050.04 Lawns and Grasses*

The school is surrounded by lawns.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1975	15	MAR-07

G2050.05 Trees, Plants and Ground Covers*

Mature trees and shrubs throughout.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1912	10	MAR-07

G3010.02 Site Domestic Water Distribution*

A 50mm combined domestic water service enters the building from the east side. This water provides domestic water for the school and a 50mm line to the fire hose stations.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	50	MAR-07

G3010.03 Site Fire Protection Water Distribution*

There are two (2) fire hydrants adjacent to the school property. One is located on the north-west corner at the intersection of 86th Ave. and 91st St. and the other one is located on the north-east corner at the intersection of 86th Ave. and 93rd St.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	50	MAR-07

G3020.01 Sanitary Sewage Collection*

The sanitary sewer is collected inside the building and connects into the City sanitary sewer to the south of the school on 86th Ave. between 91 St. and 93rd St.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	50	MAR-07

G3060.01 Gas Distribution*

A natural gas service connects to the south side of the building where it enters the Boiler Room where the gas fired equipment is located

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	50	MAR-07

G4010.02 Electrical Power Distribution Lines*

Two separate underground services: 120/240V, single phase and 208V 3 phase.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1946	50	MAR-07

G4010.04 Car Plugs-ins*

Energized parking stalls for 28 cars with Appleton Car Plug Assembly (sloped housing and shielded receptacles installed on railings). Thermostatically controlled and cycled by a control centre in the mechanical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2006	25	MAR-07

G4020.01 Area Lighting*

Metal halide floodlights lighting the playground and the parking lot.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	25	MAR-07