

RECAPP Facility Evaluation Report

Edmonton RCSSD #7



Holy Cross Catholic Elementary / Junior High School

B3153A
Edmonton

Facility Details

Building Name: Holy Cross Catholic Element
Address: 15120 - 104 Avenue
Location: Edmonton

Building Id: B3153A
Gross Area (sq. m): 7,164.70
Replacement Cost: \$20,109,000
Construction Year: 1963

Evaluation Details

Evaluation Company: Asset Evolution Incorporated (AEI)
Evaluation Date: October 25 2011
Evaluator Name: Mario Plastina

Total Maintenance Events Next 5 years: **\$5,043,900**
5 year Facility Condition Index (FCI): **25.08%**

General Summary:

Holy Cross Catholic Elementary / Junior High School, originally built in 1963 is a two-storey structure with a full basement and an area of 3352 m². In 1968, a one-storey addition with a full basement was added at the west end of the original school and a small addition to the gym at the east end of the school. The 1st addition has a total area of 2312 m². A second addition was added in 1972. A second floor was added above the 1968 Addition and a second gymnasium and music room was added to the north end of the school. The 2nd addition has a total area of 1500 m². The school has a total building area of 7164 m². Holy Cross is a French Immersion school that includes several classrooms, a library, computer rooms, 2 science room, 2 home economics rooms, 2 lunch rooms, 2 gymnasiums, fitness room (stage) change rooms, music rooms, staff room and administration offices. The second floor of the 1972 Addition is leased to - To 2learn.ca Education Society. Several classrooms are leased to daycare groups. Several interior renovations have been conducted in recent years throughout the school.

The 2011 student enrollment 363

Structural Summary:

The foundations consist of a reinforced cast-in-place grade beam, concrete columns, concrete footings and concrete pile assembly. The building has cast-in-place concrete slabs-on-grade with conventional steel reinforcement throughout the basement level. The main floor gymnasium in the 1963 Section has a concrete slabs-on-grade. The 1963, 1968 and 1972 Sections have a combination of poured in place concrete walls and masonry concrete block wall. The 1st and 2nd floor in the 1963 Section have precast concrete double-T structure on precast concrete beams supported by concrete columns. The Stage has a plywood deck on a conventional wood framed structure. The 1st floor in the 1968 & 1972 Section has a concrete slab on open web steel joists supported by concrete beams, concrete columns and concrete block walls, excluding the corridor. The corridor has a concrete structural slab on concrete beams supported by concrete columns and concrete block walls. Note for the 1968 Section - The 2nd floor of the 1972 addition is on top of the 1968 addition. Structural reinforced concrete load bearing block partitions, wood frame construction, columns and beams are located throughout the building. The floor of the mezzanine above the stage in the 1963 Section comprises of a plywood deck on a wood frame floor structure supported by concrete block walls. The 1963 Section, including the gym has a precast concrete double-T structure on precast concrete beams supported by concrete columns. The roof of 2nd floor & the roof of the gymnasium in the 1972 Section has a metal deck on open web steel joists supported by concrete columns and concrete block walls. Note for the 1968 Section - The 2nd floor of the 1972 addition is on top of the 1968 addition.

Overall the structural elements appeared to be in acceptable condition.

Recommendations:

- Study - Concrete floor slab in 1972 Gym Addition
- Repair structural floor slab in 1972 Gym as outlined in Study

Envelope Summary:

The majority of the 1963, 1968 and 1972 Sections have an exterior brick cladding assembly. Precast concrete columns and beams are exposed and painted throughout the original 1963 school. The majority of the 1972 north addition consists of an exterior masonry block wall assembly. Pre-finished corrugated vertical metal siding is located above all window elevations on the 1963 Section. The windows openings were reduced and infilled with prefinished metal siding during the window replacement in 1990. Galvanized metal siding is located along the perimeter of the 1972 gym addition at the north end of the school. A painted cement stucco finish is located at the main entrances and above and below the windows of the 1968 & 1972 Sections. A ceramic tile wall finish is located below the window assembly in the 1963 Section. Expansion/control joints are located between the additions of the exterior masonry wall assembly.

Sealant is located around all window, door and exterior cladding assemblies. The exterior concrete block walls, concrete beams and columns, original glazed tiles above and below the windows in the 1963 Section have a paint finish. The interior portion of the 1963, 1968 and 1972 Section comprise primarily of the concrete block wall assembly. Exterior metal louvres are located on the exterior walls opposite the mechanical rooms. The 1963 Section has a combination of fixed aluminum frame double glazed units with some operable slider units. The windows openings were modified and replaced in 1990. A majority of the windows have painted metal security screens. The 1968 Section has a combination of fixed aluminum frame units with an operable awning unit. A majority of the windows have painted metal security screens. The 1972 Section has a combination of fixed aluminum frame units with an operable awning unit. The windows in the 1963 corridors are wood framed non-operable units. The main entrances have painted hollow metal doors with pressed steel frames. The door have GWG insert panels. The utility exit doors in the gym, roof exit and stairwell exits are painted metal and/or wood doors in a painted steel frame assembly. The roofs in all upper sections are original and have a conventional built-up bituminous roof assembly. The lower roof above the roof and music room in the 1972 Section has a 2-ply modified bitumen roof membrane assembly. The roof was replaced in 2004. Three acrylic skylight are located in the stairwells and corridor of the 1963 and 1972 Section.

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

Recommendations:

- Replace sealant located around all window & exterior doors - All Sections. (Based per 2000 LM of sealant)
- Replace windows in 1968 Section - 34 Window Units
- Replace windows in 1972 Section - 20 Window Units
- Replace wood framed window in 1963 Corridors - 6 Window Sections
- Replace entrance doors - (11 doors, sidelights c/w hardware)
- Replace all exterior wood doors and hardware assembly - (8 doors)
- Replace entire BUR assembly - Area - 3000 m2
- Replace 3 skylights in 1963 & 1972 Sections

Interior Summary:

Interior partitions typically consist of painted masonry block walls and painted gypsum board walls. Fixed interior glazed windows with GWG are located in the general office area and library. The interior swing doors throughout the classrooms, washrooms, gyms and office areas generally consist of solid core wood doors in painted metal frames. Hardware includes aluminum kick plates, chrome door knobs with locks. The majority of the interior doors in the corridors, stairwells and utility rooms are painted steel doors in a painted steel frame and GWG panel inserts. The majority of the washrooms & change rooms have pre-finished metal partitions. The pre-finished metal partitions in the girls's shower and washrooms on the main floor of 1968 Section were replaced in 2009. Single tier metal lockers are located throughout the change rooms, basement corridors and in portions of the 2nd floor corridors. The washrooms are equipped with typical washroom accessories: Paper towel dispensers, toilet paper dispensers, hand-soap dispensers, waste bins and mirrors

The main stairwells in the 1963, 1968 and 1972 Section have a poured in place concrete assembly. The main stairwells have treads have a rubber floor finish. The landings have a vinyl floor finish. The main stairwells in the 1968 & 1972 Section have metal railings & balustrades with painted wood handrails. The main stairwells in the 1963 Section have metal railings & balustrades with painted steel handrails. The handrails and guard-rails in all stairwell do not comply to the current ABC.

The concrete walls in the utility & mechanical rooms are exposed with no wall finish. Painted gypsum board walls are provided in the administration area and renovated areas. Ceramic wall tiles are located in the men's staff washroom, girl's shower room, boy's shower room, boy's washrooms and custodial rooms. Perforated wall panels are located in the music room and large gymnasium. Acoustical wall panels are located in the small gymnasium. All concrete block, brick and gypsum board walls have a paint finish.

Painted/sealed concrete floors are located in the utility rooms and mechanical rooms. Ceramic mosaic floor tiles are located in the washrooms, change rooms and showers. Hardwood flooring is located in the original large gymnasium and stage area. The main gym floor was replaced in 1997. The majority of the corridors and classrooms in the 1963 and 1968 Sections have a vinyl asbestos floor tile finish. Original vinyl floor tiles are throughout the classrooms and small gymnasium in the 1972 Section. Carpet flooring is provided in the main office, music room and library. The carpet in office area was replaced in 2005 and in the library 2009. The concrete structure is exposed and unfinished in the mechanical areas throughout the school. Plaster ceilings are located in the main stairwells of the 1968 Section. Several washrooms and change rooms and renovated areas have a gypsum board ceiling finish. The majority of the ceilings in the corridors and classrooms throughout the 1963, 1968 and 1972 Sections have either a 610mm x 610mm and/or a 610mm x 1220mm suspended acoustical tile assembly. All the exposed structures, gypsum board and plaster ceiling have a paint finish.

Overall, the interior finishes are in acceptable condition.

Recommendations:

- Replace toilet and shower partitions - 34 Stalls
- Replace acoustic wall panels in small gym (Area - 150m²)
- Repair & refinish hardwood floor on stage area (Area - 78m²)
- Replace all original VAT flooring in the 1963 and 1968 Sections (Area - 3500m²)
- Replace vinyl floor tiles in the 1972 Addition - 1500m²
- Replace all damaged, stained and painted ceiling tiles (Area -300m²).
- Replace all original millwork (Based on 7164m²)
- Provide a designated parking stall & curb cut at main entrance for handicap accessibility.
- No automatic access is currently provided from any exterior entrance doors. The main floor is elevated above grade.
- Provide an elevator at the at the north entrance opposite the parking area.
- Provide a unisex barrier-free washroom on each floor

Mechanical Summary:

MECHANICAL SUMMARY (October 2011)

Most of the building is heated by a hot water heating system. The original c.1963 building hot water heating system was expanded to accommodate the c.1968 and c.1972 building additions. The hot water heating system supplies hot water from two natural gas fired hot water boilers to the building heating terminal units (force flow convection cabinets, finned tube radiation cabinets, fan coils and a unit heater), and to the hot water heating coils in the building air handling units (AHU1, AHU2, and HV1 through HV10). The c.1972 gymnasium and music room addition is heated by three natural gas fired force air furnaces (furnaces F1 and F2 serving the gymnasium and furnace F3 serving the music room).

