RECAPP Facility Evaluation Report

Edmonton School District No. 7

Harry Ainlay Composite High School

B3145A

Edmonton

Report run on: March 28, 2012 10:01 AM

Facility Details

Building Name:	Harry Ainlay Composite High
Address:	4350 - 111 Street
Location:	Edmonton
Building Id:	B3145A
Gross Area (sq. m):	25,285.80
Replacement Cost:	$77,277,000
Construction Year:	1965

Evaluation Details

Evaluation Company:	HENOCH ARCHITECT
Evaluation Date:	November 30 2011
Evaluator Name:	J. Henoch, AAA, MRAIC

Total Maintenance Events Next 5 years:	**$14,822,000**
5 year Facility Condition Index (FCI):	**19.18%**

General Summary:

The original, single storey school was constructed in 1965 with an approximate area of 18,134 m2. In 1968 a one-storey addition with an approximate area of 7,018 m2 was added along the east and west ends of the building along with a second gymnasium at the north end. In 1991 an outdoor courtyard was enclosed to increase the size of the library by approximately 134 m2 to bring the total building area to 25,285.8 m2.
The school has several classrooms, science labs, a library, computer rooms, music room, industrial shops, two gymnasiums, an auditorium, a cafeteria and several administrative areas.

The current student enrollment is approximately 2100 and the capacity is approximately 2350.

Structural Summary:

The foundations consist of cast-in-place concrete grade beams and spread footings with a concrete slab-on-grade.
Structural concrete block walls, columns & beams support precast concrete "T" roof slabs and a waffle slab over the central concourse.

The structural elements are in acceptable condition.

Envelope Summary:

Exterior walls are assumed to be comprised of either brick or precast concrete cladding on concrete block back-up with a cavity space containing rigid insulation.

Clearstorey, aluminum, double glazed windows are located above the north-south corridors. Aluminum windows with double glazed fixed units are located in the courtyards and and at one room.

20% of the roofs have a standard bituminous membrane believed to have been installed in 1988. Other roofs have a modified bituminous membranes (SBS) installed between 1995 and 2003.

There are 16 steel entrance doors typically comprised of several glazed doors with sidelights and insulated steel utility doors in steel frames
Both steel and wood overhead doors are typically combined with wood man doors.

The building envelope is in acceptable condition.

Interior Summary:

The typical floor finish in classrooms, 1968 Section corridors and most other rooms is vinyl asbestos tile. Shop areas, mechanical rooms and the art room have concrete floors either with a hardened surface or paint. Adiministration aras, some offices and classrooms have a carpet finish and the gymnasiums, dance studio and stage have wood floors. The kitchen and washroom floors have quarry tile and ceramic tile respectively. The corirodors and central concourse in the 1965 section have terrazo floors.

The majority of the interior walls are painted block, glazed or painted brick or demountable partitions with a paint or vinyl finish.

The interior swing doors are generally solid core wood with a plastic laminate finish in painted steel frames. There are steel and aluminum glazed doors and sidelights in the corridors.

The school has several ceiling types, including a suspended 2'x4' acoustical tile system and a 12"x12" acoustical tile adheared to the underside of the structure. Exposed structure and gypsum board ceilings are painted. The music room, auditorium and some teaching areas have a textured stucco ceiling finish.

The interior finishes are in acceptable condition.

Majority Of Finishes Original. Most Carpeting, A/C Tile @ Corridors & Some Cr S Need Replacement. Millwork @ Science Rms, Cts Areas & Beauty Culture Needs Replacement, Repair & Renewal. Misc. Repair & Refinish Work Recommended As Itemized In Survey Section.

Mechanical Summary:

Mechanical Summary (December 2011)

Building heating is provided with a hot water heating system utilizing two (2) gas fired hot water boilers. The hot water heating loop supplies various hydronic heating terminal units consisting of convectors, fin tube radiation in cabinets, unit heaters, and terminal reheat coils. A chilled water system is used to provide cooling in the building via cooling coils in the air handling units. The chilled water system consists of two (2) centrifugal chillers and a single cooling tower. Ventilation in the building is provided with twelve (12) air handling units, four packaged rooftop HVAC units and two make-up air units. Each air handling unit has a steam humidifier which is not in use. Numerous local and general exhaust systems provide exhaust to balance the fresh air supply provided by the air handling units. Building HVAC controls and actuators are pneumatic. The building is equipped with a building automation system which is used to monitor and control major HVAC equipment.

The building domestic water supply provides water for plumbing fixtures in the wash rooms and for use in the fixtures in the labs and shops. Domestic hot water is provided with two (2) domestic hot water systems, one consisting of a storage tank with an internal tube bundle heat exchanger (providing 60C DHW) and one shell and tube heat exchanger (providing 82C DHW). Fire protection consists of a standpipe system feeding fire hose cabinets throughout the building and automatic sprinklers in the drama area. Fire extinguishers are located in wall cabinets and in other areas throughout the building. An automatic dry chemical fire suppression system protects the kitchen cooking hoods.

Although some equipment replacements and upgrades have been completed over the years, most of the building mechanical systems are original. Major mechanical equipment replaced are the hot water heating boilers, chillers and cooling tower. Air distribution systems, air handling units, domestic water distribution system, domestic water heating systems, sanitary drainage system, and the storm water drainage system are all from the original installation. Although the building mechanical systems are still operational, many of the original mechanical systems will require replacement in the near future.

The mechanical systems are in acceptable condition.

Electrical Summary:

Service is 2000A, 277/480V, 3 phase, 4 wire, from the pad mounted transformer, southeast of the school, to the 2000A Service and Distribution Switchboard of Air Circuit Breakers with solid state overcurrent relays. 277/480V is used for lighting and major mechanical equipment through distribution and branch circuit panelboards and MCCs of the same voltage. Secondary distribution is 120/208V via dry type transformers to distribution and branch circuit panelboards throughout the school. A 40 kW, 277/480V natural gas generator provides the emergency power system which includes emergency and exit lighting, and essential communication systems.
Interior lighting system is predominantly fluorescent, which is in the process of converting to the energy efficient type of electronic ballasts and T8 lamps. Incandescent lights will either be converted to fluorescent or be outfitted with compact fluorescent lamps - those remain are for decorative or highlighting purposes. Exit lights will be changed to the LED types. High pressure sodium exterior lights consist of wall and under canopy fixtures and floodlights. Metal halide is present in the gazebo and in the parking lots.
The addressable fire alarm system uses manual and automatic detection devices and audio/visual signaling devices. The security systems include an intrusion detection system with sub-systems for a number of departments, video surveillance of interior and exterior cameras and automatic digital recording, and a card access system for the computer facilities. Communication systems include public address, telephone, television and local area network with wireless transmission.
The overall condition of the electrical systems is good.

Rating Guide

Condition Rating	Performance
1 - Critical	Unsafe, high risk of injury or critical system failure.
2 - Poor	Does not meet requirements, has significant deficiencies. May have high operating/maintenance costs.
3 - Marginal	Meets minimum requirements, has significant deficiencies. May have above average operating maintenance costs.
4 - Acceptable	Meets present requirements, minor deficiencies. Average operating/maintenance costs.
5 - Good	Meets all present requirements. No deficiencies.
6 - Excellent	As new/state of the art, meets present and foreseeable requirements.

S1 STRUCTURAL

A1010 Standard Foundations*

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

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

A1030 Slab on Grade*

Cast-in-place concrete slabs-on-grade throughout.
Site personnel report that problems with slab settlement (up to 100mm) in the 1968 South East section was addressed by means of foam jacking.
There are ongoing problems with settlement in the 1968 North East section which should be monitored and addressed on an as-needed basis.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

A2020 Basement Walls (& Crawl Space)*

Cast in place concrete walls at mechanical rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

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

Structural concrete block walls, columns & beams supporting mezzanines and roof.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

B1010.05 Mezzanine Construction*

Several mezzanines are located in the gymnasium and shop areas. The mezzanines are primarily cast in place concrete slabs.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

B1010.07 Exterior Stairs*

2 sets of cast in place concrete stairs extend from the gymnasium floor level to grade.

