RECAPP Facility Evaluation Report

Edmonton School District No. 7

McKee Elementary School

B3211A
Edmonton

Report run on: July 17, 2008 3:05 PM

Facility Details

Building Name: McKee Elementary School
Address: 10725 - 51 Avenue
Location: Edmonton

Building Id: B3211A
Gross Area (sq. m): 4,848.92
Replacement Cost: $10,568,088
Construction Year: 1966

Evaluation Details

Evaluation Company: Asset Evolution Incorporated (AEI)
Evaluation Date: May 9 2007
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **$3,624,878**
5 year Facility Condition Index (FCI): **34.30%**

General Summary:

McKee Elementary School is a one-storey school with a total building area of 4849 m2. The original school was built in 1966 with an area of 3239m2. An addition was added in 1972 at the south end of the school and to the west end of the gymnasium with an area of 1610m2.

The one storey school comprised of several classrooms, a gymnasium, a computer room, a library and a music room. A daycare which occupies 3 classrooms is located at the south-west end of the building.

The 2007 student enrollment is 244 children.

Structural Summary:

1966 Section - The foundations consist of cast-in-place concrete grade beams and spread footings. The original building has cast-in-place concrete slabs-on-grade with conventional steel reinforcement. The roof comprises of a wood roof deck with wood structure supported by exterior & interior concrete block walls. The structural walls and columns are concrete block walls with poured in place concrete sections.

1972 Section - The foundations consist of cast-in-place concrete grade beams and spread footings. The original building has cast-in-place concrete slabs-on-grade with conventional steel reinforcement. The roof comprises of a metal roof deck with steel structure supported by exterior & interior concrete walls. The structural walls and columns are concrete block walls with poured in place concrete sections.

Overall the structural elements are in acceptable condition.

Envelope Summary:

1966 Section - The exterior cladding consists primarily of brick with prefinished metal siding above the entrances. The exterior window units are aluminum frame with fixed and slider type units. Entrance doors (F1 &F2) are aluminum doors &frames. The utility doors are painted steel doors with painted steel frames. The roof covering has Built-up Bituminous roof assembly. Square-dome acrylic skylights are located along the interior corridor. Replacement of the roof & exterior doors is recommended.

1972 Section - The exterior cladding consists primarily of brick with prefinished metal siding above the entrances. The exterior window units are aluminum frame with fixed and slider type units. Entrance doors (F3 &F4) are aluminum doors &frames. The utility doors are painted steel doors with painted steel frames. The roof covering has Built-up Bituminous roof assembly. Replacement of the exterior doors is recommended.

Overall, the envelope of the building is in acceptable condition.

Interior Summary:

Carpet flooring is found throughout several classrooms, staff room, administration offices, library and music room. Ceramic tile flooring is located throughout the washrooms. Vinyl floor tiles are located in the most of the original classrooms, corridors and ancillary areas. The gymnasiums have a hardwood floor finish. The utility areas have a paint finish on the concrete slab.

The majority of the interior walls are masonry block walls, gypsum board and demountable partitions walls with vinyl wall coverings.

A 2'x2' suspended ceiling tile assembly is located throughout the majority of the school. The wood structure is exposed in the gymnasium & library.

The interior swing doors generally consist of stained wood doors with an interior glazed assembly. Stained solid wood fire doors are located in the corridors. The hardware typically is single cylinder with a stainless steel finish.

Overall, the interior finishes are in acceptable condition. Replacement of all classroom millwork is recommended.

Mechanical Summary:

The building is heated by two gas fired hot water boilers which supply a hot water distribution system serving the c.1966 original building and the c.1972 building addition. The hot water distribution system supplies the air handling unit heating coils and various hydronic terminal units including duct mounted heating coils, unit heaters, finned tube radiation cabinets, and unit ventilators. There are three air handling units (heating and ventilating units) serving the c.1966 original building, including HV1 which serves the gymnasium, and HV2 and HV3 which serve the interior spaces of the original building (the perimeter rooms of the original building are ventilated by unit ventilators). The heating and ventilating units are equipped with hot water heating coils. There is one air handling unit serving the c.1972 building addition. This unit is a supply fan and is not equipped with a hot water heating coil (heating is provided by duct mounted hot water heating coils downstream from the air handling unit. The fresh air supplied to the building by the air handling units is balanced by the exhaust air flow from the air handling units and from eight roof mounted sanitary and local exhaust fans.

Basic building HVAC controls and actuators are pneumatic, and the control air supply system includes an air compressor mounted on an air receiver tank (located in the main mechanical room). There is a Building Management and Control System (BMCS) providing control and monitoring functions for major HVAC equipment (Barber-Colman Network 8000).

Washroom plumbing fixtures include toilets, lavatories and urinals. There are 23 toilets (floor mounted vitreous china flush valve type and floor mounted vitreous china tank type), 23 lavatories (typically stainless steel counter mounted lavatories), and 12 urinals (wall mounted flush valve type) in the building. Other plumbing fixtures in the building include drinking fountains, janitor sinks, mop sinks, and general purpose stainless steel sinks. A natural gas fired domestic hot water heater provides domestic hot water for the building lavatories and sinks.

Fire protection for the building consists of wall mounted fire extinguishers and there is a single fire hose cabinet in the building.

Some mechanical equipment requires replacement or upgrading, including the replacement of some plumbing fixtures, the installation of additional backflow prevention devices, replacement of the roof drains, and replacement of the rooftop exhaust fans. The overall condition of the building mechanical equipment and systems is acceptable.

Electrical Summary:

McKee School is fed with an incoming 120/208V three phase, 4 wire system from an EPCOR pad-mounted transformer. The main electrical distribution consists of a main disconnect and a splitter with fusible switches feeding the branch circuit panels. Individual motor starters have been provided for mechanical equipment.

The wiring in the building is typically standard wiring in conduit.

The interior fluorescent lighting fixtures have T-8 lamps and electronic ballasts (2003 retrofit). The exit lighting in the building consists of units with LED lamps. The emergency lighting is fed from emergency lighting battery packs. The exterior lighting consists of wall mounted H.P.S. fixtures.

The building is equipped with an Edwards 6616 fire alarm system. Detection and end devices include, smoke and heat detectors, bells and pull stations.
The various communications and security systems within the school include; a Magnum Alert security system that monitors motion detectors, a Bogen Multicom 2000 P.A. system and a Nortel Meridian telephone system. Cable TV and data systems are installed within the school.

It is recommended, as routine maintenance, that a program for annual examination of major electrical components be instituted. Maintenance should include thermographic scans for hot spots and power shut down to allow examination of interior components for accumulated debris and signs of corrosion.

The main areas of concern for the school are the aged main distribution including the 1966 original panelboards, non-illuminated exit signs in room 60 and the aged master clock system.