Ventilation for the c.1963 original building is provided by ten heating and ventilating units (HV1, HV2 and HV3 for the second floor; HV4, HV5 and HV6 for the main floor; HV7, HV8 and HV9 for the basement level; and HV10 for the original gymnasium). Ventilation for the c.1968 building addition is provided by air handling unit AHU1 and ventilation for the c.1972 second floor addition is provided by air handling unit AHU2. Ventilation for the c.1972 gymnasium addition is provided by the three natural gas fired furnaces (F1, F2 and F3). Fresh air supplied to the building by the air handling units is balanced by the exhaust flow from the air handling equipment and from nine exhaust fans.

Building HVAC equipment actuators and thermostats are generally pneumatic (electric controls are used for the force flow convection heaters, the fan coils, the unit heater and the exhaust fans), and the control air supply system for the building consists of one air compressor mounted on an air receiver tank, and includes a refrigerated air dryer. There is an Andover Controls building management and control system which provides monitoring and control functions for the main HVAC equipment in the building.

Washroom plumbing fixtures include toilets, lavatories and urinals. There are 43 toilets, 21 urinals, and 42 lavatories in the building. Other plumbing fixtures in the building include drinking fountains (11 wall mounted units), various sinks (38), and showers (13 stations). Two natural gas fired domestic hot water heaters provide domestic hot water for the building lavatories, sinks and showers.

Fire protection for the building consists of a standpipe system feeding fire hose cabinets, and fire extinguishers located throughout the facility on wall mounted brackets and in the fire hose cabinets.

Current mechanical system requirements include replacement of the original c.1963 sinks, repair of the change room shower control handles, replacement of the original c.1963 washroom plumbing fixtures, replacement of the original c.1968 washroom plumbing fixtures, replacement of the c.1972 washroom lavatories, replacement of the c.1972 forced air furnaces, replacement of c.1963 heating and ventilating units (HV1 through HV10), replacement of c.1968 air handling unit AHU1, replacement of c.1972 air handling unit AHU2, replacement of exhaust fans EF1 through EF8, repair of the damaged finned tube radiation cabinets, replacement of the c.1968 unit heater, and replacement of the building management and control system. Overall, the building mechanical equipment and systems are in acceptable condition.

Electrical Summary:

Holy Cross School is fed from a utility pole south of the school. The main switchboard is rated at 800A, 120/208V. Westinghouse and Square D branch circuit panels are located throughout the school. The mechanical loads within the building are fed from individual starters and manual starter switches.

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

The interior fluorescent lighting fixtures were retrofitted in 2005 with T8 lamps and 120V electronic ballasts. The exit signs are LED type. The emergency lighting is fed from emergency lighting battery packs. The exterior lighting consists primarily of surface mounted HPS fixtures and recessed incandescent fixtures in the entrance canopies.

The fire alarm system is a conventional, zoned system equipped with a Simplex 2100 fire alarm control panel and a remote annunciator at the main building entrance. Detection and end devices include, smoke and heat detectors, bells, and pull stations.

The various communications systems within the building include structured wiring systems for the telephone and data systems. There are intrusion detection and video surveillance systems in the building. The P.A. System is a new Telecor XL system that is integrated with the Nitsuko telephone system.

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 concerns for Holy Cross School are:

- Main switchboard is aged and located in an area that is accessible to students.
- Branch circuit panels are aged. Breakers deteriorate with age.
- Replacement parts are not available for the motor starters.
- Emergency lighting battery units are aged. Many units were not operational.
- Exit signs are reportedly not connected to the emergency battery packs. Some exit signs were not illuminated.
- The dimming system for the stage lighting is obsolete.
- Incandescent exterior lighting fixtures are not energy efficient. Some fixtures did not have bulbs.
- The fire alarm system is no longer manufactured. Replacement parts are not readily available. There are no strobes in the school.

Overall the electrical systems for Holy Cross 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* - 1963,1968 and 1972 Sections

The foundations consist of a reinforced cast-in-place grade beam, concrete columns, concrete footings and concrete pile assembly.

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

A1030 Slab on Grade* - 1963,1968 and 1972 Sections

The building has cast-in-place concrete slabs-on-grade with conventional steel reinforcement throughout the basement level. The main floor gymnasium in the 1963 Section has a concrete slabs-on-grade.

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

Event: Repair structural floor slab in 1972 Gym as outlined in Study

Concern:

Concrete slab in the gym throughout.

Recommendation:

Repair structural floor slab.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2013	\$250,000	Medium

Updated: MAR-12

Event: Study - Concrete floor slab in 1972 Gym Addition

Concern:

The concrete slab in the gym area throughout the 1972 Section has a severe bow in the slab. Settlement and movement has occurred below the slab and/or concrete foundation assembly.

Recommendation:

Conduct an intrusive study to determine the extent of repair required.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Study	2012	\$10,000	Medium

Updated: MAR-12



A severe bow throughout the small gym floor in the 1972 Section.

A2020 Basement Walls (& Crawl Space)* - 1963,1968 and 1972 Sections

The 1963,1968 and 1972 Sections have a combination of poured in place concrete walls and masonry concrete block wall.

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

B1010.01 Floor Structural Frame (Building Frame)* - 1963,1968 and 1972 Sections

The 1st and 2nd floor in the 1963 Section have precast concrete double-T structure on precast concrete beams supported by concrete columns. The Stage has a plywood deck on a conventional wood framed structure. The 1st floor in the 1968 & 1972 Section has a concrete slab on open web steel joists supported by concrete beams, concrete columns and concrete block walls, excluding the corridor. The corridor has a concrete structural slab on concrete beams supported by concrete columns and concrete block walls. Note for the 1968 Section - The 2nd floor of the 1972 addition is on top of the 1968 addition.

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

B1010.02 Structural Interior Walls Supporting Floors (or Roof)* - 1963,1968 and 1972 Sections

Structural reinforced concrete load bearing block partitions, wood frame construction, columns and beams are located throughout the building.

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

B1010.05 Mezzanine Construction* - 1963 Sections

The floor of the mezzanine above the stage in the 1963 Section comprises of a plywood deck on a wood frame floor structure supported by concrete block walls.

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

B1010.09 Floor Construction Fireproofing* - 1963,1968 and 1972 Sections

Floor Construction Fire-proofing - Not visible during site visit

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

B1010.10 Floor Construction Firestopping* - 1963,1968 and 1972 Sections

Floor Construction Fire-stopping - Not visible during site visit

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

B1020.01 Roof Structural Frame* - 1963,1968 and 1972 Sections

The 1963 Section, including the gym has a precast concrete double-T structure on precast concrete beams supported by concrete columns. The roof of 2nd floor & the roof of the gymnasium in the 1972 Section has a metal deck on open web steel joists supported by concrete columns and concrete block walls. Note for the 1968 Section - The 2nd floor of the 1972 addition is on top of the 1968 addition.

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

B1020.04 Canopies* - 1968 Sections

Wood framed canopies at the main south entrance.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	0	MAR-12

B1020.06 Roof Construction Fireproofing* - 1963,1968 and 1972 Sections

Roof Construction Fireproofing - Not visible during site visit

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

S2 ENVELOPE**B2010.01.01 Precast Concrete: Exterior Wall Skin* -1963 Section**

Precast concrete columns and beams are exposed and painted throughout the original 1963 school.

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

B2010.01.02.01 Brick Masonry: Ext. Wall Skin* - 1963,1968 and 1972 Sections

The majority of the 1963,1968 and 1972 Sections have an exterior brick cladding assembly.

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

B2010.01.02.02 Concrete Block: Ext. Wall Skin* 1972 Sections

The majority of the 1972 north addition consists of an exterior masonry block wall assembly.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1972	0	MAR-12

B2010.01.06.03 Metal Siding - 1963 Section**

Pre-finished corrugated vertical metal siding is located above all window elevations on the 1963 Section. The windows openings were reduced and infilled with prefinished metal siding during the window replacement in 1990. Galvanized metal siding is located along the perimeter of the 1972 gym addition at the north end of the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	40	MAR-12

Event: Replace pre-finished corrugated vertical metal siding (1300m2 wall surface)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$160,000	Unassigned

Updated: MAR-12

B2010.01.08 Cement Plaster (Stucco): Ext. Wall* -1963 Section

A painted cement stucco finish is located at the main entrances and above and below the windows of the 1968 & 1972 Sections.

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

B2010.01.09 Expansion Control: Ext. Wall* - 1963,1968 and 1972 Sections

Expansion/control joints are located between the additions of the exterior masonry wall assembly.

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

B2010.01.11 Joint Sealers (caulking): Ext. Wall - 1963,1968 and 1972 Sections**

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

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	20	MAR-12

Event: Replace sealant located around all window & exterior doors - All Sections. (Based per 2000 LM of sealant)

Concern:

The sealant is brittle and deteriorated along the windows of the 1963, 1968 & 1972 Sections.

Recommendation:

Replace sealant located around all window & exterior doors - All Sections. (Based per 2000 LM of sealant).



Deteriorated sealant around window assembly.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$80,000	Medium

Updated: MAR-12

B2010.01.13 Paints (& Stains): Ext. Wall - 1963,1968 and 1972 Sections**

The exterior concrete block walls, concrete beams and columns, original glazed tiles above and below the windows in the 1963 Section have a paint finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	15	MAR-12

Event: Repaint exterior painted walls (2000m2 of surface area)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2016	\$80,000	Unassigned

Updated: MAR-12

B2010.01.99 Other Exterior Wall Skin* - 1963 Section

A ceramic tile wall finish is located below the window assembly in the 1963 Section.

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

B2010.02.03 Masonry Units: Ext. Wall Const.* - 1963,1968 and 1972 Sections

The interior portion of the 1963, 1968 and 1972 Section comprise primarily of the concrete block wall assembly.

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

B2010.03 Exterior Wall Vapour Retarders, Air Barriers, and Insulation* - 1963,1968 and 1972 Sections

Exterior Wall Vapor Retarders, Air Barriers, and Insulation - Not visible

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

B2010.06 Exterior Louvers, Grilles, and Screens* - 1963,1968 and 1972 Sections

Exterior metal louvres are located on the exterior walls opposite the mechanical rooms.