Rating	Installed	Design Life	Updated
4 - Acceptable	1968	0	MAR-12

B1020.01 Roof Structural Frame*

The roof structure is supported on concrete beams and columns and concrete block walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

B1020.03 Roof Decks, Slabs, and Sheathing*

Precast concrete t's and cast in place waffle slab.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

B1020.04 Canopies*

Canopies at entrances are assumed to be extensions of the roof structure.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

S2 ENVELOPE

B2010.01.01 Precast Concrete: Exterior Wall Skin* - Fascia Panels

Precast concrete fascia panels.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	0	MAR-12

Event: Investigate Movement of Precast Panels

Concern:
Many panels have shifted and some have hariline cracks indicating possible anchorage problems.

Recommendation:
Retain a consultant to assess the structural integrity of the precast concrete fascia panels and to make recommendations for repair.

Type	Year	Cost	Priority
Study	2012	$12,000	High

Updated: MAR-12

Event: Replace Precast Concrete Anchors - (20 Panels)

Concern:
Subject to the results of the study it is assumed that several fascia panels have defective anchors.

Recommendation:
In accordance with the recommendations of the study, replace defective anchors.

Type	Year	Cost	Priority
Repair	2013	$60,000	High

Updated: MAR-12

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*

The exterior walls have both brick and precast concrete infill panels.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

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

Sealant is installed around all window, door and cladding assemblies.

Rating	Installed	Design Life	Updated
3 - Marginal	1968	20	MAR-12

Event: Replace Sealant (500m)

Concern:
The sealant is brittle, broken, and has lost it's adhesive qualities.

Recommendation:
Remove and replace sealant.

Type	Year	Cost	Priority
Failure Replacement	2013	$20,000	High

Updated: MAR-12

DETERIORATED SEALANT AND SHIFTING FASCIA PANELS

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

Painted doors and frames and miscellaneous trim.

Rating	Installed	Design Life	Updated
5 - Good	2010	15	MAR-12

Event: Repaint Doors and Trim - (20 doors)

Type	Year	Cost	Priority
Lifecycle Replacement	2025	$3,000	Unassigned

Updated: MAR-12

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

The interior face of the exterior precast & brick walls is a concrete brick wall assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

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

Mastic air/vapour barrier and rigid insulation in the wall cavity assumed.

Rating	Installed	Design Life	Updated
2 - Poor	0	0	MAR-12

Event: Intall Fire Protection to Exposed EPS Insulation - (22m2)

Concern:

Exposed expanded polystyrene insulation in the mechanical room is required to be protected by a fire rated assembly.

Recommendation:

Install fire fire rated protection to exposed EPS wall insulation in mechanical room.

Type	Year	Cost	Priority
Code Repair	2012	$2,000	High

Updated: MAR-12

B2010.09 Exterior Soffits*

Cement plaster soffits throughout.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

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

Clerestorey, fixed double glazed windows in aluminum frames are located above the north-south corridors.
These windows have been heavily sealed on the exterior indicating previous problems and the possibility of future problems.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-12

Event: Replace Clerestorey Windows - (600m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$550,000	Unassigned

Updated: MAR-12

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

Double, fixed glazing in aluminum frames.

Rating	Installed	Design Life	Updated
4 - Acceptable	1968	40	MAR-12

Event: Replace Windows (65m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$7,000	Unassigned

Updated: MAR-12

B2030.01.02 Steel-Framed Storefronts: Doors**

Both steel and aluminum fully glazed doors and sidelights.

Rating	Installed	Design Life	Updated
4 - Acceptable	1968	30	MAR-12

Event: Repair Storefront (50m2)

Concern:
Various doors have defective or missing hardware, poor weather stripping and/or damaged metal panels.
Recommendation:
Replace defective or missing hardware, weather stripping and damaged panels.

Type	Year	Cost	Priority
Repair	2014	$55,000	Medium

Updated: MAR-12

Event: Replace Storefront Doors and Sidelights - (240m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$280,000	Unassigned

Updated: MAR-12

B2030.02 Exterior Utility Doors**

Insulated steel doors in steel frames; some with ventilation louvres.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-12

Event: Replace Utility Doors - (20)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$24,000	Unassigned

Updated: MAR-12

B2030.02 Exterior Utility Doors** Gymnasium

Insulated steel doors in steel frames at Gymnasium.

Rating	Installed	Design Life	Updated
6 - Excellent	2011	40	MAR-12

Event: Replace Utility Doors - (4)

Type	Year	Cost	Priority
Lifecycle Replacement	2051	$50,000	Unassigned

Updated: MAR-12

B2030.02 Exterior Utility Doors** Shops

Wood doors in wood frames next to overhead doors.

Rating	Installed	Design Life	Updated
2 - Poor	1963	40	MAR-12

Event: Replace Wood Doors and Frames - (6)

Concern:
The doors are delaminating, poorly fitting and have defective hardware. The doors are unsightly, insecure and a poor weather barrier.

Recommendation:
Replace defective wood doors and transom panels.

Type	Year	Cost	Priority
Failure Replacement	2013	$9,000	High

Updated: MAR-12

B2030.03 Large Exterior Special Doors (Overhead)* - Steel

Insulated steel overhead doors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1980	0	MAR-12

Event: Replace Overhead Doors - (5)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$35,000	Unassigned

Updated: MAR-12

B2030.03 Large Exterior Special Doors (Overhead)* - Wood

Painted wood doors with hardboard cladding.

Rating	Installed	Design Life	Updated
2 - Poor	1965	0	MAR-12

Event: Replace Overhead Doors - (2)

Concern:
The doors panels are buckling due to moisture damage and have been patched with plywood panels.
The doors are unsightly and are poor barriers to weather and heat loss.

Recommendation:
Replace wood overhead doors.

Type	Year	Cost	Priority
Failure Replacement	2013	$14,000	Medium

Updated: MAR-12

B3010.01 Deck Vapour Retarder and Insulation* - Areas 2 - 8

SBS membrane with rigid insulation.

Rating	Installed	Design Life	Updated
5 - Good	2000	0	MAR-12

B3010.01 Deck Vapour Retarder and Insulation* - Areas 1 & 9

Bituminous felts and rigid insulation assumed.

Rating	Installed	Design Life	Updated
4 - Acceptable	1988	0	MAR-12

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

Shop and Gymnasium wings (Areas 1 & 9) have standard built-up roof assemblies.

Rating	Installed	Design Life	Updated
4 - Acceptable	1988	25	MAR-12

Event: Replace Roofing - (5050m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$890,000	Unassigned

Updated: MAR-12

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

The majority of the roof has a modified bituminous membrane assembly installed between 1998 to 2003

Rating	Installed	Design Life	Updated
5 - Good	2000	25	MAR-12

Event: Remove Debris and Plant Material

Concern:
Plants are growing in several areas of the roof. This could result in damage to the roof membrane.
Recommendation:
Remove debris and plant material.

Type	Year	Cost	Priority
Preventative Maintenance	2012	$1,000	High

Updated: MAR-12

Event: Replace Roof Membrane - (20,800m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2025	$3,640,000	Unassigned

Updated: MAR-12

B3010.08.02 Metal Gutters and Downspouts**

Downspouts & metal gutters discharge water from the sloped roofs to the lower roofs.

Rating	Installed	Design Life	Updated
5 - Good	1991	30	MAR-12

Event: Replace Gutters and Downspouts - (30m)

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$1,500	Unassigned

Updated: MAR-12

B3020.01 Skylights**

Acrylic, pyramid type, unit skylights above the central circulation space.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	25	MAR-12

Event: Replace Unit Skylights - (30)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$36,000	Unassigned

Updated: MAR-12

B3020.01 Skylights**

Acrylic, barrel vault skylight at the library above the original open courtyard.