Overall the electrical systems for McKee School 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 - 1966 Section*

The foundations consist of cast-in-place concrete grade beams and spread footings.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	NOV-07

A1010 Standard Foundations - 1972 Section*

The foundations consist of cast-in-place concrete grade beams and spread footings.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	100	NOV-07

A1030 Slab on Grade - 1966 Section*

The building has cast-in-place concrete slabs-on-grade with conventional steel reinforcement.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	NOV-07

A1030 Slab on Grade - 1972 Section*

The building has cast-in-place concrete slabs-on-grade with conventional steel reinforcement.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	100	NOV-07

B1010.01 Floor Structural Frame (Building Frame) - 1966 Section*

Concrete structural flat slab supported by poured concrete & concrete block walls

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	NOV-07

B1010.01 Floor Structural Frame (Building Frame) - 1972 Section*

Concrete structural flat slab supported by poured concrete & concrete block walls

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	100	NOV-07

B1010.02 Structural Interior Walls Supporting Floors (or Roof) - 1966 Section*

Structural reinforced concrete block walls

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	NOV-07

B1010.02 Structural Interior Walls Supporting Floors (or Roof) - 1972 Section*

Structural reinforced concrete block walls

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	100	NOV-07

B1010.06 Ramps: Exterior - 1966 Section*

Poured ramps are located at the north-west entrance. Poured concrete curbs are located along the ramp.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

B1010.06 Ramps: Exterior - 1972 Section*

Poured concrete ramps are located at the south-east entrance. Painted steel handrails are located along the ramp.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	40	NOV-07

B1010.07 Exterior Stairs - 1966 Section*

Poured concrete stairs are located at the north-west entrance.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

B1010.07 Exterior Stairs - 1972 Section*

Poured concrete stairs are located at the south-east entrance. Painted steel handrails are located along the stairs.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	40	NOV-07

B1010.09 Floor Construction Fireproofing - 1966 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

B1010.09 Floor Construction Fireproofing - 1972 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	50	NOV-07

B1010.10 Floor Construction Firestopping - 1966 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

B1010.10 Floor Construction Firestopping - 1972 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	50	NOV-07

B1020.01 Roof Structural Frame - 1966 Section*

Wood roof deck with wood beams supported by exterior & interior concrete block walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	NOV-07

B1020.01 Roof Structural Frame - 1972 Section*

Metal roof deck with OWSJ supported by exterior & interior concrete block walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	100	NOV-07

B1020.06 Roof Construction Fireproofing - 1966 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

B1020.06 Roof Construction Fireproofing - 1972 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	50	NOV-07

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin - 1966 Section*

Brick cladding is located around the entire exterior perimeter walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	75	NOV-07

B2010.01.02.01 Brick Masonry: Ext. Wall Skin - 1972 Section*

Brick cladding is located around the entire exterior perimeter walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	75	NOV-07

B2010.01.06.03 Metal Siding - 1966 **

Prefinished metal siding is located above the entrances.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

Event: Replace Metal Siding - 1966 Section

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$45,760	Unassigned

Updated: APR-08

B2010.01.06.03 Metal Siding - 1972 **

Prefinished metal siding is located above the entrances

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	40	NOV-07

Event: Replace Metal Siding - 1972 Section

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$22,880	Unassigned

Updated: APR-08

B2010.01.09 Expansion Control: Exterior Wall Skin - 1966 Section*

Expansion/control joints are located throughout the cladding assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	75	NOV-07

B2010.01.09 Expansion Control: Exterior Wall Skin - 1972 Section*

Expansion/control joints are located throughout the cladding assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	75	NOV-07

B2010.01.11 Joint Sealers (caulking): Ext. Wall - 1966 Section**

Sealant is located around all window, door and exterior cladding assemblies.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	NOV-07

Event: Replace exterior joint sealant - 1966 Section]

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$11,440	Unassigned

Updated: APR-08

B2010.01.11 Joint Sealers (caulking): Ext. Wall - 1972 Section**

Sealant is located around all window, door and exterior cladding assemblies.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	20	NOV-07

Event: Replace exterior joint sealant- 1972 Section

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$5,720	Unassigned

Updated: APR-08

B2010.02.03 Masonry Units: Ext. Wall Const. - 1966 Section*

The interior face of the exterior brick walls have a concrete block wall assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	NOV-07

B2010.02.03 Masonry Units: Ext. Wall Const. - 1972 Section*

The interior face of the exterior brick walls have a concrete block wall assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	100	NOV-07

B2010.03 Exterior Wall Vapor Retarders, Air Barriers, and Insulation - 1966 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	NOV-07

B2010.03 Exterior Wall Vapor Retarders, Air Barriers, and Insulation - 1972 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	100	NOV-07

B2010.06 Exterior Louvers, Grilles, and Screens - 1966 Section*

Painted wood screen panels are located on the outside face of the exterior windows. (The wood screens are scheduled to be removed)

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

B2010.09 Exterior Soffits - 1966 Section*

The exterior soffits above each entrance have a painted wood finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

B2010.09 Exterior Soffits - 1972 Section*

The exterior soffits above each entrance have a painted wood finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	50	NOV-07

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

The windows are aluminum frame double glazed fixed & operable slider units. Windows are located in the classrooms, upper sections in the library and music room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

Event: Replace Aluminum Windows - 1966 Section - classrooms & library

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$125,840	Unassigned

Updated: APR-08

B2020.01.01.02 Aluminum Windows (Glass & Frame) 1972**

The windows are aluminum frame double glazed fixed & operable slider units.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	40	NOV-07

Event: Replace Aluminum Windows - 1972 Section - 6 windows

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$41,184	Unassigned

Updated: APR-08

B2030.01.01 Aluminum-Framed Storefronts: Doors - 1966**

The majority of the entrance doors are aluminum doors in an aluminum frame assembly. Door entrance F1 & F2 have a total of 5 doors.

Rating	Installed	Design Life	Updated
2 - Poor	1966	30	NOV-07

Event: Replace Aluminum-Framed Doors- 1966 Section - F1 & F2

Concern:
The doors are damaged and worm. The hardware is missing in isolated areas.
Recommendation:
Replace all entrance doors & hardware.

Type	Year	Cost	Priority
Failure Replacement	2008	$22,880	Medium

Updated: APR-08

B2030.01.01 Aluminum-Framed Storefronts: Doors - 1972**

The majority of the entrance doors are aluminum doors in an aluminum frame assembly. Door entrance F3 & F4 have a total of 8 doors.

Rating	Installed	Design Life	Updated
2 - Poor	1972	30	NOV-07

Event: Replace Aluminum-Framed Doors- 1972 Section] - F3 & F4

Concern:
The doors are damaged and worm. The hardware is missing in isolated areas.

Recommendation:
Replace all entrance doors & hardware.

Type	Year	Cost	Priority
Failure Replacement	2008	$36,608	Medium

Updated: APR-08

B2030.02 Exterior Utility Doors - 1966 Section**

The exterior utility doors are painted metal doors in a painted steel frame. There are 3 doors.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	40	NOV-07

Event: Replace 3 Exterior Utility Doors - 1966 Section**

Concern:
The doors & hardware are damaged and deteriorated.

Recommendation:
Replace complete door assembly & hardware.

Type	Year	Cost	Priority
Failure Replacement	2011	$10,296	Low

Updated: APR-08

B2030.02 Exterior Utility Doors - 1972 Section**

The exterior utility doors are painted metal doors in a painted steel frame. There are 4 door.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	40	NOV-07

Event: Replace 4 Exterior Utility Doors - 1972 Section**

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$13,728	Unassigned

Updated: APR-08

B3010.01 Deck Vapor Retarder and Insulation - 1966 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	NOV-07

B3010.01 Deck Vapor Retarder and Insulation - 1972 Section*

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	25	NOV-07

B3010.04.01 Built-up Bituminous Roofing (Asphalt & Gravel) -1966 Section**

The main roof has a built-up bituminous roofing (Asphalt & Gravel) assembly (BUR).