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

B2010.09 Exterior Soffits* - 1968 Section

The 1968 entrances have painted plywood soffit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	0	MAR-12

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

The 1963 Section has a combination of fixed aluminum frame double glazed units with some operable slider units. The windows openings were modified and replaced in 1990. A majority of the windows have painted metal security screens.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	40	MAR-12

Event: Replace aluminum framed windows in 1963 Section - 58 window units

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$87,000	Unassigned

Updated: MAR-12

B2020.01.01.02 Aluminum Windows (Glass & Frame) - 1968 Section**

The 1968 Section has a combination of fixed aluminum frame units with an operable awning unit. A majority of the windows have painted metal security screens.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1968	40	MAR-12

Event: Replace windows in 1968 Section - 34 Window Units

Concern:

The original windows are functioning poorly, air and water penetrations were apparent in several locations.

Recommendation:

Replace windows in 1968 Section - 34 Window Units

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$51,000	Medium

Updated: MAR-12



Original 1972 and 1968 Windows

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

The 1972 Section has a combination of fixed aluminum frame units with an operable awning unit.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1972	40	MAR-12

Event: Replace windows in 1972 Section - 20 Window Units

Concern:

Overall, the windows are in fair condition, however not energy efficient and the window hardware is obsolete.

Recommendation:

Replace windows in 1972 Section - 20 Window Units

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$30,000	Medium

Updated: MAR-12



Original windows in 1972 and 1968 Section

B2020.01.01.05 Wood Windows (Glass & Frame) -1963 Section**

The windows in the 1963 corridors are wood framed non-operable units.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	35	MAR-12

Event: Replace wood framed window in 1963 Corridors - 6 Window Sections

Concern:

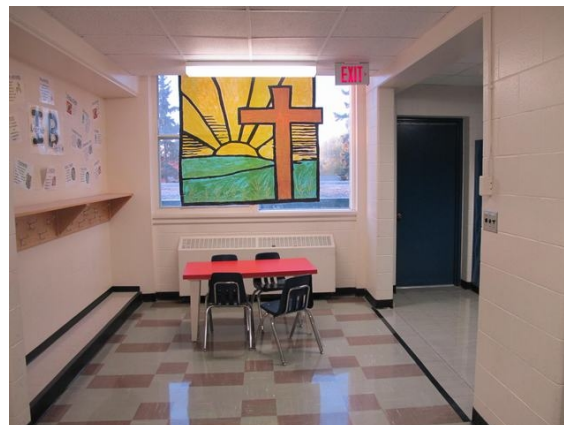
Overall, the windows are in fair condition, however not energy efficient and the window hardware is obsolete.

Recommendation:

Replace wood framed window in 1963 Corridors - 6 Window Sections

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$9,000	Low

Updated: MAR-12



Wood framed windows in 1963 Corridors.

B2030.01.02 Steel-Framed Storefronts: Doors - 1963 and 1968 Sections**

The main entrances have painted hollow metal doors with pressed steel frames. The door have GWG insert panels.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1971	30	MAR-12

Event: Replace entrance doors - (11 doors, sidelights c/w hardware)

Concern:

The majority of the main entrance doors are aged, worn and no longer close properly. The hardware is original at most entrances.

Recommendation:

Replace entrance doors - (11 doors, sidelights c/w hardware)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$66,000	Medium

Updated: MAR-12



Main entrance doors - South elevation

B2030.02 Exterior Utility Doors - 1963,1968 and 1972 Sections**

The utility exit doors in the gym, roof exit and stairwell exits are painted metal and/or wood doors in a painted steel frame assembly.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	40	MAR-12

Event: **Replace all exterior wood doors and hardware assembly - (8 doors)**

Concern:

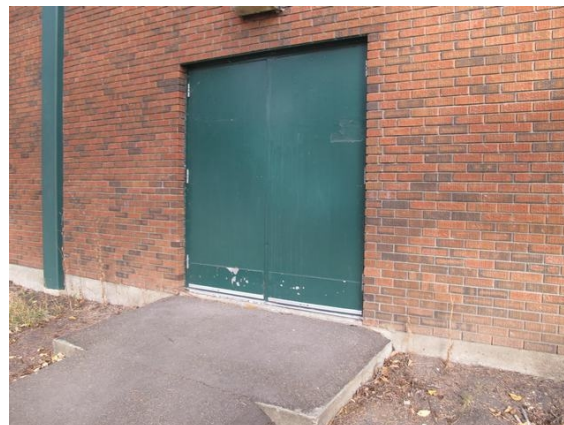
The doors are worn, warped and no longer close properly. The hardware is original at most entrances.

Recommendation:

Replace all exterior wood doors and hardware assembly - (8 doors)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$24,000	Low

Updated: MAR-12



Painted wood exit doors at gym - South elevation

B3010.01 Deck Vapour Retarder and Insulation* - 1963,1968 and 1972 Sections

Deck Vapor Retarder and Insulation - Not Visible

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

B3010.04.01 Built-up Bituminous Roofing (Asphalt & Gravel) - 1963,1968 and 1972 Sections**

The roofs in all upper sections are original and have a conventional built-up bituminous roof assembly. A roof inspection by Acron was conducted in June, 2009 for the school.

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

Event: **Replace entire BUR assembly - Area - 3000 m2**

Concern:

The roofs have exceeded their expected useful life. Several blisters and evidence of excessive ponding was observed in numerous areas.

Recommendation:

Replace entire roof assembly - Area - 3000 m2

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$500,000	Medium

Updated: MAR-12



Original roof above 1963 Section

B3010.04.04 Modified Bituminous Membrane Roofing (SBS) - 1972 Section**

The lower roof above the roof and music room in the 1972 Section has a 2-ply modified bitumen roof membrane assembly. The roof was replaced in 2004.

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

Event: Replace SBS roof above the 1972 North Section - Area - 400m2

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2029	\$65,000	Unassigned

Updated: MAR-12

B3020.01 Skylights - 1963 & 1972 Section**

Three acrylic skylight are located in the stairwells and corridor of the 1963 and 1972 Section.

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

Event: Replace 3 skylights in 1963 & 1972 Sections

Concern:

The skylights are original and have surpassed their theoretical useful life. Replace units during the roof replacement.

Recommendation:

Replace 3 skylights in 1963 & 1972 Sections

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$15,000	Medium

Updated: MAR-12



Skylight above stairwell in 1972 Addition

S3 INTERIOR**C1010.01 Interior Fixed Partitions***

Interior partitions typically consist of painted masonry block walls and painted gypsum board walls.

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

C1010.05 Interior Windows*

Fixed interior glazed windows with GWG are located in the general office area and library

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

C1010.07 Interior Partition Firestopping*

Firestopping observed only in the janitor closets, mechanical and electrical utility areas.

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

C1020.01 Interior Swinging Doors (& Hardware)*

The interior swing doors throughout the classrooms, washrooms, gyms and office areas generally consist of solid core wood doors in painted metal frames. Hardware includes aluminum kick plates, chrome door knobs with locks.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1988	0	MAR-12

C1020.03 Interior Fire Doors*

The majority of the interior doors in the corridors, stairwells and utility rooms are painted steel doors in a painted steel frame and GWG panel inserts.

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

C1020.04 Interior Sliding and Folding Doors*

A folding metal overhead grill door is located at the main entrance stairwell.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2007	0	MAR-12

C1030.01 Visual Display Boards**

Whiteboards, tackboards and chalkboards located throughout the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	20	MAR-12

Event: Replace Visual Display Boards - (Based on the 45 teaching areas)

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

Updated: MAR-12

C1030.02 Fabricated Compartments (Toilets/Showers) - 2009**

The pre-finished metal partitions in the girls's shower and washrooms on the main floor of 1968 Section were replaced in 2009.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2009	30	MAR-12

Event: Replace metal toilet partitions - 12 Stalls

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2039	\$18,000	Unassigned

Updated: MAR-12



Metal toilet partitions.

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

The majority of the washrooms & change rooms have pre-finished metal partitions.

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

Event: Replace toilet and shower partitions - 34 Stalls

Concern:

Several of the original toilet partitions are dented and scratched panels. The hinges are broken and loose fittings.

Recommendation:

Replace toilet and shower partitions - 34 Stalls

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$51,000	Low

Updated: MAR-12



Damaged door panels in washrooms

C1030.08 Interior Identifying Devices*

The room number or room name is mounted on or above the interior doors.

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

C1030.10 Lockers**

Single tier metal lockers are located throughout the change rooms, basement corridors and in portions of the 2nd floor corridors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	30	MAR-12

Event: Replace all lockers in corridors and change rooms (300 Units)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2020	\$140,000	Unassigned

Updated: MAR-12

C1030.12 Storage Shelving*

Metal and wood storage shelving throughout the vestibules, custodial utility rooms and staff supply rooms.

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

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

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

C2010 Stair Construction*

The main stairwells in the 1963, 1968 and 1972 Section have a poured in place concrete assembly. A wood framed stair is located in the large gymnasium to the stage. A wood framed stair is located in the corridor to the stage in the large gymnasium. A steel stair from the basement mechanical room to the exterior. A poured concrete stair from the small gymnasium to the exterior.

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

C2020.05 Resilient Stair Finishes**

The main stairwells have treads have a rubber floor finish. The landings have a vinyl floor finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1994	20	MAR-12

Event: Replace rubber finish on main stairwells - 5 stairwells

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$50,000	Unassigned

Updated: MAR-12

C2020.08 Stair Railings and Balustrades*

The main stairwells in the 1968 & 1972 Section have metal railings & balustrades with painted wood handrails. The main stairwells in the 1963 Section have metal railings & balustrades with painted steel handrails. The handrails and guard-rails in all stairwell do not comply to the current ABC.

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

C3010.01 Concrete Wall Finishes (Unpainted)*

The concrete walls in the utility & mechanical rooms are exposed with no wall finish.

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

C3010.04 Gypsum Board Wall Finishes (Unpainted)*

Painted gypsum board walls are provided in the administration area and renovated areas.