Rating	Installed	Design Life	Updated
4 - Acceptable	1981	25	MAR-12

Event: Repair glazing on Skylight

Type	Year	Cost	Priority
Repair	2011	$2,312	Unassigned

Updated: NOV-11

Event: Replace Skylight - (120m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$250,000	Unassigned

Updated: MAR-12

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Interior partitions typically consist of painted or glazed block, brick, cast-in-place concrete and stud partitions with a paint finish on gypsum board.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1010.02 Interior Demountable Partitions*

Demountable partitons, with a paint or vinyl finish on gypsum board, are typical for most classrooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1010.03 Interior Operable Folding Panel Partitions**

There are operable folding panel partitions:
- in the large gymnasium
- behind the stage
- between classrooms 345/346 and 532/534

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace Folding Panel Partition - (330m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$350,000	Unassigned

Updated: MAR-12

C1010.04 Interior Balustrades and Screens, Interior Railings*

Wood screen in the servery and Hair Dressing.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1010.05 Interior Windows*

Single glazing in aluminum frames in many partitions throughout the facility.
Aluminum sliders in the theatre booth.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1010.06 Interior Glazed Partitions and Storefronts*

Glazed doors and sidelights in aluminum frames at the entrance to the Administration area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1010.07 Interior Partition Firestopping*

Mechanical and electrical equipment which penetrates partitions and which is not obscured from view, has firestop seals.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1020.01 Interior Swinging Doors (& Hardware)*

Typical interior doors are solid core wood with a plastic laminate finish in painted steel frames. Steel doors in utility rooms and shops.

Rating	Installed	Design Life	Updated
4 - Acceptable	1968	0	MAR-12

Event: Repair Defective Doors - (75 doors)

Concern:
Many wood doors have various defects primarily associated with delaminating, chipped or broken plastic laminate.

Recommendation:
Repair or replace defective doors.

Type	Year	Cost	Priority
Repair	2013	$26,000	High

Updated: MAR-12

C1020.03 Interior Fire Doors*

Fire doors in corridors and in fire separations.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1020.04 Interior Sliding and Folding Doors*

-Folding metal security screen in the cafeteria servery area.
-Sliding glass - patio type - door between lab and "geenhouse" and in the staff dining room.
-Aluminum, fully glazed, sliding panels at Student Centre installed in 2009.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1030.01 Visual Display Boards**

Tackboards, chalkboards and whiteboards throughout.

Rating	Installed	Design Life	Updated
4 - Acceptable	1998	20	MAR-12

Event: Replace Whiteboards (550m2) and Tackboards (550m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2018	$110,000	Unassigned

Updated: MAR-12

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

Prefinished metal toilet partitions in washrooms.

Rating	Installed	Design Life	Updated
5 - Good	2000	30	MAR-12

Event: Replace Toilet Partitions - (115)

Type	Year	Cost	Priority
Lifecycle Replacement	2030	$145,000	Unassigned

Updated: MAR-12

C1030.05 Wall and Corner Guards*

Painted steel or stainless steel corner guards.

Rating	Installed	Design Life	Updated
5 - Good	1965	0	MAR-12

C1030.06 Handrails*

Wood handrails (35mm x 250mm) on both sides of principle corridors.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	0	MAR-12

Event: Refinish Handrails - (1500m)

Concern:
Much of the finish on the handrails is worn and unsightly.
Recommendation:
Refinish defective wood handrails.

Type	Year	Cost	Priority
Repair	2013	$40,000	Medium

Updated: MAR-12

C1030.08 Interior Identifying Devices*

Principle signage for room identification and directional signage consists of either suspended or wall mounted, wood plaques with embossed lettering.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1030.10 Lockers**

Prefinished steel lockers in the corridors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace Lockers - (2,350)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$480,000	Unassigned

Updated: MAR-12

C1030.10 Lockers** - Change Rooms

Half height prepainted steel lockers.

Rating	Installed	Design Life	Updated
5 - Good	2010	30	MAR-12

Event: Replace Lockers - (770)

Type	Year	Cost	Priority
Lifecycle Replacement	2040	$96,000	Unassigned

Updated: MAR-12

C1030.12 Storage Shelving*

- Clear finish plywood storage shelving in storage rooms.
- Prepainted, steel, football player's storage compartments on gymnasium mezzanine installed in 201.
- Steel storage racks in automotive area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C1030.14 Toilet, Bath, and Laundry Accessories*

The washrooms are equipped with typical washroom accessories: paper towel dispensers, toilet paper dispensers, soap dispensers, waste bins, mirrors and grab bars.
Many acrylic toilet paper dispensers in the boys' washrooms have lighter burns but they remain servicable.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	0	MAR-12

C2010 Stair Construction*

Concrete steps to the mezzanine levels in the gymnasium.
Steel stairs to the mezzanine levels in the shops, auditorium and gym with open risers and a painted finish.
Wood stairs to the theatre booth and to the stage.

Rating	Installed	Design Life	Updated
5 - Good	1965	0	MAR-12

C2020.02 Terrazzo Stair Finishes*

Terrazzo stairs at the gym entrance.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C2020.08 Stair Railings and Balustrades*

Steel handrails at typical mezzanine stairs.
Wood handrails at stairs in the gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C3010.02 Wall Paneling**

T & G wood wall finish in a portion of the theatre and in the staff lounge.

Rating	Installed	Design Life	Updated
5 - Good	1965	30	MAR-12

Event: Replace Wall Paneling - (50m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$6,000	Unassigned

Updated: MAR-12

C3010.06 Tile Wall Finishes**

Ceramic wall tiles behind drinking fountains in corridors, in small washroom and shower.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-12

Event: Replace Ceramic Wall Tiles - (20m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$5,000	Unassigned

Updated: MAR-12

C3010.09 Acoustical Wall Treatment**

Acoustic wall panels in staff dining room, cafeteria, library.

Rating	Installed	Design Life	Updated
5 - Good	1995	20	MAR-12

Event: Replace Acoustic Wall Panels - (130m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$32,000	Unassigned

Updated: MAR-12

C3010.09 Acoustical Wall Treatment** 1968 Gymnasium and Music Room

Painted wood and fabric acoustic panels.

Rating	Installed	Design Life	Updated
4 - Acceptable	1968	20	MAR-12

Event: Replace Acoustic Wall Assembly - (300m)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$73,000	Unassigned

Updated: MAR-12

C3010.11 Interior Wall Painting*

Gypsum board walls and some brick walls have a paint or vinyl finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	2005	0	MAR-12

Event: Repaint Walls - (1500m2)

Concern:
Walls in some classrooms have a paint or vinyl finish which is worn, torn, marred and unsightly.
Recommendation:
Repaint or replace defective wall finishes.

Type	Year	Cost	Priority
Repair	2013	$23,000	High

Updated: MAR-12

C3020.01.02 Painted Concrete Floor Finishes*

Painted concrete floors in the shop areas, art room, and utility rooms.

Rating	Installed	Design Life	Updated
2 - Poor	1990	0	MAR-12

Event: Repaint Concrete Floors - (1700m2)

Concern:
The paint finish is worn, unsightly and difficult to keep clean.
Recommendation:
Strip and repaint concrete floors with silicone acrylic concrete stain & sealer or equal.

Type	Year	Cost	Priority
Failure Replacement	2014	$40,000	High

Updated: MAR-12

C3020.02 Tile Floor Finishes**

Ceramic tile floors in washrooms and showers and locker rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1968	50	MAR-12

Event: Repair Ceramic Floor Tiles - (4m2)

Concern:
Ceramic floor tiles are missing in several areas. Areas with missing tiles are difficult to maintain and are unsightly.

Recommendation:
Replace missing or defective tile.

Type	Year	Cost	Priority
Repair	2012	$1,200	High

Updated: MAR-12

Event: Replace Floor Tiles - (350m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$58,000	Unassigned

Updated: MAR-12

C3020.02 Tile Floor Finishes** Kitchen

Quarry tile floors in the kitchen and servery.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	50	MAR-12

Event: Replace Quarry Tile Floor Finishes (330m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$85,000	Unassigned

Updated: MAR-12

C3020.03 Terrazzo Floor Finishes*

Terrazzo floor throughout the main corridors of the 1965 section and in the central gathering area.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

C3020.04 Wood Flooring**

Hardwood flooring in south gymnasium, back stage and gymnasium mezzanine.
Painted plywood downstage and on the shop mezzanines.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Refinish Backstage Floor - (160m2)

Concern:
The backstage hardwood floor is uneven and severely stained.
Recommendation:
Refinish the backstage floor.