Rating	Installed	Design Life	Updated
3 - Marginal	1966	25	NOV-07

Event: Replace BUR assembly - 1966 Section] Roof Area-3562m2

Concern:
The roof has several reported leaks. Blisters and deterioration was observed in several locations.
Recommendation:
The roof is scheduled for replacement in the Summer of 2007.

Type	Year	Cost	Priority
Failure Replacement	2008	$514,800	Medium

Updated: APR-08

B3010.04.01 Built-up Bituminous Roofing (Asphalt & Gravel) -1972 Section**

The 1972 Section has a built-up bituminous roofing (Asphalt & Gravel) assembly (BUR).

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	25	NOV-07

Event: Replace BUR Roofing - 1972 Section - Area - 1670 m2

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$240,240	Unassigned

Updated: APR-08

B3020.01 Skylights - 1966 Section**

1966 Section - 6 acrylic square dome skylights are located on the flat roof area above the interior corridors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	NOV-07

Event: Replace 6 dome skylights - 1966 Section

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$13,728	Unassigned

Updated: APR-08

B3020.02 Other Roofing Openings (Hatch,Vent, etc) - 1966 Section*

There is one metal roof hatch that provides access to the roof.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	NOV-07

B3020.02 Other Roofing Openings (Hatch,Vent, etc) - 1972 Section*

There is one metal roof hatch that provides access to the roof.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	25	NOV-07

S3 INTERIOR

C1010.01.03 Unit Masonry Assemblies: Partitions -

Interior partitions throughout the school consist primarily of painted and/or glazed masonry block walls.

Rating	Installed	Design Life	Updated
5 - Good	1966	100	NOV-07

C1010.01.07 Framed Partitions (Stud) -

Interior gypsum board partitions are located throughout the office area, library and ancillary spaces.

Rating	Installed	Design Life	Updated
5 - Good	1966	100	NOV-07

C1010.02 Interior Demountable Partitions - *

Interior demountable partitions are typically located throughout the corridors in the 1972 addition.

Rating	Installed	Design Life	Updated
5 - Good	1972	50	NOV-07

C1010.03 Interior Operable Folding Panel Partitions - **

A folding door partition is located between classrooms 33 & 34.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

Event: Replace folding partition between rooms 33 & 34

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$17,160	Unassigned

Updated: APR-08

C1010.04 Interior Balustrades and Screens, Interior Railings - *

The stairs to the gymnasium area have a rubber handrail with painted steel pickets.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

C1010.05 Interior Windows - Glass block*

Glass block windows are located in the computer room.

Rating	Installed	Design Life	Updated
5 - Good	1966	80	NOV-07

C1010.07 Interior Partition Firestopping - *

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

C1020.01 Interior Swinging Doors (& Hardware) - *

The interior swing doors generally consist of solid core doors with a stain finish in a painted steel frames. Several of the original doors & frames do not have a fire rated label.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

C1020.03 Interior Fire Doors - *

Stained solid wood fire doors are located in the corridors. The majority of the doors are rated and labeled.

Rating	Installed	Design Life	Updated
5 - Good	1966	50	NOV-07

C1020.04 Interior Sliding and Folding Doors - *

A folding door partition is located in the library office area.

Rating	Installed	Design Life	Updated
5 - Good	2003	25	NOV-07

C1030.01 Visual Display Boards - **

Tackboards, chalkboards and whiteboards are located in each teaching area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	NOV-07

Event: Replace Visual Display Boards

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$45,760	Unassigned

Updated: APR-08

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

Prefinished metal washroom partitions are located in all boy's & girl's washrooms.

Rating	Installed	Design Life	Updated
5 - Good	2003	30	NOV-07

Event: Replace toilet partitions

Type	Year	Cost	Priority
Lifecycle Replacement	2033	$22,880	Unassigned

Updated: APR-08

C1030.08 Interior Identifying Devices - *

Signage panels are located above each classroom entrance and the room number located above & on the interior doors

Rating	Installed	Design Life	Updated
5 - Good	1966	20	NOV-07

C1030.12 Storage Shelving - *

Ceramic tile & metal shoe racks are located throughout the corridors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

C1030.14 Toilet, Bath, and Laundry Accessories - *

The washrooms are equipped with typical washroom accessories: Paper towel dispensers, toilet paper dispensers, hand-soap dispensers, waste bins and mirrors.

Rating	Installed	Design Life	Updated
5 - Good	2003	20	NOV-07

C3010.06 Tile Wall Finishes - ceramic tile**

Ceramic wall tile is located throughout the washrooms

Rating	Installed	Design Life	Updated
5 - Good	1966	40	NOV-07

Event: Replace Ceramic Tile Wall Finishes

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$68,640	Unassigned

Updated: APR-08

C3010.11 Interior Wall Painting - *

The interior concrete block and gypsum board partitions throughout the school have a paint finish.

Rating	Installed	Design Life	Updated
5 - Good	2003	15	NOV-07

C3010.12 Wall Coverings - *

Vinyl wall coverings are located on all the demountable partitions.

Rating	Installed	Design Life	Updated
5 - Good	1966	15	NOV-07

C3020.01.02 Paint Concrete Floor Finishes*

Painted/sealed concrete floors are located in the mechanical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1999	10	NOV-07

C3020.02 Tile Floor Finishes - Ceramic tile**

Ceramic floor tile is located throughout the washroom areas.

Rating	Installed	Design Life	Updated
5 - Good	1966	50	NOV-07

Event: Replace Ceramic Tile Floor Finishes

Type	Year	Cost	Priority
Lifecycle Replacement	2016	$34,320	Unassigned

Updated: APR-08

C3020.04 Wood Flooring**

Hardwood flooring is located in the gymnasium and on the stage area.

Rating	Installed	Design Life	Updated
5 - Good	1966	30	NOV-07

Event: Replace hardwood floor - gym & stage (500m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$57,200	Unassigned

Updated: APR-08

C3020.07 Resilient Flooring - Vinyl tile**

Vinyl floor tile is located throughout the majority of the corridors and classrooms. The floors have a combination of the original 9"x9" VAT and 12"x12" VCT.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	20	NOV-07

Event: Replace Resilient Flooring (Abatement included) - 2500m2

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$240,240	Unassigned

Updated: APR-08

C3020.07 Resilient Flooring Rubber **

Rubber flooring is located at the building entrance areas.

Rating	Installed	Design Life	Updated
5 - Good	2003	20	NOV-07

Event: Replace rubber flooring

Type	Year	Cost	Priority
Lifecycle Replacement	2023	$11,440	Unassigned

Updated: APR-08

C3020.08 Carpet Flooring - **

Carpeting is located in 50% of the classrooms, library & in the office areas.

Rating	Installed	Design Life	Updated
5 - Good	2005	15	NOV-07

Event: Replace Carpet Flooring (1500SM)

Type	Year	Cost	Priority
Lifecycle Replacement	2020	$91,520	Unassigned

Updated: APR-08

C3020.08 Carpet Flooring Daycare & Rm 33**

Carpeting is located throughout the daycare area.