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

C3010.06 Tile Wall Finishes**

Ceramic wall tiles are located in the men's staff washroom, girl's shower room, boy's shower room, boy's washrooms and custodial rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	40	MAR-12

Event: Replace ceramic wall tiles (Area -150m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$36,000	Unassigned

Updated: MAR-12

C3010.09 Acoustical Wall Treatment - Music Room & Large Gym**

Perforated wall panels are located in the music room and large gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1995	20	MAR-12

Event: Replace perforated panel boards in gym & music room - 500m2

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$100,000	Unassigned

Updated: MAR-12

C3010.09 Acoustical Wall Treatment - Small Gymnasium**

Acoustical wall panels are located in the small gymnasium.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1972	20	MAR-12

Event: **Replace acoustic wall panels in small gym (Area - 150m2)**

Concern:

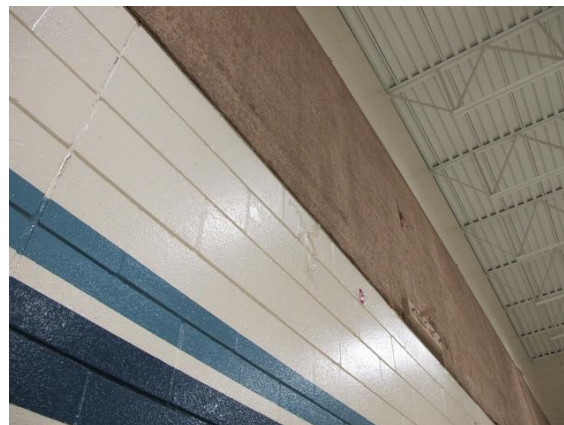
Overall, the panels in the small gymnasium are old and deteriorated.

Recommendation:

Replace acoustic wall panels in small gym (Area - 150m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$35,000	Low

Updated: MAR-12



Original deteriorated acoustical panels in small gym.

C3010.11 Interior Wall Painting*

All concrete block, brick and gypsum board walls have a paint finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2005	0	MAR-12

C3020.01.02 Painted Concrete Floor Finishes*

Painted/sealed concrete floors are located in the utility rooms and mechanical rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	0	MAR-12

C3020.02 Tile Floor Finishes**

Ceramic mosaic floor tiles are located in the washrooms, change rooms and showers.

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

Event: **Replace ceramic floor tiles (Area - 300m2)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$48,000	Unassigned

Updated: MAR-12

C3020.04 Wood Flooring**

Hardwood flooring is located in the original large gymnasium and stage area. The main gym floor was replaced in 1997.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1997	30	MAR-12

Event: Repair & refinish hardwood floor on stage area (Area - 78m2)

Concern:

The hardwood floor is worn and damaged in isolated areas.

Recommendation:

Repair & refinish hardwood floor on stage area (Area - 78m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2012	\$5,000	Low

Updated: MAR-12

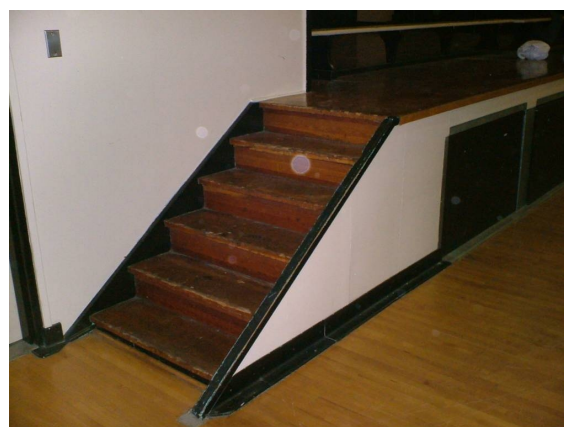


Hardwood flooring on stage area in the 1963 Section.

Event: Replace hardwood flooring in gym and stage - (Area 522m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2027	\$130,000	Unassigned

Updated: MAR-12



Hardwood floor in large gymnasium, stage and wood stair to stage.

C3020.07 Resilient Flooring - VAT**

The majority of the corridors and classrooms in the 1963 and 1968 Sections have a vinyl asbestos floor tile finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	20	MAR-12

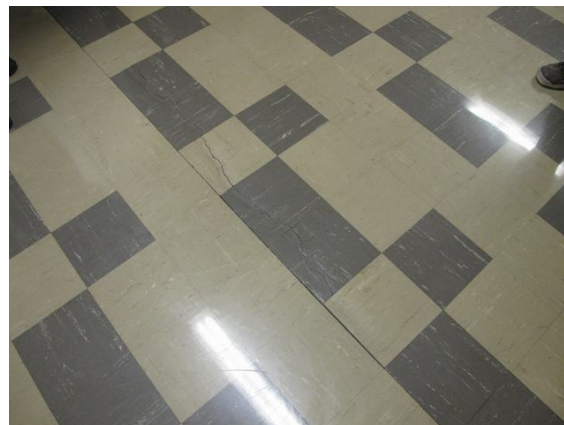
Event: **Replace all original VAT flooring in the 1963 and 1968 Sections (Area - 3500m2)**

Concern:

Overall, the tiles are in fair condition, however several tiles are broken in isolated locations throughout the corridors.

Recommendation:

Replace all original VAT in the corridors and classrooms in the 1963 and 1968 Sections.



Cracked VAT flooring in original classroom.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$350,000	High

Updated: MAR-12

C3020.07 Resilient Flooring - Vinyl Tiles**

Original vinyl floor tiles are throughout the classrooms and small gymnasium in the 1972 Section.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1972	20	MAR-12

Event: **Replace vinyl floor tiles in the 1972 Addition - 1500m2**

Concern:

The tiles are aged, worn and deteriorated in the classrooms, corridors and small gym.

Recommendation:

Replace vinyl floor tiles in the 1972 Addition - 1500m2



Deteriorated finish on vinyl floor tiles in corridors.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$75,000	Medium

Updated: MAR-12

C3020.08 Carpet Flooring**

Carpet flooring is provided in the main office, music room and library. The carpet in office area was replaced in 2005 and in the library 2009.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	15	MAR-12

Event: **Replace carpet in the library, offices and music room - (Area - 350m2)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2020	\$35,000	Unassigned

Updated: MAR-12

C3030.01 Concrete Ceiling Finishes (Unpainted)*

The concrete structure is exposed and unfinished in the mechanical areas throughout the school.

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

C3030.03 Plaster Ceiling Finishes (Unpainted)*

Plaster ceilings are located in the main stairwells of the 1968 Section.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	0	MAR-12

C3030.04 Gypsum Board Ceiling Finishes (Unpainted)*

Several washrooms and change rooms and renovated areas have a gypsum board ceiling finish.

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

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

The majority of the ceilings in the corridors and classrooms throughout the 1963, 1968 and 1972 Sections have either a 610mm x 610mm and/or a 610mm x 1220mm suspended acoustical tile assembly. Cost includes asbestos abatement.

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

Event: **Replace all damaged, stained and painted ceiling tiles (Area -300m2).**

Concern:

Overall, many ceiling tiles are painted, broken and stained in several locations throughout the corridors, stairwells and classrooms.

Recommendation:

Replace all damaged, stained and painted ceiling tiles (Area - 300m2). Cost includes asbestos abatement.



Stained ceiling tiles in the stairwell washroom in the original 1963 Section.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Hazardous Materials Abatement	2012	\$32,000	Medium

Updated: MAR-12

Event: **Replace suspended acoustic tile ceilings. (Area - 4800m2)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$620,000	Unassigned

Updated: MAR-12

C3030.07 Interior Ceiling Painting*

All the exposed structures, gypsum board and plaster ceiling have a paint finish.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	0	MAR-12

S4 MECHANICAL**D2010.04 Sinks** - c.1963**

Original c.1963 sinks include seven general purpose stainless steel sinks and three concrete mop sinks.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	30	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	10	number	

Event: Replace the original c.1963 sinks (10)**Concern:**

The original c.1963 sinks are in marginal condition due to age, wear and surface finish deterioration.

Recommendation:

Replace the original c.1963 sinks.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$15,000	Low

Updated: MAR-12

D2010.04 Sinks - c.1968**

Original c.1968 sinks include 22 general purpose stainless steel sinks and two stainless steel process sinks.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	30	MAR-12

Event: Replace the original c.1968 sinks (24)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$37,000	Unassigned

Updated: MAR-12

D2010.04 Sinks - c.1972**

Original c.1972 sinks include four general purpose stainless steel sinks.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1972	30	MAR-12

Event: Replace the original c.1972 sinks (4)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$6,000	Unassigned

Updated: MAR-12

D2010.05 Showers - c.1963**

There is one prefabricated metal type shower stall located in the physical education office.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	30	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	1	number	

Event: **Replace the physical education office shower stall (1)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$2,100	Unassigned

Updated: MAR-12

D2010.05 Showers - c.1997**

Shower stations are located in the boy's and girl's change rooms (six shower stations in each change room). The shower station walls and floors have architectural finishes and this element covers only the shower heads and shower controls. The existing shower heads and shower controls are not original and are estimated to be c.1997 vintage.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1997	30	MAR-12

Event: **Replace the change room shower heads and shower controls (12)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2027	\$12,000	Unassigned

Updated: MAR-12

Event: **Replace the missing change room shower control handles (12)**

Concern:

The change room shower controls are missing handles.

Recommendation:

Replace the missing change room shower control handles.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2012	\$1,200	High

Updated: MAR-12

D2010.08 Drinking Fountains/Coolers - c.1963**

There are two c.1963 wall mounted vitreous china drinking fountains located in the corridors of the original c.1963 building.