Type	Year	Cost	Priority
Repair	2014	$9,000	Low

Updated: MAR-12

Event: Replace Wood Flooring - (670m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$160,000	Unassigned

Updated: MAR-12

C3020.04 Wood Flooring** - Dance Studio

Hardwood sports floor.

Rating	Installed	Design Life	Updated
6 - Excellent	2010	30	MAR-12

Event: Replace Wood Flooring - (160m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2040	$42,000	Unassigned

Updated: MAR-12

C3020.04 Wood Flooring** - North Gymnasium

Hardwood sports flooring.

Rating	Installed	Design Life	Updated
6 - Excellent	2006	30	MAR-12

Event: Replace Wood Flooring - (470m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2036	$120,000	Unassigned

Updated: MAR-12

C3020.07 Resilient Flooring**

Vinyl tile in renovated labs and administration area.

Rating	Installed	Design Life	Updated
6 - Excellent	2010	20	MAR-12

Event: Replace Vinyl Tile - (630m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2030	$35,000	Unassigned

Updated: MAR-12

C3020.07 Resilient Flooring**

Original vinyl asbestos tiles (9"x9", 12"x12", 18'x24") in most rooms and 1968 section corridors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	20	MAR-12

Event: Replace Vinyl Asbestos Tiles - (11,500m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$625,000	Unassigned

Updated: MAR-12

Event: Replace Vinyl Asbestos Tiles - (350m2)

Concern:
Portions of tile floors in utility rooms and classrooms are missing or broken or marred and unsightly.
Recommendation:
Replace defective vinyl asbestos tiles.

Type	Year	Cost	Priority
Failure Replacement	2013	$21,000	Medium

Updated: MAR-12

C3020.08 Carpet Flooring**

Carpeting in the staff dining area and lounge, library, administrative areas.

Rating	Installed	Design Life	Updated
5 - Good	2006	15	MAR-12

Event: Replace Carpet - (1300m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$82,000	Unassigned

Updated: MAR-12

C3020.08 Carpet Flooring**

Carpet in various activity rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1998	15	MAR-12

Event: Lifecycle Replacement - (1000m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$65,000	Unassigned

Updated: MAR-12

Event: Replace Carpet - (350m2)

Concern:
Carpet in rooms 186, 416, 537 and 550 is worn, distorted and/or soiled.

Recommendation:
Replace defective carpet.

Type	Year	Cost	Priority
Failure Replacement	2014	$23,000	Medium

Updated: MAR-12

C3020.14 Other Floor Finishes*

- Interlocking rubber tiles in the fitness centre.
- Vinyl with pad underlay on gymnastics mezzanine.

Rating	Installed	Design Life	Updated
5 - Good	2010	0	MAR-12

C3030.02 Ceiling Paneling (Wood)*

T & G wood on the underside of the theatre booth.

Rating	Installed	Design Life	Updated
5 - Good	1965	0	MAR-12

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

The majority of the ceilings in the corridors & classrooms have a 2'-0"x4'x0" suspended acoustic tile assembly.

Rating	Installed	Design Life	Updated
4 - Acceptable	1968	25	MAR-12

Event: Replace Acoustical Ceiling Tiles - (13,600m2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$570,000	Unassigned

Updated: MAR-12

Event: Replace Ceiling Tiles - (1200m2)

Concern:
Selected acoustic tiles in various classrooms and corridors are broken, marred, or missing and unsightly.
Recommendation:
Replace defective suspended ceiling tiles.

Type	Year	Cost	Priority
Failure Replacement	2014	$50,000	High

Updated: MAR-12

C3030.07 Interior Ceiling Painting*

Gypsum board ceilings and exposed concrete structures have a paint finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	0	MAR-12

C3030.09 Other Ceiling Finishes* - 12"x12" Acoustical Ceiling tiles

12"x12" cellulous acoustical ceiling tiles located between the concrete 'T' structure in the south gymnasium, mezzanines, shops and music room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

Event: Replace Ceiling Tiles - (400m2)

Concern:

Acoustic ceiling tiles in the north gymnasium have been removed apparently because of adhesive failure and the possibility of injury to users of the facility.
Without the tiles, the acoustic quality of the space is compromised and the ceiling is unsightly.

Recommendation:

Install new acoustic ceiling tiles - or other acoustic treatment - to the gymnasium ceiling.

Type	Year	Cost	Priority
Failure Replacement	2014	$24,000	Low

Updated: MAR-12

D1010.02 Lifts**

A platform chair lift is located on the stairs in the foyer of the gymnasium.

Rating	Installed	Design Life	Updated
5 - Good	1992	25	MAR-12

Event: Replace Lift

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$30,000	Unassigned

Updated: MAR-12

S4 MECHANICAL

D2010.04 Sinks**-1965 and 1968

There are one hundred and ninety-two (193) sinks in the building. Of this amount, 124 are in the 1965 section and 69 in the 1968 sections. Sinks include stainless steel counter sinks, stainless steel science lab sinks, janitor sinks, shampoo sinks, china counter sinks, stainless steel elongated counter sinks in the vocational wing and china wall hung sinks.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace Sinks-(193)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$382,000	Unassigned

Updated: MAR-12

D2010.05 Showers**-1965 Section

Two (2) gang showers, each with five (5) shower heads are located in the gymnasium girl's shower room, (room 488) and in the boy's shower room, (room 487). In addition there are two (2) separate showers for the physical education instructor's rooms, (rooms 482 and 485), one (1) in the wellness area, (room 522) and one (1) emergency shower in science room, (room 372).

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace Showers-(25)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$58,800	Unassigned

Updated: MAR-12

D2010.08 Drinking Fountains/Coolers**-1965 and 1968

There are a total of seventeen (17) drinking fountains in the 1965 and 1968 sections. Thirteen (13) are located in the 1965 section and four (4) in the 1968 sections. Drinking fountains appear to be original except for five (5) which are stainless steel. It is estimated that the five stainless drinking fountains were replaced in 1975. Except for the stainless steel drinking fountains, the rest are vitreous china. Drinking fountains are located in the corridors except for two (2) which are located in the kitchen (120) and two (2) in gymnasium (480).

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	35	MAR-12

Event: Replace Drinking Fountains-(17)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$31,400	Unassigned

Updated: MAR-12

D2010.09 Other Plumbing Fixtures*-1965 and 1968

There are six (6) enameled steel half Bradley wash fountains. They are located in the shop areas (rooms 141, 174, 178, 206, 216 and 224). Except for the 914mm half Bradley in room 174, the rest are all half 1219mm one half Bradleys.

Rating	Installed	Design Life	Updated
2 - Poor	1965	0	MAR-12

Event: Replace Half Bradley Wash Fountain-(1)

Concern:
The half type Bradley wash fountain in room 216 is broken.
Recommendation:
Replace the unit with a new wash fountain.

Type	Year	Cost	Priority
Failure Replacement	2013	$6,200	Medium

Updated: MAR-12

Event: Replace Half Bradley Wash Fountains-(5)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$30,000	Unassigned

Updated: MAR-12

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

Wall hung lavatories are vitreous china.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	35	MAR-12

Event: Replace Vitreous China Lavatories-(10)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$19,800	Unassigned

Updated: MAR-12

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

Water closets are floor mounted with a mixture of flush tank and flushometer flushing.

Rating	Installed	Design Life	Updated
5 - Good	2005	35	MAR-12

Event: Replace Water Closetsd-(17)

Type	Year	Cost	Priority
Lifecycle Replacement	2040	$35,700	Unassigned

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)**-1965 and 1968

There are twenty-three urinals in the 1965 section and seven in the 1968 sections. Urinals are vitreous china wall mounted with a mixture of either tank or flushometer flushing.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	35	MAR-12

Event: Replace Urinals-(30)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$63,000	Unassigned

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)**-1965 and 1968

Lavatories have stainless bowls and plumbing brass are single lever mixing faucets.
It is estimated that the stainless steel lavatories were installed over a ten year period with the average installation being year 2005.