Rating	Installed	Design Life	Updated
3 - Marginal	1972	15	NOV-07

Event: Replace carpet in Daycare area

Concern:
The carpet in the daycare and in room 33 is worn and stained throughout.

Recommendation:
Replace carpet throughout the daycare area.

Type	Year	Cost	Priority
Failure Replacement	2008	$13,728	Low

Updated: NOV-07

Rippled carpet in room 33.

C3030.02 Ceiling Paneling (Wood) - *

The ceilings in rooms 33 & 34 have a linear wood ceiling.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	60	NOV-07

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

The majority of the ceilings have a 2'-0"x2'-0"suspended acoustical tile assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	NOV-07

Event: Replace Acoustic Tile Ceiling (3500m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$251,680	Unassigned

Updated: APR-08

C3030.07 Interior Ceiling Painting - *

All the gypsum board & wood ceilings have a paint finish.

Rating	Installed	Design Life	Updated
5 - Good	1966	20	NOV-07

D1010.02 Lifts**

A lift is located in room 44 adjacent to the stage area in the gymnasium. It is a custom lift by RAM Manufacturing Ltd. with a maximum load of 300lbs.

Rating	Installed	Design Life	Updated
4 - Acceptable	1992	25	NOV-07

Event: Replace Lift in room 44

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$22,880	Unassigned

Updated: APR-08

S4 MECHANICAL

D2010.04 Sinks - c.1966**

There are 18 original c.1966 sinks in the c.1966 original building. Typical sinks include stainless steel general purpose sinks (16) and enameled steel janitor sinks (2).

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

Event: Replace the 16 general purpose sinks in the c.1966 original building (not including the two janitor sinks)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$21,736	Unassigned

Updated: MAR-08

Event: Replace the two c.1966 janitor sinks in the c.1966 original building with floor level mop sinks

Concern:
The existing janitor sinks in the c.1966 original building are difficult for school staff to use since they require lifting buckets of water to the height of the sink.

Recommendation:
Replace the existing janitor sinks with floor level mop sinks.

Type	Year	Cost	Priority
Operating Efficiency Upgrade	2008	$4,576	Low

Updated: MAR-08

D2010.04 Sinks - c.1972**

There are 12 original c.1972 sinks in the c.1972 building addition. Typical sinks include stainless steel general purpose sinks and plastic floor level mop sinks.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	30	NOV-07

Event: Replace 11 original sinks in the c.1972 building addition (not including the sink in room 13)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$14,872	Unassigned

Updated: MAR-08

Event: Replace the general purpose sink in room 13

Concern:
The general purpose sink in room 13 is in poor condition.
Recommendation:
Replace the general purpose sink in room 13.

Type	Year	Cost	Priority
Failure Replacement	2008	$1,373	Low

Updated: MAR-08

D2010.08 Drinking Fountains / Coolers - c.1966**

There are 17 drinking fountains in the c.1966 original building, including five wall mounted corridor units and 12 sink mounted classroom units. Three of the corridor drinking fountains are plastic and two are vitreous china. The drinking fountains are not equipped with coolers.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	35	NOV-07

Event: Replace the 12 sink mounted classroom drinking fountains and the two drinking fountains in corridors C2 and C10 in the c.1966 original building

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$8,008	Unassigned

Updated: MAR-08

Event: Replace the three wall mounted plastic drinking fountains in corridors C3 and C6 with vitreous china drinking fountains

Concern:

The three plastic wall mounted drinking fountains in corridors C3 and C6 are in poor condition.

Recommendation:

Replace the three wall mounted plastic drinking fountains in corridors C3 and C6 with vitreous china drinking fountains.

Type	Year	Cost	Priority
Failure Replacement	2008	$4,118	Low

Updated: MAR-08

D2010.08 Drinking Fountains / Coolers - c.1972**

There are seven drinking fountains in the c.1972 building addition, including one wall mounted corridor unit, one wall mounted classroom unit, and five sink mounted classroom units. The two wall mounted drinking fountains are vitreous china. The drinking fountains are not equipped with coolers.

Rating	Installed	Design Life	Updated
3 - Marginal	1972	35	NOV-07

Event: Replace the sink mounted drinking fountains in rooms 13 and 17 in the c.1972 building addition

Concern:
The sink mounted drinking fountains in rooms 13 and 17 are in poor condition.

Recommendation:
Replace the sink mounted drinking fountains in rooms 13 and 17 in the c.1972 building addition.

Type	Year	Cost	Priority
Failure Replacement	2008	$1,144	Low

Updated: MAR-08

Event: Replace three of the sink mounted classroom drinking fountains (rooms 15, 16 and 21) and the two wall mounted drinking fountains (room 19 and corridor C7) in the c.1972 building addition

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$3,661	Unassigned

Updated: MAR-08

D2010.10 Washroom Fixtures (WC, Lav, Urnl) - c.1966**

Original washroom plumbing fixtures in the c.1966 original building include 12 toilets in the boy's and girl's washrooms (rooms 37 and 38), the infirmary washroom (room 40), and in the male and female staff washrooms (rooms 57 and 58). The eight toilets in the boy's and girl's washrooms are floor mounted vitreous china flush valve type toilets and the other four toilets are floor mounted vitreous china tank type toilets.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	35	NOV-07

Event: Replace the eight floor mounted vitreous china flush valve type toilets in the boy's and girl's washrooms (rooms 37 and 38) in the c.1966 original building

Concern:

The eight toilets in the boy's and girl's washrooms (rooms 37 and 38) are in poor condition, with worn flush valves, leaking seals and corroding anchor bolts.

Recommendation:

Replace the eight floor mounted vitreous china flush valve type toilets in the boy's and girl's washrooms (rooms 37 and 38) in the c.1966 original building.

Type	Year	Cost	Priority
Failure Replacement	2009	$14,872	Low

Updated: MAR-08

Event: Replace the four floor mounted vitreous china tank type toilets in rooms 40, 57 and 58 in the c.1966 original building

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$6,864	Unassigned

Updated: MAR-08

D2010.10 Washroom Fixtures (WC, Lav, Urnl) - c.1972**

Original washroom plumbing fixtures in the c.1972 building addition include 11 toilets in the boy's and girl's washrooms (rooms 9 and 10), and in one classroom (room 19), as well as three lavatories in rooms 11 and 19. The toilets include floor mounted vitreous china flush valve type fixtures, and the lavatories are counter mounted type fixtures.

Rating	Installed	Design Life	Updated
3 - Marginal	1972	35	NOV-07

Event: Replace 11 c.1972 toilets in rooms 9, 10 and 19 in the c.1972 building addition

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$20,592	Unassigned

Updated: MAR-08

Event: Replace the three original c.1972 lavatories in the c.1972 building addition (rooms 11 and 19)

Concern:
The original lavatories in rooms 11 and 19 have worn mechanical components and are in poor condition.
Recommendation:
Replace the three original c.1972 lavatories in the c.1972 building addition (rooms 11 and 19).

Type	Year	Cost	Priority
Failure Replacement	2009	$4,118	Low

Updated: MAR-08

D2010.10 Washroom Fixtures (WC, Lav, Urnl) - c.2003**

In c.2003, most of the lavatories and urinals in the c.1966 original building and the c.1972 building addition were replaced. These fixtures include 20 lavatories (12 in the c.1966 original building and eight in the c.1972 building addition), and 12 urinals (nine in the c.1966 original building and three in the c.1972 building addition). The new lavatories are stainless steel counter mounted units and the new urinals are wall mounted vitreous china flush valve type units).