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

Event: Replace the c.1963 drinking fountains (2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$3,000	Unassigned

Updated: MAR-12

D2010.08 Drinking Fountains/Coolers - c.1993**

There are six c.1993 wall mounted drinking fountains located in the corridors of the c.1963 original building and the c.1968 building addition, including four fiberglass drinking fountains and two refrigerated drinking fountains.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	35	MAR-12

Event: Replace the c.1993 drinking fountains (6)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2028	\$13,000	Unassigned

Updated: MAR-12

D2010.08 Drinking Fountains/Coolers - c.2000**

There are three c.2000 wall mounted stainless steel drinking fountains located in the corridors of the c.1963 original building and the c.1972 building addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	35	MAR-12

Event: Replace the c.2000 drinking fountains (3)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2035	\$4,500	Unassigned

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl) - c.1963**

Original c.1963 washroom plumbing fixtures in the building include floor mounted vitreous china tank type toilets (22), wall mounted vitreous china lavatories (22), and counter mounted enameled steel lavatories (1).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	35	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	45	number	

Event: **Replace the c.1963 washroom plumbing fixtures (22 toilets and 23 lavatories)**

Concern:

The original c.1963 washroom plumbing fixtures are in marginal condition due to age, wear and surface finish deterioration.

Recommendation:

Replace the original c.1963 washroom plumbing fixtures.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$78,500	Low

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl) - c.1968**

Original c.1968 washroom plumbing fixtures in the building include floor mounted vitreous china tank type toilets (7), floor mounted vitreous china flush valve type toilets (6), wall mounted vitreous china lavatories (1), counter mounted enameled steel lavatories (2), wall mounted vitreous china flush valve type urinals (1), and wall mounted vitreous china tank type urinals (1).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1968	35	MAR-12

Event: **Replace the c.1968 washroom plumbing fixtures (13 toilets, three lavatories and two urinals)**

Concern:

The original c.1968 washroom plumbing fixtures are in marginal condition due to age, wear and surface finish deterioration.

Recommendation:

Replace the original c.1968 washroom plumbing fixtures.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$34,000	Low

Updated: MAR-12

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

Original c.1972 washroom lavatories include counter mounted enameled steel lavatories (6).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1972	35	MAR-12

Event: Replace the c.1972 lavatories (6)

Concern:

The original c.1972 washroom lavatories are in marginal condition due to age, corrosion, surface finish deterioration, and surface finish damage (chipping).

Recommendation:

Replace the original c.1972 washroom lavatories.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$9,000	Low

Updated: MAR-12

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

Original c.1972 washroom toilets include floor mounted vitreous china flush valve type toilets (8).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1972	35	MAR-12

<u>Capacity Size</u>	<u>Capacity Unit</u>
8	number

Event: Replace the c.1972 toilets (8)

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

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl) - c.1997**

In c.1997, most of the original building urinals were replaced with wall mounted vitreous china flush valve type urinals (19).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1997	35	MAR-12

<u>Capacity Size</u>	<u>Capacity Unit</u>
19	number

Event: Replace the c.1997 urinals (19)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2032	\$35,000	Unassigned

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl) - c.2009**

In c.2009, ten of the washroom lavatories were replaced with counter mounted stainless steel lavatories (in the boy's and girl's washrooms in the c.1968 building addition).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
6 - Excellent	2009	35	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	10	number	

Event: Replace the c.2009 lavatories (10)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2044	\$15,000	Unassigned

Updated: MAR-12

D2020.01.01 Pipes and Tubes: Domestic Water*

There is one municipal water supply to the building (100 mm diameter) which feeds the building domestic water distribution system and the building standpipe system (the water supply enters the building in the boiler room). The water supply feeds the building domestic water distribution system through a water meter (50 mm diameter). The domestic water pressure piping in the building is generally copper, although there are some sections of galvanized steel piping at the water meter.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	1100	N/A	

D2020.01.02 Valves: Domestic Water - c.1963**

Domestic water distribution system valves in the c.1963 original building include the domestic water supply main isolation valves, the domestic water distribution system zone isolating valves, and plumbing fixture isolating valves. The main isolation valves are gate type valves.

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

Event: Replace the c.1963 domestic water distribution system valves (3,352 SM GFA)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$18,000	Unassigned

Updated: MAR-12

D2020.01.02 Valves: Domestic Water - c.1968**

Domestic water distribution system valves in the c.1968 building addition include the domestic water distribution system zone isolating valves, and plumbing fixture isolating valves.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	40	MAR-12

Event: Replace the c.1968 domestic water distribution system valves (2,312 SM GFA)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$12,500	Unassigned

Updated: MAR-12

D2020.01.02 Valves: Domestic Water - c.1972**

Domestic water distribution system valves in the c.1972 building addition include the domestic water distribution system zone isolating valves, and plumbing fixture isolating valves.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1972	40	MAR-12

Event: Replace the c.1972 domestic water distribution system valves (1,500 SM GFA)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$8,000	Unassigned

Updated: MAR-12

D2020.01.03 Piping Specialties (Backflow Preventers)**

There is one 19 mm diameter backflow prevention device (located in the boiler room) for the make-up water supply to the closed loop hot water heating system. There is one 75 mm diameter backflow prevention device (located in the boiler room) for the water supply to the building standpipe system. There is one 50 mm diameter backflow prevention device (located in the boiler room) for the water supply to the building domestic water distribution system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1995	20	MAR-12

Event: Replace the c.1995 backflow prevention devices (one at 19 mm diameter, one at 50 mm diameter and one at 75 mm diameter)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$9,000	Unassigned

Updated: MAR-12

D2020.02.02 Plumbing Pumps: Domestic Water**

Two Grundfos circulation pumps located in the boiler room provide domestic hot water circulation.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	20	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	2	number	

Event: **Replace the c.2001 domestic hot water circulation pumps (2)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$3,600	Unassigned

Updated: MAR-12

D2020.02.06 Domestic Water Heaters - c.2001**

One c.2001 natural gas fired domestic hot water (DHW) heater located in the boiler room supplies hot water to the building sinks, lavatories and showers. The DHW heater is an A.O. Smith model BTRC199-110 with an input heating capacity of 179,100 Btu/h (52.49 kW), a volume capacity of 75 USG (284 L), and a recovery rate of 173.67 USG/h (657.3 L/h).

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

Event: **Replace the c.2001 DHW heater in the boiler room (52.49 kW)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2021	\$4,500	Unassigned

Updated: MAR-12

D2020.02.06 Domestic Water Heaters - c.2006**

One c.2006 natural gas fired domestic hot water (DHW) heater located in the boiler room supplies hot water to the building sinks, lavatories and showers. The DHW heater is an A.O. Smith model GCVT-50-100 with an input heating capacity of 50,000 Btu/h (14.66 kW), a volume capacity of 48 USG (182 L), and a recovery rate of 51.17 USG/h (193.7 L/h).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2006	20	MAR-12

Event: **Replace the c.2006 DHW heater in the boiler room (14.66 kW)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2026	\$2,500	Unassigned

Updated: MAR-12

D2020.03 Water Supply Insulation: Domestic*

Where visible, the domestic cold water piping is insulated to prevent condensation and the domestic hot water piping is insulated to reduce heat loss. The insulation assembly includes a painted fabric cover in exposed areas.

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

D2030.01 Waste and Vent Piping*

Visible waste and vent piping is generally copper in smaller diameters and cast iron in larger diameters. The sanitary drainage system for the c.1963 original building discharges on the west side of the original c.1963 building and enters the 200 mm diameter municipal sanitary sewer that runs beneath the building between the c.1963 original building and the c.1968 building addition (150 mm diameter discharge line from the building). The sanitary drainage system for the c.1968 building addition discharges on the east side of the c.1968 building addition and enters the 200 mm diameter municipal sanitary sewer that runs beneath the building between the c.1963 original building and the c.1968 building addition (150 mm diameter discharge line).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	7164	m2	

D2030.02.04 Floor Drains*

Floor drains are used in the building in various areas including the washrooms and the mechanical rooms. The floor drains discharge to the building sanitary drainage systems.

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

D2030.03 Waste Piping Equipment*

There is a sanitary sump pit located in the boiler room complete with a vertical type simplex sump pump.

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

D2040.01 Rain Water Drainage Piping Systems*

The flat roof areas of the building drain via standard roof drains and internal storm water drainage piping. The storm water drainage piping in the building is generally cast iron with bell and spigot type joints, and some asbestos cement piping is also used. The storm water drainage system for the c.1963 original building discharges on the east side of the c.1963 original building to the 1,050 mm diameter municipal storm sewer main located on the 151 Street NW easement (250 mm diameter discharge line). The storm water drainage system for the c.1968 building addition discharges at the southeast corner of the c.1968 building addition to the 300 mm diameter municipal storm sewer main located on 104 Avenue NW (200 mm diameter discharge line). The storm water drainage system for the c.1972 gymnasium addition discharges on the east side of the c.1972 gymnasium addition to the 1,050 mm diameter municipal storm sewer main located on the 151 Street NW easement (150 mm diameter discharge line).

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

D2040.02.04 Roof Drains*

Storm water drainage for the building flat roof areas is via roof drains with internal drainage piping. The roof drains are equipped with metal strainers and are not equipped with flow control weirs.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	22	number	

D3010.02 Gas Supply Systems*

The natural gas supply to the building is underground to the exterior of the building adjacent to the boiler room. The gas meter and pressure reducing station are located on the exterior of the building. The natural gas supply line is 50 mm diameter (medium pressure). The natural gas piping is steel.

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

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

There are two natural gas fired hot water boilers located in the boiler room which provide hot water for building heating. Each boiler is an RBI model 33HB28002R2SFS with an input heating capacity of 2,520,000 Btu/h (738.61 kW).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	35	MAR-12

Event: Replace the c.2001 hot water boilers in the boiler room (two at 738.61 kW)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2036	\$104,000	Unassigned

Updated: MAR-12

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

The combustion gases from the two hot water boilers discharge through insulated breeching to a common chimney which extends above the building roof above the boiler room. There is an insulated combustion air supply duct to the boiler room (equipped with an Eskimo trap). The breeching for each boiler contains an induced draft fan.