Rating	Installed	Design Life	Updated
5 - Good	2005	35	MAR-12

Event: Replace Stainless Steel Lavatories-(46)

Type	Year	Cost	Priority
Lifecycle Replacement	2040	$82,800	Unassigned

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)**-1965 and 1968

There are sixty-six lavatories in the 1965 section and seven in the 1968 sections. It is estimated there are seventeen (17) enameled steel lavatories remaining from the original installations and ten (10) vitreous china sinks. Replacement lavatories are stainless steel.

Rating	Installed	Design Life	Updated
2 - Poor	1965	35	MAR-12

Event: Replace Enamelled Steel Lavatories-(17)

Concern:
Several of the enameled steel lavatories are rusted and on some the enamel is chipped.
Recommendation:
Replace enameled steel sinks.

Type	Year	Cost	Priority
Failure Replacement	2012	$34,000	Medium

Updated: MAR-12

D2010.10 Washroom Fixtures (WC, Lav, Urnl)**-1965 and 1968

There are a total of seventy-two (72) water closets in the 1965 section and 1968 sections. Fifty-eight (58) are in the 1965 section and fourteen (14) are in the 1968 sections. Some water closets were replaced between 2001 and 2011. It is estimated there are forty-two (42) in the 1965 section and thirteen (13) in the 1968 sections that are original water closets. Water closets are floor mounted with a combination of either tank and flushometer flushing.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	35	MAR-12

Event: Replace Water Closets-(55)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$115,500	Unassigned

Updated: MAR-12

D2020.01.01 Pipes and Tubes: Domestic Water*-1965 and 1968

There is one water supply to the building entering in the boiler room (203). The water service supplies the fire protection wet standpipe hose system and water for domestic use which is metered with a compound water meter. Water piping is generally steel or galvanized steel in larger diameters and copper in smaller diameters.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

Event: Replace domestic water piping system (all building areas)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$1,448,956	Unassigned

Updated: MAR-12

D2020.01.02 Valves: Domestic Water**-1965 and 1968

Domestic water system valves include zone isolating valves and fixture isolating valves. Some zone isolation valves have been replaced ($25,000), and the rest of the domestic water valves are original.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-12

Event: Replace Domestic Water Valves

Recommendation:
Since there were no mechanical engineering drawings available when this report was developed the values from the previous report were reused. However, the number of valves and the replacement cost were not confirmed.

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$303,000	Unassigned

Updated: MAR-12

D2020.01.03 Piping Specialties (Backflow Preventers)**-1965 Section

There are five (5) backflow prevention devices in the domestic water piping system. They are located in the boiler room in the following piping systems:
1. A !00mm pressure reducing backflow prevention device is located in the domestic water service.
2. A double check valve backflow prevention device is located in the 76mm wet standpipe fire hose system.
3. A 38mm pressure reducing backflow device is in the makeup water for the chillers and the cooling tower.
4. A 25mm pressure reducing backflow device is located in the hot water boilers feed water line.
5. A 19mm pressure device is located in the feed water line for the steam boiler.

Rating	Installed	Design Life	Updated
4 - Acceptable	1999	20	MAR-12

Event: Replace Backflow Preventors-(5)

Type	Year	Cost	Priority
Lifecycle Replacement	2019	$15,400	Unassigned

Updated: MAR-12

D2020.02.02 Plumbing Pumps: Domestic Water**-1965

There are three domestic hot water circulation pumps as follows:
1. A 50mm bronze body in line circulating pump with a 1.49 kW motor circulates domestic hot water between the domestic hot water distribution piping system and the domestic hot water storage tank.
2. A 38mm bronze body in line circulating pump with a fractional kW motor circulates domestic hot water from the domestic hot water distribution system back to the natural gas fired domestic hot water heater.
3. An 18mm bronze body in line circulating pump with a fractional kW motor circulates hot water from the kitchen hot water distribution system back to the shell and tube domestic hot water heat exchanger.
.
All circulation pumps are located in the boiler room. It is estimated that the pump circulating hot water between the hot water distribution piping system and the hot water storage tank was installed in 2003 and the other two (2) pumps were installed in approximately 1995.

Rating	Installed	Design Life	Updated
4 - Acceptable	1995	20	MAR-12

Event: Replace Domestic Hot Water Circulating Pumps-(3)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$9,500	Unassigned

Updated: MAR-12

D2020.02.06 Domestic Water Heaters**

The main domestic hot water supply system consists of a hot water storage tank with an internal tube bundle steam heat exchanger designed to supply hot water for domestic use at 60C. The 82C hot water system consists of a steam to hot water shell and tube type heat exchanger. Both domestic hot water systems are located in the boiler room (203).

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	20	MAR-12

Event: Failure Replacement safety valve

Type	Year	Cost	Priority
Failure Replacement	2011	$74	Unassigned

Updated: JUL-11

Event: Replace DHW Tank & Tube Bundle-(1)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$47,400	Unassigned

Updated: MAR-12

D2020.02.06 Domestic Water Heaters**-1965 Section

An A.O. Smith Model BTRC 199 110 natural gas fired domestic hot water heater provides domestic hot water in summer when the steam boiler is not operating. The heater has a recovery of 0.18L/s and a storage capacity of 284 liters. The water heater is located in the boiler room (203).

Rating	Installed	Design Life	Updated
5 - Good	2005	20	MAR-12

Event: Replace Domestic Water Heater-(1)

Type	Year	Cost	Priority
Lifecycle Replacement	2025	$7,300	Unassigned

Updated: MAR-12

D2020.03 Water Supply Insulation: Domestic*-1965 and 1968

The domestic hot water lines are insulated to prevent heat loss and the domestic cold water lines are insulated to prevent condensation. Refer to the "Hazardous Materials Report" for asbestos content in the insulation before doing work on the insulated piping and equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D2030.01 Waste and Vent Piping*-1965 and 1968

Waste and vent piping in the building is generally cast iron in larger diameters and copper in smaller diameters.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

Event: Install Backflow Preventer In The Drain Outside Gymnasium Door

Concern:
The drain outside the gymnasium door occasionally backs up causing flooding in the gymnasium.

Recommendation:
Install a backflow preventer to prevent the drain backing up and flooding the gymnasium.

Type	Year	Cost	Priority
Repair	2012	$5,300	High

Updated: MAR-12

D2030.02.04 Floor Drains*-1965 and 1968

Floor drains have cast iron bodies and cast iron strainers in mechanical rooms. In public areas they have cast iron bodies and nickel bronze strainers.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D2040.01 Rain Water Drainage Piping Systems*-1965 and 1968

The building flat roof areas are drained with standard roof drains. Rain water leaders are combined under floor and connect into the municipal storm sewer system. Piping is cast iron. A storm water sump is located in mechanical room (486).

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D2040.02.04 Roof Drains*-1965 and 1968

Storm water is drained from the flat roof areas of the building with standard flow control drains equipped with cast iron dome strainers.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D2090.01 Compressed Air Systems (Non Controls)**-1965 Section

A single Gardner Denver Model ADS-1011 air compressor supplies the shops with compressed air. The twin cylinder head compressor and 7.46 kW electric motor are mounted on a common steel base which is mounted on a horizontal air receiver. It is assumed the compressor was installed in about 2005 and the air receiver is probably original .

Rating	Installed	Design Life	Updated
4 - Acceptable	2005	30	MAR-12

Event: Replace Air Compressor-(1)

Type	Year	Cost	Priority
Lifecycle Replacement	2035	$13,500	Unassigned

Updated: MAR-12

D3010.02 Gas Supply Systems*-1965 and 1968

The natural gas service enters the concrete gas meter vault located in the north east corner in the boiler room. In this vault the gas pressure is regulated and the gas is metered. Natural gas is the energy source for the hot water heating boilers, steam boiler, make-up air units and domestic water heater. Natural gas is also supplied to gas cocks in the science rooms. A master gas valve is provided for each classroom where natural gas is supplied to the lab benches. Natural gas is distributed in carbon steel piping with threaded joints for small pipe sizes and welded joints for larger pipe sizes.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	0	MAR-12

Event: Paint Outdoor Natural Gas Piping On Roof

Concern:
The outdoor gas piping on the roof has extensive surface rusting.