Rating	Installed	Design Life	Updated
5 - Good	2003	35	NOV-07

Event: Replace the c.2003 washroom plumbing fixtures (20 lavatories and 12 urinals)

Type	Year	Cost	Priority
Lifecycle Replacement	2038	$57,200	Unassigned

Updated: MAR-08

D2020.01.01 Pipes and Tubes: Domestic Water - *

There is one 50 mm diameter domestic water supply to the building located in the original mechanical room/boiler room (room 47). The water supply is metered (50 mm meter) and there is no backflow prevention device on the municipal water supply. Water piping in the building is generally copper.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

D2020.01.02 Valves: Domestic Water - **

Domestic water system valves include zone isolating valves and fixture isolating valves. The domestic water system valves are generally brass with soldered connections.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

Event: Replace the domestic water distribution system valves

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$43,472	Unassigned

Updated: APR-08

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

A backflow prevention device is provided for the boiler (hot water heating loop) make-up water supply line in the mechanical room (room 47). A backflow prevention device is also provided for the fire protection water supply take-off from the domestic water supply in the mechanical room (which feeds one fire hose cabinet). There is no backflow prevention device on the municipal water supply to the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1999	20	NOV-07

Event: Install a backflow prevention device on the municipal water supply to the building

Concern:
The municipal water supply is not protected from potential backflow from the building.

Recommendation:
Install a backflow prevention device on the municipal water supply to the building.

Type	Year	Cost	Priority
Code Upgrade	2008	$5,720	Low

Updated: MAR-08

Event: Replace the hot water heating loop make-up supply line backflow prevention device and the fire hose cabinet backflow prevention device

Type	Year	Cost	Priority
Lifecycle Replacement	2019	$3,432	Unassigned

Updated: APR-08

D2020.02.02 Plumbing Pumps: Domestic Water - **

There is a domestic hot water circulation pump located in the mechanical room (room 47), which circulates domestic hot water to keep the domestic hot water loop at temperature.

Rating	Installed	Design Life	Updated
5 - Good	2002	20	NOV-07

Event: Replace the domestic hot water circulation pump located in the mechanical room (room 47)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$2,860	Unassigned

Updated: APR-08

D2020.02.06 Domestic Water Heaters - **

Domestic hot water for the building is provided by an A.O. Smith gas fired domestic hot water heater (model BT-80-110 with an input heating capacity of 68,400 Btu/h and a volume of 280 L) located in the mechanical room (room 47).

Rating	Installed	Design Life	Updated
5 - Good	2002	20	NOV-07

Event: Replace the domestic hot water heater located in the mechanical room (room 47)

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$6,864	Unassigned

Updated: APR-08

D2020.03 Water Supply Insulation: Domestic - *

The domestic hot water lines are insulated to prevent heat loss and the domestic cold water lines are insulated to prevent condensation.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

D2030.01 Waste and Vent Piping - *

Waste and vent piping in the building is generally cast iron in larger diameters and copper in smaller diameters. Because the building is on one level, most of the sanitary drainage piping is below grade.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

D2040.01 Rain Water Drainage Piping Systems - *

The building flat roof areas are drained by standard roof drains which discharge to the municipal storm sewer system via internal storm drainage piping. The storm drainage piping is generally cast iron.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

D2040.02.04 Roof Drains - *

The flat roof areas of the building are drained by standard roof drains equipped with strainers.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	40	NOV-07

Event: Replace the roof drains

Concern:
The roof drains exhibit significant corrosion which may result in leakage in the near future. Many of the roof drains are missing strainers.

Recommendation:
Replace the roof drains (coordinate with the replacement of the building roofing).

Type	Year	Cost	Priority
Failure Replacement	2010	$11,440	Low

Updated: MAR-08

D3010.02 Gas Supply Systems - *

Natural gas is provided to the building underground to the original building mechanical room (room 47), where the gas meter and the natural gas pressure reducing station are located. The natural gas piping is steel.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	60	NOV-07

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

There are two hot water heating boilers located in the mechanical room adjacent to the gymnasium (room 47). The natural gas fired boilers are Peerless cast iron sectional type boilers. Boiler no. 1 (the east boiler) is a model 210-17-W with an input heating capacity of 3,360,000 Btu/h. Boiler no. 2 (the west boiler) is a model 210-14-W with an input heating capacity of 2,730,000 Btu/h.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	35	NOV-07

Event: Replace the two hot water heating boilers (B1 and B2)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$160,160	Unassigned

Updated: APR-08

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

The boiler combustion gases are ducted separately to a common chimney in the mechanical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	35	NOV-07

Event: Replace the two boiler discharge stacks and the chimney lining

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$27,456	Unassigned

Updated: APR-08

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

The closed loop hot water heating system has a chemical pot feeder for the manual addition of chemicals for water treatment, as well as a side stream filtration system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

D3040.01.01 Air Handling Units: Air Distribution - c.1966**

In the c.1966 original building, there are three heating and ventilating units which provide ventilation for the gymnasium and the interior portions of the building (the perimeter classrooms of the original building are ventilated with unit ventilators). Heating and ventilating unit HV1 serves the gymnasium and is located in the main mechanical room (room 47). Heating and ventilating units HV2 and HV3 serve the interior portion of the original building and are located in mechanical rooms 36 and 67 respectively. The heating and ventilating units are equipped with hot water heating coils.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

Event: Replace the three air handling units serving the c.1966 original building (HV1, HV2 and HV3 located in mechanical rooms 47, 36 and 67, respectively)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$171,600	Unassigned

Updated: MAR-08

D3040.01.01 Air Handling Units: Air Distribution - c.1972**

In the c.1972 building addition, one air handling unit located in mechanical room 32 provides ventilation. The air handling unit includes a supply fan but not a heating coil. Heating is provided by duct mounted reheat coils.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	30	NOV-07

Event: Replace the air handling unit serving the c.1972 building addition (mechanical room 32)

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$68,640	Unassigned

Updated: MAR-08

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

The air handling unit serving the c.1972 building addition (located in mechanical room 32) has an associated return air fan, also located in mechanical room 32.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	30	NOV-07

D3040.01.04 Ducts: Air Distribution - *

Air distribution ducts include the air duct systems for the four air handling units (three serving the c.1966 original building and one serving the c.1972 building addition). In addition to the air distribution ducts, the duct systems include components not specifically listed elsewhere, including duct insulation, turning vanes, dampers, etc., as applicable.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

D3040.01.07 Air Outlets & Inlets:Air Distribution - *

Air outlets and inlets include the air distribution system supply air diffusers and return air grilles. This element also includes the fresh air intake louvres and hoods, and the exhaust air grilles and hoods associated with the air handling units. In the c.1966 original building, some of the perimeter room unit ventilators were closed in with the c.1972 building addition, and fresh air intake hoods were installed on the roof to supply fresh air to these unit ventilators. Those fresh air intake hoods are included in this element.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

D3040.03.01 Hot Water Distribution Systems - **

Primary heating in the building is provided by a hot water heating system supplying various hydronic terminal units including finned tube radiation cabinets, unit ventilators, and unit heaters. The closed loop hot water heating system includes the hot water piping, insulation, valves, piping specialties, two expansion tanks, and three hot water circulation pumps. The hot water circulation pumps and the hot water expansion tanks are located in the main mechanical room (room 47).