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

Event: Replace the boiler breeching, common stack and combustion air supply duct (28 m)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$20,000	Unassigned

Updated: MAR-12

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

Water treatment for the closed loop hot water system consists of manual chemical addition via a pot feeder and sidestream cartridge filtration in parallel with the hot water circulation pumps.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2001	0	MAR-12

D3020.03.01 Furnaces**

Natural gas fired forced air furnaces provide heating and ventilation for the c.1972 gymnasium and music room. Two Flame-master model FM-235 furnaces (F1 and F2 at 68.88 kW each) operate in tandem to provide heating and ventilation for the gymnasium and a single Flame-master model FM-155 furnace (F3 at 45.43 kW) provides heating and ventilation for the music room. There is an associated return air fan for the gymnasium covered under a separate element (see D3040.01.02 Fans: Air Distribution (Remote from AHU)*).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1972	25	MAR-12

Event: Replace the c.1972 forced air furnaces F1, F2 and F3 (two at 68.88 kW and one at 45.43 kW)

Concern:

The c.1972 furnaces are in poor condition due to wear, corrosion and obsolescence.

Recommendation:

Replace the c.1972 forced air furnaces.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$22,000	Medium

Updated: MAR-12



Gymnasium Furnaces.

D3020.03.02 Chimneys (& Comb. Air): Furnace*

The combustion gases from the three forced air furnaces (F1, F2 and F3) discharge into a common B-type stack which penetrates the roof above the c.1972 gymnasium mechanical room. There is a combustion air supply duct to the gymnasium mechanical room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1972	0	MAR-12

D3040.01.01 Air Handling Units: Air Distribution - c.1963 - HV1 through HV10**

The original c.1963 building is equipped with ten heating and ventilating units (HV1 through HV10). Heating and ventilating units HV1, HV2 and HV3 serve the second floor, heating and ventilating units HV4, HV5 and HV6 serve the main floor, heating and ventilating units HV7, HV8 and HV9 serve the basement level, and heating and ventilating unit HV10 serves the original gymnasium. The heating and ventilating units are Trane Torrivent units. Each heating and ventilating unit is a mixed air unit (mixed fresh air and return air) and includes dampers, filters, a mixing section, a hot water heating coil, and a supply air fan. The flow capacity of units HV1, HV2, HV4, HV5, HV7 and HV8 is 3,000 CFM each (1,416 L/s each). The flow capacity of units HV3, HV6 and HV9 is 1,500 CFM each (708 L/s each). The flow capacity of unit HV10 is 5,500 CFM (2,596 L/s).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1963	30	MAR-12



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Event: **Replace the c.1963 heating and ventilating units (six at 1,416 L/s, three at 708 L/s and one at 2,596 L/s)**

Concern:

The heating and ventilating units are in poor condition due to wear and obsolescence.

Recommendation:

Replace the c.1963 heating and ventilating units.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$220,000	Medium

Updated: MAR-12

D3040.01.01 Air Handling Units: Air Distribution - c.1968 - AHU1**

Air handling unit AHU1 serves the basement and main floors of the west wing of the school (the c.1968 building addition). The air handling unit is a mixed air unit (mixed fresh air and return air) and includes dampers, filters, a mixing section, a hot water heating coil, and a supply air fan. The estimated flow capacity of AHU1 is 7,500 L/s. The air handling unit has two supply zones (the north end of the wing and the south end of the wing). There is an associated return air fan covered under a separate element (see D3040.01.02 Fans: Air Distribution (Remote from AHU)*).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1968	30	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	7500	L/s	



West Wing Air handling Unit. Serves Basement and Main Floor

Event: Replace c.1963 air handling unit AHU1 (7,500 L/s)

Concern:

Air handling unit AHU1 is in marginal condition due to wear and inadequate winter fresh air supply capacity.

Recommendation:

Replace air handling unit AHU1.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$67,000	Medium

Updated: MAR-12

D3040.01.01 Air Handling Units: Air Distribution - c.1972 - AHU2**

Air handling unit AHU2 serves the second floor of the west wing of the school (part of the c.1972 building addition). The air handling unit is a mixed air unit (mixed fresh air and return air) and includes dampers, filters, a mixing section, a hot water heating coil, and a supply air fan. The flow capacity of AHU2 is 3,950 L/s. There is an associated return air fan covered under a separate element (see D3040.01.02 Fans: Air Distribution (Remote from AHU*)).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1972	30	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	3950	L/s	



West Wing Air Handling Unit. Serves Upper Floor

Event: Replace c.1972 air handling unit AHU2 (3,950 L/s)

Concern:

Air handling unit AHU2 is in marginal condition due to wear and inadequate winter fresh air supply capacity.

Recommendation:

Replace air handling unit AHU2.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$40,000	Medium

Updated: MAR-12

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

Air distribution fans remote from the air handling units include the return air fan for air handling unit AHU1, the return air fan for air handling unit AHU2, and the gymnasium return air fan for furnaces F1 and F2.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	0	MAR-12

D3040.01.03 Air Cleaning Devices: Air Distribution*

The building air handling units (AHU1, AHU2 and HV1 through HV10) are equipped with air filters.

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

D3040.01.04 Ducts: Air Distribution*

The air distribution ducts include the supply air, return air, exhaust air, and fresh air duct systems, as applicable, for the building air handling units (AHU1, AHU2 and HV1 through HV10), and for the building furnaces (F1, F2 and F3). The duct systems include associated components not specifically listed elsewhere, including duct insulation, turning vanes, dampers, mixing boxes, etc. The ducts for the gymnasium air handling unit (HV10) originally ran below grade but were converted to overhead ducts in c.2008 (the gymnasium ventilation duct systems were completely renovated in c.2008).

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

D3040.01.07 Air Outlets & Inlets: Air Distribution*

The air outlets and inlets include supply air diffusers and return air grilles for the air distribution systems associated with the building air handling units and furnaces (AHU1, AHU2, HV1 through HV10, F1, F2 and F3). Typical supply air diffusers are ceiling mounted round cone type supply air diffusers, square cone type diffusers in the T-bar ceiling grid, and duct mounted rectangular diffusers. Typical return air grilles are wall mounted double deflection type return air grilles and wall mounted standard return air grilles.

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

D3040.03.01 Hot Water Distribution Systems**

The building is heated with a single closed loop hot water heating system which has been expanded to accommodate the building additions. In the c.1963 original building, the hot water heating system provides hot water to the hydronic terminal units (including finned tube radiation cabinets, force flow convectors, and a unit heater), and to the heating and ventilating unit heating coils (HV1 through HV10). This element covers the hot water distribution system in the c.1963 original building which includes the three hot water circulation pumps and the expansion tank. The hot water distribution system includes all components of the closed loop hot water heating system including piping, valves, piping insulation, piping specialties, circulation pumps, and the expansion tank. The hot water circulation pumps are located in the boiler room and the bladder type expansion tank is located in the second floor fan room above the boiler room. The hot water distribution piping is schedule 40 steel with welded and flanged fittings. Smaller diameter hot water distribution piping uses threaded fittings and branch lines utilize copper piping. The hot water distribution system utilizes a reverse return piping system configuration. A heating coil circulation pump has been provided for air handling unit AHU1.

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

<u>Capacity Size</u>	<u>Capacity Unit</u>
7164	m2

Event: Replace the building hot water distribution system (7,164 SM GFA)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$650,000	Unassigned

Updated: MAR-12

D3040.04.01 Fans: Exhaust - Exhaust Fans EF1 through EF8**

There are eight roof mounted exhaust fans for the building (EF1 through EF8) which provide general and sanitary exhaust. The roof exhaust fans are typically "mushroom" type centrifugal exhaust fans.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	30	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	8	number	

Event: Replace the roof mounted exhaust fans (8)

Concern:

The roof mounted exhaust fans are in marginal condition due to age, wear and weathering.

Recommendation:

Replace the roof mounted exhaust fans.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$16,000	Medium

Updated: MAR-12

D3040.04.01 Fans: Exhaust - Gymnasium Exhaust EF9**

The gymnasium exhaust fan is an axial flow exhaust fan located in the stage area. The gymnasium exhaust fan was refurbished in c.2010.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2010	30	MAR-12

Event: Replace the gymnasium exhaust fan (1)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2040	\$10,000	Unassigned

Updated: MAR-12

D3040.04.03 Ducts: Exhaust*

Exhaust duct systems include the collection and discharge ducts (as applicable) associated with the nine building exhaust fans. This element includes all components of the exhaust duct systems not specifically covered under other elements, including ducts, duct supports, dampers, insulation, etc.

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

D3040.04.05 Air Outlets and Inlets: Exhaust*

Exhaust air inlets include the inlet grilles associated with the exhaust system collection ducts. Exhaust air outlets include the discharge termination for the interior exhaust fan.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1972	0	MAR-12

D3050.05.01 Convectors - Force Flow Convection Heaters - c.1963**

Hot water force flow convection heaters are used to provide heating at high heat load areas (entrance vestibules) in the c.1963 original building. There are two force flow convection heaters in the c.1963 original building.

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

Event: Replace the c.1963 force flow convection heaters (2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$8,000	Unassigned

Updated: MAR-12

D3050.05.02 Fan Coil Unitsc.1968**

Hot water fan coils mounted in the ceiling space are used to provide heating at high heat load areas (entrance vestibules) in the c.1968 building addition. There are three hot water fan coil units in the c.1968 building addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	30	MAR-12

Event: Replace the c.1968 fan coil units (3)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$15,000	Unassigned

Updated: MAR-12

D3050.05.03 Finned Tube Radiation**

Hot water finned tube radiation cabinets provide perimeter heating in most areas of the building. In addition, finned tube radiation cabinets provide heating in some of the corridors. The estimated length of finned tube radiation cabinets is 210 m.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	40	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	210	meters	

Event: **Repair or replace damaged finned tube radiation cabinets as required (20 m)**

Concern:

Some of the finned tube radiation cabinets are damaged.

Recommendation:

Repair or replace damaged finned tube radiation cabinets as required.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Repair	2012	\$9,000	Low

Updated: MAR-12

Event: **Replace the finned tube radiation cabinets (estimated 210 m)**

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$95,000	Unassigned

Updated: MAR-12

D3050.05.06 Unit Heaters - c.1968**

There is a suspended hot water unit heater used in the main floor fan room located above the boiler room.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1968	30	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	1	number	

Event: **Replace the c.1968 unit heater (1)**

Concern:

The unit heater is in marginal condition due to leakage, corrosion and wear.