Recommendation:
Clean and remove rusted sections. Paint exterior surface of the gas piping in compliance with CAN/CSA-B149.1, "Natural Gas and Propane Installation Code".

Type	Year	Cost	Priority
Repair	2012	$5,700	Low

Updated: MAR-12

D3020.01.01 Heating Boilers & Accessories: Steam**

A York Shipley steam boiler, Model SPLC 750-N-94573 with an input capacity of 1,715 kW is located in boiler room 203. This boiler provides steam for producing 60C hot water for domestic use and 82C hot water for kitchen food preparation equipment. The boiler was also intended to supply steam for the humidifiers in the air handling units but the humidifiers are not used. There are two (2) pressure relief valves, a low water fuel cutoff control, a water level control and a pressure reducing backflow prevention device in the feed water. The boiler inspection certificate shows that the boiler was inspected by ABSA on August 11, 2008.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	35	MAR-12

Event: Replace Steam Boiler-(1)

Concern:

The steam boiler is unreliable as evidenced by several operational problems resulting in the boiler shutting down. Maintenance and repair costs are high and increasing because parts are becoming difficult to source.

Recommendation:

Replace the steam boiler.

Consequences of Deferral:

Reliability of the boiler will decrease an the boiler ages. High maintenance and repair costs will increase with the aging of the boiler.

Type	Year	Cost	Priority
Failure Replacement	2013	$152,500	Medium

Updated: MAR-12

Event: Study upgrade for boiler replacement

Type	Year	Cost	Priority
Study	2011	$9,002	Unassigned

Updated: NOV-11

D3020.01.03 Chimneys (& Comb. Air): Steam Boilers**-1965 Section

The steam boiler has a separate chimney for venting the flue gases. A common outdoor air duct provides combustion air for the steam boiler, two (2) hot water heating boilers and a domestic water heater, all operating on natural gas. The chimney has considerable rusting on the exterior section above the roof. Inspection of the stack interior shows considerable rusting as well. The combustion air duct is made of galvanized sheet metal with a "mushroom" hood air intake. The duct terminates in the boiler room into an arctic trap.

Rating	Installed	Design Life	Updated
2 - Poor	1965	35	MAR-12

Event: Replace Comb. Air Duct-(1)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$12,400	Unassigned

Updated: MAR-12

Event: Replace Steam Boiler Stack-(1)

Type	Year	Cost	Priority
Failure Replacement	2013	$6,200	High

Updated: MAR-12

D3020.01.04 Water Treatment: Steam Boilers*-1965 Section

Chemicals are supplied into the condensate receiver to treat the condensate before it is pumped back into the boiler. The deaerator is not being used and has not been used recently to deaerate the boiler feed water.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D3020.02.01 Heating Boilers and Accessories: H.W.**-1965 Section

Two (2) hot water boilers are located in the boiler room 203 for heating the building and ventilation air. Both boilers are Unilux Model ZF800W, each has an input of 2345 kW. Both boilers have a pressure relief valve, a low water fuel cutoff controller and a common backflow prevention device in the make up water for the two boilers. Boiler inspection certificates mounted in the boiler room show that the boilers were inspected by ABSA on June 24, 2008.

Rating	Installed	Design Life	Updated
5 - Good	2004	35	MAR-12

Event: Replace Heating Boilers and Accessories-(2)

Type	Year	Cost	Priority
Lifecycle Replacement	2039	$784,000	Unassigned

Updated: MAR-12

D3020.02.02 Chimneys (& Comb. Air): H.W. Boiler**-1965

The two hot water boilers have separate chimneys. Both chimneys have considerable rusting on the exterior above the roof and on the inside. The combustion air system is described in " D3020.01.03 Chimneys (& Comb. Air): Steam Boilers**-1965"

Rating	Installed	Design Life	Updated
2 - Poor	1965	35	MAR-12

Event: Replace Hot Water Boiler Chimneys-(2)

Concern:
Both boiler chimneys above the roof are rusted on the exterior and on the interior surfaces.
Recommendation:
Replace the two hot water boiler chimneys.
Consequences of Deferral:
Accelerated deterioration will inevitably result in failure.

Type	Year	Cost	Priority
Failure Replacement	2013	$15,500	Low

Updated: MAR-12

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

Chemical pot feeders are provided for adding chemicals to the closed hot water heating loop.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D3020.05 Auxiliary Equipment: Heat Generation*-1965 Section

Two hot water heating circulating pumps were installed when the hot water heating boilers were replaced. Both pumps are Bell and Gossett Model 80-B-6x6x7. Each pump delivers 42.9L/s with a pump head of 44.8 kPa These pumps provide continuous water circulation through the boilers.

Rating	Installed	Design Life	Updated
5 - Good	2004	0	MAR-12

D3030.02 Centrifugal Water Chillers**- 1965 Section

Two (2) Trane centrifugal water chillers are located in boiler room 203. Each chiller has a cooling capacity of 728 kW. Refrigerant R134A is used in both chillers.

Rating	Installed	Design Life	Updated
6 - Excellent	2008	25	MAR-12

Event: Replace Chillers (2)

Type	Year	Cost	Priority
Lifecycle Replacement	2033	$615,000	Unassigned

Updated: MAR-12

D3030.05 Cooling Towers** - 1965 Section

An Evapco cooling tower Model LSTB 8P 118 is located on a mezzanine in boiler room 203. It rejects the heat from the two (2) water chillers. The cooling tower has three DWDI fan wheels mounted on a common shaft which is driven with a 37.3 kW electric motor.

Rating	Installed	Design Life	Updated
6 - Excellent	2008	25	MAR-12

Event: Replace Cooling Tower-(1)

Type	Year	Cost	Priority
Lifecycle Replacement	2033	$209,000	Unassigned

Updated: MAR-12

D3030.06.01 Refrigeration Compressors**

Two (2) refrigeration compressor/condensing units, one (1) for each of the kitchen walk-in cooler and freezer.

Rating	Installed	Design Life	Updated
2 - Poor	1965	25	MAR-12

Event: Replace Kitchen Refrigeration Compressors-(2)

Concern:
The kitchen cooler and freezer refrigeration compressors are in poor condition and unreliable and incur high maintenance and repair costs.

Recommendation:
Replace the kitchen cooler and freezer compressor units. Coordinate the installation with replacement of the cooler and freezer units.

Type	Year	Cost	Priority
Failure Replacement	2012	$4,600	High

Updated: MAR-12

D3030.06.02 Refrigerant Condensing Units**-1965 Section

Both condensers are air cooled.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	25	MAR-12

Event: Replace Cooler & Freezer Condensing Units-(2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$34,400	Unassigned

Updated: MAR-12

D3040.01.01 Air Handling Units: Air Distribution**-1965 and 1968

There are eight (8) air handling units serving the 1965 Section. These units are as follows: F1 is located on the mezzanine in room 404. It serves the large gymnasium, room 480. F2 and F3 serve the west zone and east zone respectively. F4 through F8 serve the shops. The air handling units in the 1965 section are designed to provide heating, ventilation, humidity addition and with the exception of the gymnasium unit F1, they also provide cooling. These air handling units are all constant velocity mixed air systems. The 1968 sections are served with four (4) air handling units. They include the following units: F1 located in room 396 supplies the two (2) west additions. F2 located in room 105 supplies the two (2) east additions. F3 located in the basement below the north gymnasium, serves the north gymnasium, room 492. F23 supplies the shops area. The air handling units serving the 1968 sections are designed to provide heating, ventilation, humidity addition and with the exception of the gymnasium unit they also provide cooling.These air handling units are all constant velocity mixed air systems.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace Air Handling Units-(12)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$1,285,000	Unassigned