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

Event: Replace the hot water distribution system in the c.1966 original building and the c.1972 building addition

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$434,720	Unassigned

Updated: APR-08

D3040.04.01 Fans: Exhaust - **

There are eight rooftop exhaust fans serving the building, including sanitary exhaust fans, a library exhaust fan, a gymnasium exhaust fan, and a music room exhaust fan.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	30	NOV-07

Event: Replace the eight rooftop exhaust fans

Concern:
The rooftop exhaust fans are in poor condition, and exhibit physical damage, housing corrosion, fastener corrosion, and damaged or missing bird screens.

Recommendation:
Replace the eight rooftop exhaust fans.

Type	Year	Cost	Priority
Failure Replacement	2009	$36,608	Low

Updated: MAR-08

D3040.04.03 Ducts: Exhaust - *

Most of the building exhaust fans have associated duct systems for the collection of air from single or multiple source locations. The exhaust duct systems include related components not specified elsewhere, including duct insulation and dampers, as applicable.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

D3040.04.05 Air Outlets and Inlets: Exhaust - *

Exhaust outlets and inlets include collection grilles and diffusers, where applicable.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

D3050.02 Air Coils - **

Duct mounted hot water heating coils are used to provide primary heating in the c.1972 building addition.

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	30	NOV-07

Event: Replace the duct mounted hot water heating coils in the c.1972 building addition

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$85,800	Unassigned

Updated: APR-08

D3050.05.03 Finned Tube Radiation - **

Hydronic terminal units in the building include finned tube radiation cabinets used for heating in some locations, including corridors, the music room, and the library.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

Event: Replace the finned tube radiation cabinets in the c.1966 original building and in the c.1972 building addition

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$137,280	Unassigned

Updated: APR-08

D3050.05.06 Unit Heaters**

Ducted hot water unit heaters or projection heaters are used for heating at the entrance vestibules where heating loads are high. There are two unit heaters in the c.1966 original building and two unit heaters in the c.1972 building addition.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

Event: Replace the four unit heaters (projection heaters) at the entrance vestibules

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$18,304	Unassigned

Updated: MAR-08

D3050.05.07 Unit Ventilators**

The perimeter classrooms in the c.1966 original building are equipped with unit ventilators for fresh air supply. Some of the perimeter room unit ventilators were closed in with the c.1972 building addition, and fresh air intake hoods were installed on the roof to supply fresh air to these unit ventilators. The unit ventilators were manufactured by Dunham-Bush.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

Event: Replace the unit ventilators in the c.1966 original building

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$96,096	Unassigned

Updated: MAR-08

D3060.02.02 Pneumatic Controls**

The original HVAC equipment controls in the building were pneumatic, and included pneumatic thermostats and pneumatic control valve and damper actuators. Since then, a building management and control system has been installed, but the basic HVAC equipment controls are still pneumatic. Pneumatic controls include the control air distribution system and the control air supply system which consists of an air compressor mounted on an air receiver tank (located in the main mechanical room - room 47).

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	40	NOV-07

Event: Replace the HVAC equipment pneumatic controls including the control air supply and distribution system

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$68,640	Unassigned

Updated: MAR-08

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

A Barber-Colman Network 8000 building management and control system (BMCS) has been installed to provide digital monitoring and control of the major building mechanical equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	2002	20	NOV-07

Event: Replace the Barber-Colman building management and control system

Type	Year	Cost	Priority
Lifecycle Replacement	2022	$102,960	Unassigned

Updated: MAR-08

D4020 Standpipes - *

There is a single fire hose cabinet in the building located near the gymnasium entrance. The fire hose cabinet is fed from the building domestic water supply via a backflow prevention device.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	100	NOV-07

D4030.01 Fire Extinguisher, Cabinets and Accessories - *

Wall mounted fire extinguishers are located throughout the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

S5 ELECTRICAL

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

The incoming hydro service to McKee School is a 120/208V, 3-phase, 4-wire service from an EPCOR pad-mounted transformer, located on the school grounds. The EPCOR meter and main electrical distribution equipment are located in the main mechanical room. The main electrical distribution consists of a 600A main fusible disconnect switch and a splitter with fusible disconnect switches feeding the panels within the school.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	40	NOV-07

Event: Replace Main Electrical Distribution

Concern:

The existing main electrical distribution equipment has exceeded its life expectancy. Switch blade contacts begin to loosen with age which can lead to arcing.

Recommendation:

Replace existing main distribution with a new service entrance switchboard with breaker distribution. Conduit and wiring for branch panels will have to be extended to new switchboard location.

Aged main electrical distribution.

Type	Year	Cost	Priority
Failure Replacement	2008	$34,320	Medium

Updated: NOV-07

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution) - 1998**

Additional branch circuit panelboards were added in 1998. The panels are Federal Pioneer panels that are subfed from existing panels.

Rating	Installed	Design Life	Updated
5 - Good	1998	30	NOV-07

Event: Replace 1998 Branch Circuit Panelboards

Type	Year	Cost	Priority
Lifecycle Replacement	2028	$9,152	Unassigned

Updated: NOV-07

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

The majority of the electrical branch circuit panelboards within the school are original Federal Pioneer panels installed when the building was constructed.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	30	NOV-07

Event: Replace Branch Circuit Panelboards

Concern:
The branch circuit panels (1966) are at the end of their life expectancy. Over the life of the panel, breaker contacts become worn and the breakers will no longer operate correctly and may trip unnecessarily. Older panels do not readily accept newer style breakers.

Recommendation:
Replace aged panelboards and reconnect branch circuit wiring.

Consequences of Deferral:
Deferring replacement could lead to partial power outages and intermittent tripping of breakers as well as increased maintenance costs.

Type	Year	Cost	Priority
Failure Replacement	2008	$36,608	Low

Updated: NOV-07

Aged branch circuit panelboard.

D5010.07.02 Motor Starters and Accessories**

Individual motor starters (typically Allen Bradley) have been provided to feed mechanical equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

Event: Replace Motor Starters and Accessories

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$9,152	Unassigned

Updated: APR-08

D5020.01 Electrical Branch Wiring*

The majority of the cabling is standard building wire in EMT conduit. Armoured cable has been provided, in selected locations, for final connections to mechanical and miscellaneous equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

D5020.02.01 Lighting Accessories (Lighting Controls)*

There are 120V line voltage switches used for lighting control.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

D5020.02.02.01 Interior Incandescent Fixtures*

Incandescent lighting fixtures have been used for stage lighting. There are some incandescent track lighting fixtures in the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

D5020.02.02.02 Interior Florescent Fixtures**

The standard lighting fixtures used throughout the school are surface mounted, T8, fluorescent wrap-around fixtures that were installed as part of an energy efficiency upgrade project in 2003.

Rating	Installed	Design Life	Updated
4 - Acceptable	2003	30	NOV-07

Event: Replace Interior Florescent Fixtures

Type	Year	Cost	Priority
Lifecycle Replacement	2033	$280,280	Unassigned

Updated: APR-08

D5020.02.03.02 Emergency Lighting Battery Packs**

Emergency lighting is provided from emergency lighting battery packs and remote emergency lighting heads.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	20	NOV-07

Event: Replace Emergency Lighting Battery Packs

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$17,160	Unassigned

Updated: APR-08

D5020.02.03.03 Exit Signs*

The exit signs within the school have been retrofitted with LED lamps.