Recommendation:

Replace the c.1968 unit heater.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$4,000	Low

Updated: MAR-12

D3060.02.01 Electric and Electronic Controls**

Electric controls are used to operate the force flow convection heaters, fan coils, unit heater and exhaust fans. Electric controls are also used to operate the furnaces in the c.1972 gymnasium addition.

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

Event: Replace the electric controls for the force flow heaters, fan coils, unit heater, exhaust fans and furnaces (18)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$5,400	Unassigned

Updated: MAR-12

D3060.02.02 Pneumatic Controls**

The building HVAC system controls and actuators are generally pneumatic (electric controls are used for the force flow convection heaters, fan coils, unit heater and exhaust fans - see D3060.02.01 Electric and Electronic Controls**). The control air supply system is located in the boiler room and consists of an air compressor mounted on an air receiver tank, as well as a refrigerated air dryer. Pneumatic controls include pneumatic thermostats, control valves for the heating terminal units (finned tube radiation cabinets and the heating coils for the air handling units), and damper actuators for the unit ventilators and the air handling unit dampers. This element includes the control air distribution system and components, and excludes the control air supply system (covered under a separate element - see D3060.02.02 Pneumatic Controls** - Control Air Supply System).

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

Event: Replace the pneumatic controls (7,164 SM GFA)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2015	\$37,000	Unassigned

Updated: MAR-12

D3060.02.02 Pneumatic Controls - Control Air Supply System**

The control air supply system is located in the boiler room and consists of an air compressor mounted on an air receiver tank, and includes a refrigerated air dryer.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1993	40	MAR-12

Event: Replace the control air supply system (air compressor, receiver and dryer)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2033	\$4,500	Unassigned

Updated: MAR-12

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

A building management and control system (BMCS) provides monitoring and control functions for the main HVAC equipment. The BMCS is an Andover Controls model AC256M.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1991	20	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	7164	m2	

Event: **Replace the building management and control system (7,164 SM GFA)**

Concern:

The building management and control system (BMCS) is obsolete and replacement parts for the Andover system are difficult to obtain.

Recommendation:

Replace the building management and control system.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$156,000	Medium

Updated: MAR-12

D4020 Standpipes*

The building is equipped with a standpipe system feeding standard fire hose cabinets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	12	number	

D4030.01 Fire Extinguisher, Cabinets and Accessories*

Dry chemical type fire extinguishers are located throughout the building on wall mounted brackets and in the fire hose cabinets.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1986	0	MAR-12
	<u>Capacity Size</u>	<u>Capacity Unit</u>	
	24	number	

S5 ELECTRICAL

D5010.01.02 Main Electrical Transformers (Utility Owned)*

The incoming hydro service to Holy Cross School is a 120/208V, 3-phase, 4-wire service from a utility pole located on the south side of the school. The underground service from the utility pole to the main switchboard consists of two runs of 4 #500MCM (Copper) in 3 inch conduit. The EPCOR meter is located adjacent to the main switchboard.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	40	MAR-12

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

The main electrical switchboard is a Westinghouse switchboard with mains rated at 800A, 120/208V, 3-phase, 4-wire. The switchboard has an 800A, main breaker and a distribution section with moulded case breakers feeding a total of 15 branch circuit panels. The switchboard is located in the corridor across from the custodian's room (Basement Level).

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1968	40	MAR-12

Event: Replace Main Switchboard (800A, 120/208V)

Concern:

Due to the age of the breakers, they may not function properly in case of fault condition. The switchboard is located in a corridor that is accessible to the students.

Recommendation:

Replace the main switchboard. Relocated switchboard to a location where it is only accessible to maintenance staff and authorized personnel.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$47,000	High

Updated: MAR-12



800A, 120/208V switchboard located in corridor.

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution) - 1963 to 1972**

The branch circuit panels in original school (1963) are Square D panels. Westinghouse panels were installed in the 1968 and 1972 additions. The panel capacities range from 30 circuit to 42 circuit. The branch circuit panels all have copper bussing and bolt-on breakers.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1968	30	MAR-12

Event: Replace Branch Circuit Panels (15 panels)

Concern:

The branch circuit panels installed between 1963 and 1972 are well past 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. Panel directories and panel identification are missing in many panels.

Recommendation:

Replace panels with new 120/208V branch circuit panels c/w sufficient circuits to accommodate building loads and provide capacity for additional loads in the future.



Original Square D (1963) and Westinghouse (1972) branch circuit panels.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$76,000	Medium

Updated: MAR-12

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

Panel S is a 42-circuit, Federal Pioneer, branch circuit panel installed in the office area of the CTS lab.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1998	30	MAR-12

Event: Replace Branch Circuit Panel (1 panel)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2028	\$5,000	Unassigned

Updated: MAR-12

D5010.07.02 Motor Starters and Accessories - 1963 to 1972**

Individual motor starters in the school are Allen Bradley, CCL or Furnas motor starters. Motor rated starter switches have been provided for fractional horsepower motor loads. The starters are typically located within the mechanical rooms.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1968	30	MAR-12

Event: Replace Motor Starters (25 starters and 20 manual starter switches)

Concern:

The motor starters installed between 1963 and 1972 are aged. Replacement parts are no longer readily available.

Recommendation:

Replace individual motor starters and manual motor starter switches.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$63,000	Medium

Updated: MAR-12



Allen Bradley and CCL motor starters in mechanical room.

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.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	0	MAR-12

Event: Electrical wiring study and replacement.

Concern:

The branch wiring in the original building has exceeded its theoretical life expectancy. With age the wiring insulation can break down, which can lead to short circuits and potential fire hazards.

Recommendation:

Inspect and test the wiring systems within the building to determine the condition of the wiring. Study should include costing for any proposed replacements.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Operating Efficiency Upgrade	2012	\$7,500	Medium

Updated: MAR-12

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

120 volt line voltage switching in classrooms and offices. Keyed switching in hallways. Gym has motion sensor low voltage switching.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1968	0	MAR-12

D5020.02.02.01 Interior Incandescent Fixtures*

Incandescent fixtures have been installed in the kindergarten room on the second floor.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1990	0	MAR-12

D5020.02.02.02 Interior Fluorescent Fixtures**

The fluorescent lighting fixtures within the school were upgraded in 2005. T8 lamps and electronic ballasts have been installed in the fluorescent lighting fixtures. The typical classroom lighting fixtures are surface mounted T8 fluorescent wrap-around fixtures. Recessed 2 ft. x 4 ft. fluorescent fixtures have been provided in the computer lab, CTS lab and the library. T8 industrial fluorescent fixtures have been installed in the mechanical rooms. The lighting for the gymnasiums consists of 4-lamp T5 fluorescent fixtures controlled by motion sensors. There are recessed compact fluorescent downlights in main entrance area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	30	MAR-12

Event: Replace Interior T8 Fluorescent Lighting (7164 m2 gfa)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2035	\$444,000	Unassigned

Updated: MAR-12

D5020.02.03.02 Emergency Lighting Battery Packs**

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

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
2 - Poor	1985	20	MAR-12

Event: Replace Emergency Lighting Battery Units (22 units)

Concern:

Emergency lighting battery units are aged. Many units were not operational, including all units on the second floor.

Recommendation:

Replace emergency lighting battery units.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$24,200	High

Updated: MAR-12



Aged emergency lighting battery unit is not plugged in. Heads are not aligned properly.

D5020.02.03.03 Exit Signs*

The exit signs are typically installed at building exits and along egress routes. The exit signs are typically metal, stencil faced exit signs with LED lamps.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	2005	0	MAR-12

Event: Repair Exit Signs (15 exit signs)

Concern:

It was reported that several exit signs were not connected to an emergency lighting battery pack and therefore would not operate during a power outage. Some exit signs were not operational and one exit sign was missing a faceplate.

Recommendation:

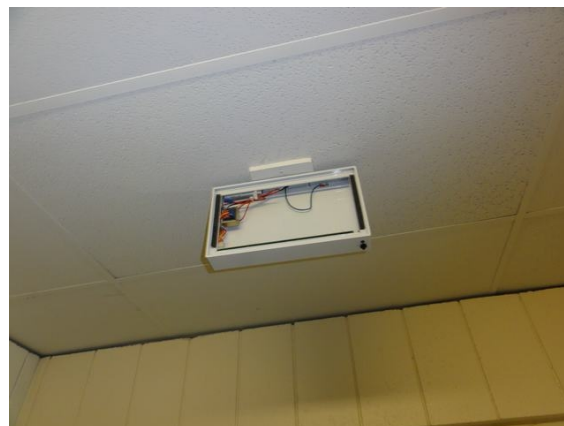
Connect EXIT signs to DC side of emergency lighting battery packs. Relamp exit signs that are not operational and replace the exit sign that is missing a faceplate.

Consequences of Deferral:

Safety concerns for personnel in case of power loss conditions.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Code Repair	2012	\$3,000	High

Updated: MAR-12



Faceplate missing on exit sign.

D5020.02.05 Special Purpose Lighting*

Theatrical floodlights have been provided for the stage area.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1972	0	MAR-12

D5020.02.07 Dimming Control*

An original six circuit dimmer panel with rotary dials is located in the stage area.

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

Event: Replace Dimming System (6 channels @ 2400W)

Concern:

The dimming system is obsolete. Replacement parts are not available.

Recommendation:

Replace dimming system.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$5,000	Low

Updated: MAR-12



Obsolete dimmer panel on stage.

D5020.03.01.01 Exterior Incandescent Fixtures*

Recessed incandescent downlights have been provided in the entrance canopies.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1972	0	MAR-12

Event: Replace Exterior Incandescent Lighting (6 fixtures)

Concern:

The exterior incandescent lighting is not energy efficient. Some fixtures have deteriorated.

Recommendation:

Replace incandescent exterior lighting with new energy efficient exterior lighting fixtures.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$3,000	Low

Updated: MAR-12



Inefficient exterior incandescent lighting fixture.