Updated: MAR-12

D3040.01.02 Fans: Air Distribution (Remote from AHU)*-1965 and 1968

Air distribution fans include return air fans for the air handling units. There are two (2) return air fans (F9 and F10) in the 1965 section for the east and west zones and four (4) return air fans (F4, F5, F6, and F7 associated with the 1968 sections.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D3040.01.03 Air Cleaning Devices: Air Distribution*-1965 and 1968

Air cleaning devices consist of 25mm deep throw away filters mounted in throw away frames.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D3040.01.04 Ducts: Air Distribution*-1965 and 1968

Air distribution ducts include the supply and return air duct systems for the air handling units. Supply and return air duct systems for the 1965 section are located inside the building. Main supply and return air ducts for the 1968 sections are located outdoors on the roof. The distribution air ductwork for these sections is located indoor. Inspect the interior of the ducts. If they are dust laden have the systems cleaned by an experienced and reliable contractor that is familiar with doing this type of work.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D3040.01.07 Air Outlets & Inlets: Air Distribution*-1965 and 1968

Air outlets and inlets include supply air diffusers, grilles and louvers. Air inlets include return air grilles and louvers. The diffusers and grilles are generally of steel construction. Louvers are constructed of galvanized steel with bird screens.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

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

Steam distribution systems consist of steam piping, condensate piping and the condensate pumping system. Steam and condensate piping includes the piping between the boiler room, 203 and the air handling units and the kitchen equipment. Also included is the piping in the boiler room between the steam boiler and the two (2) DHW heat exchangers. The cast iron condensate receiver has two (2) vertical condensate pumps mounted on the tank.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	40	MAR-12

Event: Clean Condensate Tank & Recondition Condensate Pumps-(2)

Concern:

On the exterior the condensate tank and condensate pumps are quite rusted. The rust should be cleaned off and the condensate tank painted. Condensate pumps should be refurbished or replaced. This item should be coordinated with with the study recommended in "D3020.01.01 Heating Boilers & Accessories: Steam".

Type	Year	Cost	Priority
Preventative Maintenance	2012	$30,000	High

Updated: MAR-12

Event: Replace Steam & Condensate Systems

Concern:

The condensate piping system has deteriorated considerably as is evident by the exterior surfaces.

Recommendation:

Sections of the condensate piping should be removed to determine the condition of the interal piping.

Consequences of Deferral:

Deferral could result in an unscheduled system failure.

Type	Year	Cost	Priority
Failure Replacement	2015	$461,000	High

Updated: MAR-12

D3040.03.01 Hot Water Distribution Systems**-1965 and 1968

The hot water heating system supplies hot water for the reheat coils, for air handling unit coils, for wall fin radiation and for heating terminal units. The hot water distribution system includes an expansion tank, hot water circulating pumps, piping and associated piping components i.e. valves, insulation, piping specialties. Hot water heating pumps for the 1965 section and for the 1968 sections include pumps P1 (large gymnasium air handling unit coil circulation pump), P2 (air handling unit heating coils), P3 (east zone reheat coils), P4 (west zone reheat coils), P5 (gymnasium hot water supply), and P9 (shops wing hot water supply).

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-12

Event: Replace HW Piping Distribution System-$93/sq.m gfa

Recommendation:

Engineering drawings for the mechanical building systems were not available at the time of this report. This required making an assumption of the systems layout and equipment. Information from the previous report was used where possible, however, this information was not confirmed.

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$2,940,000	Unassigned

Updated: MAR-12

Event: Replace Hot Water Heating Pumps-(6)

Concern:

The hot water heating pumps are unreliable and do not have any standby capacity.

Recommendation:

Replace the hot water heating pumps (6).

Type	Year	Cost	Priority
Failure Replacement	2014	$108,000	Medium

Updated: MAR-12

D3040.03.02 Chilled Water Distribution Systems**

The chilled water and condenser water pumps and piping were replaced with the installation of the new chillers and cooling tower in 2008. A single cooling tower pump circulates condenser water.This pump, P6 is a Taco Model KS8011-9. It delivers 78.86L/s against a head of 172.9 kPa when driven with an 18.65kW motor. Three (3) chilled water pumps, P3, P7 and P8 circulate chilled water to the chilled water coils in the air handling units. Pump P3 is a Taco Model KS6011A-9.80 E2C. It delivers 30.9L/s chilled water against a head of 268.1 kPa with a 14.91 kW motor. Chilled water pumps P7 and P8 are identical. Both are Taco Models KS1630A/10.7E2D. Each pump delivers 57.66L/s against a head of 268.1L/s with a 22.4kW motor. All pumps related to the cooling plant are located in the boiler room 203.

Rating	Installed	Design Life	Updated
4 - Acceptable	2004	40	MAR-12

Event: Replace Chilled Water Distribution Systems- ($50.91/sq.m. gfa)

Recommendation:

Engineering drawings for the mechanical building systems were not available at the time of this report. This required making a reasonable assessment of the systems and equipment in some cases. Information from the previous report was used where possible. However, this information was not confirmed.

Type	Year	Cost	Priority
Lifecycle Replacement	2044	$1,287,000	Unassigned

Updated: MAR-12

Event: replace cooling water pump

Type	Year	Cost	Priority
Failure Replacement	2011	$5,006	Unassigned

Updated: JUL-11

D3040.04.01 Fans: Exhaust**-1965 and 1968

It is estimated that there are approximately 50 main exhaust fans for the building. The estimated number of exhaust air fans for the 1965 section is thirty (30) and twenty (20) for the 1968 sections.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Improve Ventilation in Food Service Labs-(2)

Concern:
Ventilation in the food service labs (rooms 542 and 544) is not adequate and food odours from these areas permeate throughout the school.

Recommendation:
Investigate and correct the poor ventilation in the food service labs. The cost shown is an allowance.

Consequences of Deferral:
Food odors will remain in the building.

Type	Year	Cost	Priority
Indoor Air Quality Upgrade	2012	$19,800	High

Updated: MAR-12

Event: Replace Exhaust Fans-(2)

Concern:
Site personnel report the exhaust fans for the fume hoods in science rooms 377 and 102 are not performing adequately. Replace these fans to ensure they meet health and safety requirements and maintain comfort in the spaces.

Recommendation:

Type	Year	Cost	Priority
Failure Replacement	2012	$5,300	High

Updated: MAR-12

Event: Replace Exhaust Fans-(50)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$230,500	Unassigned

Updated: MAR-12

D3040.04.03 Ducts: Exhaust*-1965 and 1968

Exhaust air ducts are galvanized sheet metal. The ducts should be inspected internally for cleanliness. If the ducts are not clean, have the systems cleaned by an experienced and reliable contractor familiar with doing this type of work.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D3040.04.05 Air Outlets and Inlets: Exhaust*-1965 and 1968

Exhaust inlets include grilles and exhaust hoods and exhaust air outlets include exhaust stacks and louvers. Exhaust air grilles are made of steel and exhaust hoods in the kitchen are made of stainless steel. Stacks and louvers are generally made of galvanized sheet metal.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D3040.05 Heat Exchangers**-1965 Section

There are two (2) heat exchangers in boiler room 203. A bundle tube heat exchanger in the hot water storage tank heats the domestic water with steam to 60C for domestic use. A shell and tube heat exchanger provides 82C water for kitchen food processing equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace Heat Exchangers-(2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$21,000	Unassigned

Updated: MAR-12

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)**- 1965 Section

There are three (3) packaged rooftop HVAC units providing supplementary heating and cooling for rooms 380, 382 and 818. The air handling units are all Carrier with natural gas heating sections and electric refrigeration. Two units are Carrier Model 48H 004 and one is a Carrier Model 48TECAD 4A2M5A0B04D.

Rating	Installed	Design Life	Updated
2 - Poor	1976	30	MAR-12

Event: Replace Rooftop Packaged HVAC Units-(3)

Concern:
The HVAC units are operational but have deteriorated significantly and require frequent maintenance.
Recommendation:
Replace the three classroom rooftop HVAC units.