Rating	Installed	Design Life	Updated
4 - Acceptable	2003	30	NOV-07

Event: Install Illuminated Exit Signs

Concern:
In room 60 there are non-illuminated exit signs which will not be visible during a power outage.

Recommendation:
Provide new illuminated exit signs connected to the nearest emergency lighting battery pack.

Type	Year	Cost	Priority
Code Upgrade	2008	$2,288	Medium

Updated: APR-08

Non-illuminated exit sign in room 60.

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

The exterior lighting for the school consists of HID wall mounted fixtures.

Rating	Installed	Design Life	Updated
5 - Good	2003	30	NOV-07

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

A timer and contactor have been provided for control of the exterior lighting.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

D5030.01 Detection and Fire Alarm**

The fire alarm system is an Edwards 6616 system that was installed in 1988. The main fire alarm control panel is located in the general office area. There is a remote annunciator at the main entrance. Fire alarm bells are located throughout the school. Duct mounted smoke detection has been provided for air handling systems.

Rating	Installed	Design Life	Updated
4 - Acceptable	1988	25	NOV-07

Event: Replace Fire Alarm System

Type	Year	Cost	Priority
Lifecycle Replacement	2013	$85,800	Unassigned

Updated: APR-08

D5030.02.02 Intrusion Detection**

The security system is a Magnum Alert system with the main panel located in the general office storage room. A security system keypad has been provided. PIR motion detectors have been provided throughout the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1994	25	NOV-07

Event: ReplaceIntrusion Detection System

Type	Year	Cost	Priority
Lifecycle Replacement	2019	$34,320	Unassigned

Updated: APR-08

D5030.03 Clock and Program System*

The majority of the clocks within the school are Edwards system clocks fed from the original Edwards drum type master clock system.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	25	NOV-07

Event: Replace Clock System

Concern:
The existing clock system is well past its life expectancy. Replacement parts are not available and maintenance on the system is costly.
Recommendation:
Provide new wireless synchronized clock system.

Type	Year	Cost	Priority
Failure Replacement	2009	$18,304	Low

Updated: NOV-07

Aged master clock system.

D5030.04.01 Telephone Systems*

The telephone system is a Nortel Meridian system. Meridian telephone handsets are located in the classrooms and selected areas such as the general office. The main telephone equipment is located in the general office storage room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	25	NOV-07

D5030.04.05 Local Area Network Systems*

The main server is located in the general office storage room. Cat. 5 cables are used for the network wiring within the school. Supernet has been installed in the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1998	15	NOV-07

D5030.05 Public Address and Music Systems**

The public address system is a Bogen Multicom 2000 system. The P.A. system panel is located in the general office storage room. Speakers are typically surface mounted in the classrooms and the corridors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1997	20	NOV-07

Event: Replace Public Address and Music Systems

Type	Year	Cost	Priority
Lifecycle Replacement	2017	$22,880	Unassigned

Updated: APR-08

D5030.06 Television Systems*

The cable TV incoming service is located in the main mechanical room. Cable TV outlets have been provided in selected rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	20	NOV-07

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.03 Theater and Stage Equipment - *

Curtains & lighting equipment are located in the theatre.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	NOV-07

E1090.07 Athletic, Recreational, and Therapeutic Equipment - *

Fixed & movable basketball hoops are located in the gymnasium. A climbing apparatus is located in the gym area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	15	NOV-07

E2010.02 Fixed Casework - Teaching areas**

Each classroom is equipped with custom wood open faced and/or painted cabinet units along the exterior wall. The staff room has painted wood upper and lower cabinet units. The library has fixed and moveable wood shelving casework. Painted wood coat storage units are located in the corridors.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	35	NOV-07

Event: Replace Fixed Casework - All teaching spaces

Concern:
The majority of the millwork in the classrooms is deteriorated. The counter-tops and cabinet doors are damaged and non-functional.

Recommendation:
Replace millwork throughout all teaching areas.

Type	Year	Cost	Priority
Failure Replacement	2009	$251,680	Medium

Updated: NOV-07

E2010.02 Fixed Casework Washrooms & Displays**

The washrooms have plastic laminate counter tops. Glass display cabinets are located in the main entrance area and in the corridors.

Rating	Installed	Design Life	Updated
5 - Good	2003	35	NOV-07

Event: Replace vanities & display cabinets

Type	Year	Cost	Priority
Lifecycle Replacement	2038	$34,320	Unassigned

Updated: APR-08

E2010.03.01 Blinds - **

Horizontal metal blinds are located on several windows in the 1972 Section

Rating	Installed	Design Life	Updated
4 - Acceptable	1972	30	NOV-07

Event: Replace Horizontal Metal Blinds

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$6,864	Unassigned

Updated: APR-08

E2010.03.06 Curtains and Drapes**

Curtains are located in the classrooms of the 1966 section

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

Event: Replace curtains in 1966 Section

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$6,864	Unassigned

Updated: APR-08

F2020.01 Asbestos - *

An asbestos report was conducted by PHH Environmetal in September, 2000 and provided by EDSB. See report for details.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	0	NOV-07

F2020.04 Mould - *

No mould known or reported

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	0	NOV-07

F2020.09 Other Hazardous Materials - *

No hazardous material known or reported

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	0	NOV-07

S8 FUNCTIONAL ASSESSMENT

K3020 Indoor Environment

The computer room (Rm. 66) does not have any air conditioning.

Call it a program functional upgrade for 2008, cost is $18,000.

Rating	Installed	Design Life	Updated
2 - Poor	0	0	NOV-07

Event: Install local air conditioning for the computer room

Concern:
The computer room can get very warm since there is no air conditioning.

Recommendation:
Installation of a new direct expansion type air conditioning system for the computer room (room 66).

Type	Year	Cost	Priority
Indoor Air Quality Upgrade	2008	$20,592	Low

Updated: MAR-08

K4010.01 Barrier Free Route: Parking to Entrance - *

Barrier free access from the parking area to the main building entrance is provided at the north west elevation.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	0	NOV-07

K4010.02 Barrier Free Entrances - *

No automatic door entrances are provided.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	0	NOV-07

Event: Provided power operators for barrier free access at the main entrance of the building.

Concern:
No automatic access is currently provided from any exterior entrance doors.

Recommendation:
Provide automatic access door operator at exterior entrance door.

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2008	$4,576	Low

Updated: APR-08

K4010.03 Barrier Free Interior Circulation - *

Barrier free access is provided to most areas, including the gym stage area where a lift is provided.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	0	NOV-07

K4010.04 Barrier Free Washrooms - *

A barrier free washroom stall is provided in the boy's & girl's washroom.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	0	NOV-07

RECAPP Facility Evaluation Report

Mckee Elementary School

S3211
Edmonton

Report run on: July 18, 2008 12:24 PM

Facility Details

Building Name: Mckee Elementary School
Address:
Location: Edmonton

Building Id: S3211
Gross Area (sq. m): 0.00
Replacement Cost: $0
Construction Year: 0

Evaluation Details

Evaluation Company: Asset Evolution Incorporated (AEI)
Evaluation Date: May 9 2007
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **$308,880**
5 year Facility Condition Index (FCI): **0%**

General Summary:

The site of McKee Elementary School includes an asphalt paved roadway & parking area accessible from 51st Avenue. A sodded playing field is located at the south end of the property. Grass, shrubs and mature trees are located along the north elevation of the school. An asphalt paved playground is located at the south-west end of the school. Pedestrian concrete walkways are located at each entrance of the school. Exterior poured in place concrete stairs and ramps are located along the north elevation. Site drainage appears to slope away from the building with no problems indicated or observed.