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

Surface mounted HPS fixtures have been provided around the perimeter of the building.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	0	MAR-12

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

Exterior lighting is controlled by Photo-cell and the Energy management system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1985	0	MAR-12

D5030.01 Detection and Fire Alarm**

A single stage, conventional, supervised, non-coded fire detection and alarm system has been provided within the school. The system consists of pull stations, smoke detectors, heat detectors, audible (bells) signal devices and shutdown interlocks to mechanical air handling systems. The main control panel is a Simplex 2100 panel, located in the administration office area. A remote fire alarm annunciator with a passive graphic has been provided at the main entrance. The fire alarm control panel has 16 zones (13 active). The 2010 inspection report indicated that there were four smoke detectors that had been painted and should be replaced.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1982	25	MAR-12

Event: Replace Fire Alarm System (7164 sq. m. gfa)

Concern:

Existing Simplex 2100 fire alarm panel is no longer manufactured and repair parts no longer available. Fire devices are aged and may no longer be reliable. There are no strobes in the school.

Recommendation:

Provide new addressable fire alarm system to current code requirements. Provide strobe coverage throughout.



Simplex 2100 fire alarm control panel located in administration area.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2012	\$107,000	High

Updated: MAR-12

D5030.02.02 Intrusion Detection**

The main DSC security system panel is located in the storage room by the main floor mechanical room. Security keypads have been provided at the main and central north entrances. PIR motion detectors have been provided throughout the school. Door contacts have been installed on exterior doors.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2005	25	MAR-12

Event: Replace Intrusion Detection System (1 panel, 2 keypads, 21 motion detectors & 5 door contacts)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$21,000	Unassigned

Updated: MAR-12

D5030.02.04 Video Surveillance**

Surveillance cameras have been provided in the building. There are a total of 5 interior cameras, typically located at the school entrances. Switching, monitoring and recording equipment for the surveillance system is located in the storage room by the main floor mechanical room.

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

Event: Replace Video Surveillance System (5 cameras + recording and control equipment)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2032	\$8,000	Unassigned

Updated: MAR-12

D5030.03 Clock and Program Systems*

There are digital clocks installed in the school.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1988	0	MAR-12

D5030.04.01 Telephone Systems*

The telephone system is a Nitsuko system with three DX2NA-32 units, located in the storage room across from the custodian's room (basement level). Handsets are located in the classrooms and selected areas such as the general office. The telephone system is integrated with the Telecor system. A separate Nitsuko system has been installed for the leased area on the second floor.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1999	0	MAR-12

D5030.04.04 Data Systems*

The main data system servers are located in the storage room adjacent to the main floor mechanical room. The network wiring within the school is typically Cat. 5 or better. Supernet has been installed in the school. The network switches and patch panels are typically rack mounted.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2007	0	MAR-12

D5030.05 Public Address and Music Systems**

The public address system is a Telecor XL system located in the staff work room. Speakers are typically surface mounted square units or recessed round units. The system is integrated with the telephone system.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
5 - Good	2010	20	MAR-12

Event: Replace P.A. System (Head-end equipment and 40 classrooms)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$51,000	Unassigned

Updated: MAR-12

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1020.03 Theatre and Stage Equipment*

The stage in the 1933 Section is equipped with proscenium curtains and lighting bars suspended over the stage.

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

E1090.04 Residential Equipment*

The home economics lab is equipped with refrigerator, stoves, microwaves, washer and dryers and several small kitchen appliances. The staff kitchen area is equipped with a refrigerator, dishwasher and microwaves. Microwave ovens are located in the lunch room

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

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

Electronic scoreboards, fixed and movable basketball hoops are located in the main gym. Four basketball backboards are located in the small gymnasium.

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

E2010.02 Fixed Casework**

Most classrooms and offices are equipped with custom wood open faced and/or painted cabinet units. The science lab, including the prep room is equipped with upper wood cabinets, lower cupboards c/w counter-top, open fixed shelving. The home economics room is equipped upper wood cabinets, lower cupboards c/w plastic laminate counter-top, open fixed shelving. The CTS labs have painted wood upper and lower cabinet units, fixed tables & millwork around the perimeter of the room. The library has fixed and moveable wood shelving casework, upgraded in 2001. Glass display cabinets are located in the main entrance area and in the corridors. The washrooms with plastic laminate counter tops were upgraded in 2009. The staff room is equipped with upper and lower custom wood cabinet. The kitchens and washrooms have plastic laminate counter tops.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1963	35	MAR-12

Event: Replace all original millwork (Based on 7164m2)

Concern:

Most of the millwork is original throughout all the sections of the school. Minimal upgrades have been conducted on the millwork.

Recommendation:

Replace all original millwork (Based on 7164m2)

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Failure Replacement	2013	\$630,000	Medium

Updated: MAR-12



Original millwork in classroom area.

E2010.03.01 Blinds**

Venetian blinds and roll-up blinds are located throughout the majority of the of the windows in the 1963 and 1968 Sections. The blinds were replaced in 2000 throughout the 1963 and 1968 Sections. The windows in the 1971 Section have internal blinds within the windows.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2000	30	MAR-12

Event: Replace window blinds in 1963 & 1968 Sections - 92 Windows

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2030	\$55,000	Unassigned

Updated: MAR-12

E2010.04 Fixed Floor Grilles and Mats*

Embedded entrance mats are located at the north-west exit in the 1972 Addition.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1972	0	MAR-12

E2020.02.03 Furniture*

All classroom, shops, labs and offices areas are equipped with movable desks and chairs.

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

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

A barrier free parking stall is not identified in the parking area.

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

Event: Provide a designated parking stall & curb cut at main entrance for handicap accessibility.

Concern:

A barrier free parking stall is not identified in the parking area.

Recommendation:

Provide a designated parking stall & curb cut at main entrance for handicap accessibility.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2012	\$5,000	Low

Updated: MAR-12

K4010.02 Barrier Free Entrances*

Power assist doors are not provided throughout the entire school.

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

Event: Provided a ramp and power operator for barrier free access at the north entrance.

Concern:

No automatic access is currently provided from any exterior entrance doors. The main floor is elevated above grade.

Recommendation:

Provided a power operator for barrier free access at the north entrance opposite the parking area. Provide an exterior ramp opposite the main north entrance in the 1968 Addition.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2012	\$50,000	Medium

Updated: MAR-12

K4010.03 Barrier Free Interior Circulation*

Barrier free access is not provided throughout the 3 level school. All main entrances are elevated above grade.

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

Event: **Provide an elevator at the at the north entrance opposite the parking area.**

Concern:

Main floor level is elevated above grade. There is no barrier free access to all levels in the school.

Recommendation:

Provide an elevator at the at the north entrance opposite the parking area.

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2012	\$250,000	High

Updated: MAR-12

K4010.04 Barrier Free Washrooms*

The staff, girls & boys washrooms on all floor levels are not barrier free.

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

Event: **Provide a unisex barrier-free washroom on each floor**

Concern:

Existing washrooms will not accommodate barrier-free user requirements.

Recommendation:

Provide a unisex barrier-free washroom on each floor

<u>Type</u>	<u>Year</u>	<u>Cost</u>	<u>Priority</u>
Barrier Free Access Upgrade	2012	\$90,000	High

Updated: MAR-12

K4030.01 Asbestos*

Please see HAZARDOUS BUILDING MATERIALS SURVEY conducted by Golder Associates Ltd. Dated April, 2007 for details. Report indicates asbestos presence in duct mastic, duct insulation and duct connector fabric, pipe fittings, pipe runs, floor tiles, ceiling tiles, texture sprayed ceilings and cement board. No costs were provided by ECDSB.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1980	0	MAR-12

K4030.04 Mould*

Please see HAZARDOUS BUILDING MATERIALS SURVEY conducted by Golder Associates Ltd. Dated April, 2007 for details. No mould issues know or reported.

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

K4030.09 Other Hazardous Materials*

Please see HAZARDOUS BUILDING MATERIALS SURVEY conducted by Golder Associates Ltd. Dated April, 2007 for details. No hazardous issues know or reported.

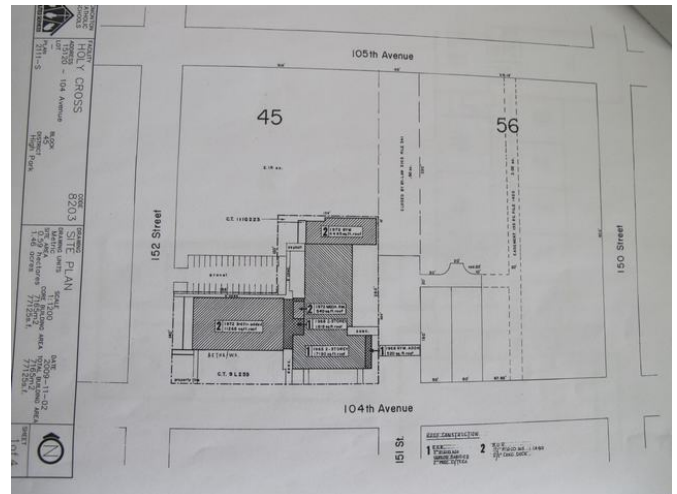
<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1963	0	MAR-12

K5010.02 Building Documentation*

The evaluation was conducted on October 25, 2011, by Asset Evolution Inc.

Holy Cross Catholic Elementary / Junior High School, originally built in 1963 is a two-storey structure with a full basement and an area of 3352 m². In 1968, a one-storey addition with a full basement was added at the west end of the original school and a small addition to the gym at the east end of the school. The 1st addition has a total area of 2312 m². A second addition was added in 1972. A second floor was added above the 1968 Addition and a second gymnasium and music room was added to the north end of the school. The 2nd addition has a total area of 1500 m². The school has a total building area of 7164 m². Holy Cross is a French Immersion school that includes several classrooms, a library, computer rooms, 2 science room, 2 home economics rooms, 2 lunch rooms, 2 gymnasiums, fitness room (stage) change rooms, music rooms, staff room and administration offices. The second floor of the 1972 Addition is leased to - To 2learn.ca Education Society. Several classrooms are leased to daycare groups.

<u>Rating</u>	<u>Installed</u>	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	2011	0	MAR-12



Holy Cross Catholic Elementary-Junior High School - Site & Roof Plan