Overall the site elements appeared to be in acceptable condition, however the asphalt paved playground, roadway & parking areas need replacement.

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

G2010.02.02 Flexible Pavement Roadway (Asphalt) - **

An asphalt paved roadway to the main parking areas is accessible from 51st Avenue located at the north end of the site.

Rating	Installed	Design Life	Updated
2 - Poor	1966	25	NOV-07

Event: Replace asphalt paved roadway (200sm

Concern:
The asphalt paved surface is deteriorated and settlement is located in several areas.

Recommendation:
Repave asphalt paved roadway.

Type	Year	Cost	Priority
Failure Replacement	2008	$17,160	Medium

Updated: APR-08

G2020.02.02 Flexible Paving Parking Lots(Asphalt) - **

The asphalt paved parking area on the north-west corner of the site is accessible from 51st Avenue.

Rating	Installed	Design Life	Updated
2 - Poor	1966	25	NOV-07

Event: Repave asphalt paved parking lot (1500SM)

Concern:
The asphalt paved surface is deteriorated with several cracks observed throughout the parking area.

Recommendation:
Repave the entire parking area.

Type	Year	Cost	Priority
Failure Replacement	2008	$114,400	Medium

Updated: APR-08

G2020.06.02 Parking Bumpers - *

Painted steel parking bumpers are located at each parking stall.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	NOV-07

G2020.06.03 Parking Lot Signs - *

Each parking bumper stall has a reference number.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	NOV-07

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

Poured in place concrete walkways are located around the building and lead to all school entrances.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	25	NOV-07

Event: Repair and/or replace the concrete walkways.

Concern:
Isolated areas of the concrete walkways are cracked and pose a potential tripping hazard.

Recommendation:
Repair and/or replace damaged sections of the concrete walkways.

Type	Year	Cost	Priority
Repair	2008	$11,440	Low

Updated: APR-08

Cracked poured concrete walkway.

Event: Replace poured in place concrete walkways

Type	Year	Cost	Priority
Lifecycle Replacement	2012	$68,640	Unassigned

Updated: APR-08

G2040.02.01 Chain Link Fences and Gates*

A chain-link fence is located around the asphalt paved playground, parking area and around portions of the site.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

G2040.03 Athletic and Recreational Surfaces - **

An asphalt paved playground is located at the west end of the school and a sodded playfield is located at the south end of the property.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	25	NOV-07

Event: Repave the asphalt paved playground area. (1200SM)

Concern:
The surface of the asphalt in the playground area has deteriorated.

Recommendation:
Repave the asphalt paved playground area.

Type	Year	Cost	Priority
Failure Replacement	2008	$91,520	Medium

Updated: NOV-07

G2040.05 Site and Street Furnishings - *

Bicycle racks are located along the north-east end of the school. Basketball hoops are located adjacent to the asphalt paved playground along the west elevation of the school. Fixed seating is located at several school entrances.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	15	NOV-07

G2040.06 Exterior Signs - *

Exterior wall-mounted signage is provided on the buildings main entrances. School signage is located on the north wall. A free-standing signage panel is located at the north-east corner of the site.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	25	NOV-07

G2040.08 Flagpoles - *

A flagpole is located on the north end of the site, adjacent to the main entrance.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	30	NOV-07

G2040.11 Retaining Walls - *

A poured in place concrete retaining wall is located along the north end of the property.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

G2050.04 Lawns and Grasses - *

Grassed areas are located along the north and east sides of the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	15	NOV-07

G2050.05 Trees, Plants and Ground Covers - *

Mature trees, shrubs and ground covered areas are located along the north and east sides of the site.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	10	NOV-07

G3010.02 Site Domestic Water Distribution - *

The building domestic water supply is fed from a 300 mm diameter water main on 51st Avenue. The domestic water supply to the building enters the mechanical room at the northwest corner of the building (room 47). The building domestic water supply is a 50 mm diameter line and the building water meter is 50 mm. There is no separate fire protection water supply to the building and the single fire hose cabinet in the building is fed from the domestic water supply.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

G3020.01 Sanitary Sewage Collection - *

The building sanitary sewer discharges to the municipal sanitary sewer system on the north side of the building. The 150 mm diameter building sanitary sewer line ties into the 250 mm diameter municipal sanitary sewer line on 51st Avenue.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

G3030.01 Storm Water Collection - *

The building storm sewer discharges to a municipal storm sewer on 107th Street. The 150 mm diameter building storm sewer line exits the building to the east and ties into a 250 mm diameter municipal storm sewer line. There is a storm sewer catch basin located in the paved parking area on the west side of the building. This catch basin drains through a 150 mm diameter storm sewer line to the south and east, and ties into the 250 mm diameter municipal storm sewer on 107th Street.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

G3060.01 Gas Distribution - *

Natural gas is supplied to the building via a 75 mm diameter medium pressure primary gas line which approaches the site from the east and enters the main mechanical room (room 47) at the northwest corner of the building. A 50 mm diameter low pressure secondary gas line on the west side of the building also enters the main mechanical room (room 47) at the northwest corner of the building. The natural gas pressure reducing station and the gas meter are located in the main mechanical room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

G4010.03 Electrical Power Distribution Equipment - *

An EPCOR padmounted transformer, located on the school grounds, provides 120/208V power to the school.

Rating	Installed	Design Life	Updated
4 - Acceptable	1966	50	NOV-07

G4010.04 Car Plugs-ins - *

There are approximately 40 rail mounted car plug-ins with weatherproof coverplates and duplex receptacles. A new contactor was provided in the main mechanical room for control of the car plug-ins.

Rating	Installed	Design Life	Updated
3 - Marginal	1966	25	NOV-07

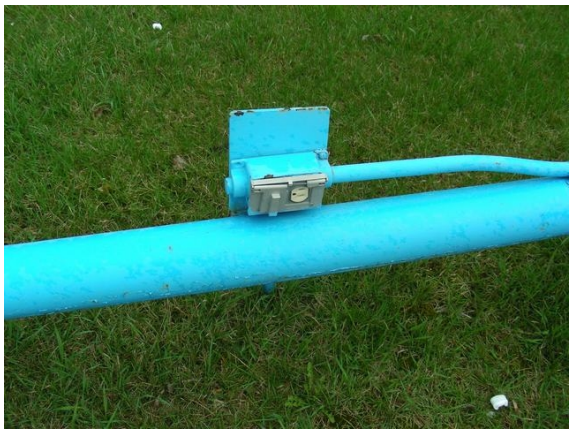
Event: **Replace car plug-ins**

Concern:
Many of the car plug-ins are aged or have damaged coverplates.

Recommendation:
Replace aged and damaged car plug-ins.

Type	Year	Cost	Priority
Failure Replacement	2008	$5,720	Low

Updated: NOV-07



Damaged coverplate on car plug-in.