Type	Year	Cost	Priority
Failure Replacement	2013	$95,100	Medium

Updated: MAR-12

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)**- 1968 Section

There are two Engineered Air direct fired make-up air units on the roof over the welding shops. They provide tempered outdoor air to the welding shops, balancing the air exhausted from these spaces.

Rating	Installed	Design Life	Updated
4 - Acceptable	1968	30	MAR-12

Event: Replace Welding Shops Make-Up Air Units-(2)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$85,100	Unassigned

Updated: MAR-12

D3050.01.02 Packaged Rooftop Air Conditioning Units (& Heating Units)**-1965 Section

A rooftop packaged HVAC unit serves the library, room 308. The unit has a gas fired heat exchanger and electric refrigeration. It is a Carrier Model 48TECAD 4A2M5A0B04D. It is estimated that this unit was installed when the courtyard was converted to a library in 1991.

Rating	Installed	Design Life	Updated
4 - Acceptable	1991	30	MAR-12

Event: Replace Packaged Rooftop Air Conditioning Unit-(1)

Type	Year	Cost	Priority
Lifecycle Replacement	2021	$31,700	Unassigned

Updated: MAR-12

D3050.02 Air Coils**-1965 and 1968

Interior zoning is provided with a constant supply air temperature and hot water reheat coils in the supply air ductwork for each zone.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	30	MAR-12

Event: Replace Reheat Coils-(150)

Concern:
Some terminal reheat coils have failed and the failure rate can be expected to accelerate as they age.

Recommendation:
Replace the terminal reheat coils.

When this report was prepared there were no mechanical engineering drawings available. An assumption of mechanical systems and and mechanical components was made but the accuracy is not confirmed. In some cases information was taken from the previous report but it is not confirmed.

Type	Year	Cost	Priority
Failure Replacement	2014	$856,000	Medium

Updated: MAR-12

D3050.03 Humidifiers**-1965 and 1968

The indoor air handling units have steam humidifiers for adding humidity to the air systems. The humidifiers have not been used for a long time and are therefore not in service.

Rating	Installed	Design Life	Updated
2 - Poor	1965	25	MAR-12

Event: Repair Steam humidifiers-(12)

Concern:
The humidifiers are not used and need to be repaired and put into service.
Humidity levels are very low when outdoor air temperatures are in the minus values. This is an irritant to the respiratory system and encourages the spread of viruses. Humidity levels should be kept at acceptable levels for the occupants.

Recommendation:
Replace the air handling unit humidifiers.

Type	Year	Cost	Priority
Repair	2012	$90,900	Low

Updated: MAR-12

Event: Replace Humidifiers-(12)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$150,000	Unassigned

Updated: MAR-12

D3050.05.01 Convectors**-1965 and 1968

Force flow convection fan cabinet heaters are used in high heat loss areas such as entrances.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-12

Event: Replace Force Flow Cabinet Heaters-(14)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$47,500	Unassigned

Updated: MAR-12

D3050.05.06 Unit Heaters**-1965 and 1968

Projection unit heaters are used in entrances and for heating combustion air in the boiler room, room 203. Horizontal unit heaters are use in the welding shops, automotives shops and fan rooms.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace Unit Heaters-(36)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$196,900	Unassigned

Updated: MAR-12

D3060.02.01 Electric and Electronic Controls**-1965 and 1968

Line voltage electric thermostats are used for the unit heaters and boiler controls are electric.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace Electric Controls

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$18,600	Unassigned

Updated: MAR-12

D3060.02.02 Pneumatic Controls**

The mechanical building control system actuators are predominantly pneumatic. A single air compressors provides air for the pneumatic instruments. The compressor supplying instrument air is a Devilbiss Model 445 with a double cylinder head. The compressor and 7.46 kW electric motor are mounted on steel base which is mounted on the horizontal air receiver. The electric motor was replaced in 97/10/16. The compressor has a 1995 tag which is probably when it was replaced. An electric refrigerated air dryer dries the air before it is supplied to the pneumatic instruments.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-12

Event: Replace Pneumatic Controls-($5.82/sq.m. gfa)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$147,200	Unassigned

Updated: MAR-12

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

The building has an Andover building automation system. The system is used primarily for monitoring mechanical building systems and for controlling some components.

Rating	Installed	Design Life	Updated
6 - Excellent	2010	20	MAR-12

Event: Replace BMS System

Type	Year	Cost	Priority
Lifecycle Replacement	2030	$107,000	Unassigned

Updated: MAR-12

Event: Replace energy management system

Concern:
The building automation system is obsolete and replacement parts are reportedly difficult to obtain.
Recommendation:
Replace the building automation system.
Consequences of Deferral:
High maintenance and repair costs.

Type	Year	Cost	Priority
Failure Replacement	2011	$104,779	Medium

Updated: AUG-11

D3090 Other Special HVAC Systems and Equipment*

A dust collector is located in the building construction shop, room 216.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D4010 Sprinklers: Fire Protection*

The drama area, rooms 470 and 471are sprinklered.

Rating	Installed	Design Life	Updated
4 - Acceptable	1980	0	MAR-12

D4020 Standpipes*

The building is equipped with a wet standpipe, fire hose cabinets and fire hoses.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D4030.01 Fire Extinguisher, Cabinets and Accessories*

Type ABC chemical fire extinguishers are mounted in recessed wall cabinets and some are surface mounted on walls.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

D4090.04 Dry Chemical Fire Extinguishing Systems (Kitchen Hood)**-1965

The kitchen cooking hood is protected with a dry chemical automatic fire suppression system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-12

Event: Replace Dry Chemical Fire Suppression System-(1)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$15,500	Unassigned

Updated: MAR-12

S5 ELECTRICAL

D5010.01.02 Main Electrical Transformers (Utility Owned)*

The guard rail protected pad mounted transformer is located in the southeast parking lot, adjacent to the east wing of the building, approximately 30m from the Switchgear Room, southeast corner of the Boiler Room.

Rating	Installed	Design Life	Updated
5 - Good	2000	0	MAR-12

Capacity Size	Capacity Unit
1500	kVA

D5010.02 Secondary Electrical Transformers (Interior)** - 1965 Section

The main secondary distribution transformer is a 300kVA, 480V - 120/208V, delta-wye connected, 3 phase, 4 wire, dry type, forced air ventilated, with coil temperature sensors, by Ferranti-Packard.
The other secondary transformers are 480V - 120/208V, delta-wye connected, 3 phase, 4 wire, naturally ventillated, dry type transformers, by Pioneer Electric:
1 - 150kVA, for normal power (from CDP-4D2)
2 - 9kVA, for emergency power (from Panels Y & Z)

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-12

Capacity Size	Capacity Unit
Varies	N/A

Event: Replace Secondary Electrical Transformers (1 - 300kVA, 1 - 150kVA & 2 - 9kVA)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$50,000	Unassigned

Updated: MAR-12

D5010.02 Secondary Electrical Transformers (Interior)** - 1968 Section

The secondary transformers in this section are 480V - 120/208V, delta-wye connected, 3 phase, 4 wire, naturally ventilated, dry type transformers, by ACME Polygon:
- 225kVA from CDP-4D3, and
- 75kVA from CDP-4D4.
There is a 10kVA, 480V - 120/240V, single phase, 3 wire, dry type transformer, also by ACME Polygon.

Rating	Installed	Design Life	Updated
4 - Acceptable	1968	40	MAR-12

Capacity Size	Capacity Unit
Varies	N/A

Event: Replace Dry Type Transformers (1 - 225kVA, 1 - 75kVA & 1 - 10kVA,1Ph)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$28,000	Unassigned

Updated: MAR-12

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

The main switchboard is a 2000A, 277/480V, 3 phase, 4 wire, free-standing with front and rear access, Service and Distribution Switchboard, originally by EPE, modified by Federal Pioneer, consisting of:
-Service entrance section with a 2000A, Air Circuit Breaker (by Merlin Gerin) with solid state overcurrent relays and metering equipment.
-Distribution section with 6 - 800A framed Air Circuit Breakers (by Merlin Gerin) with solid state overcurrent relays, set as follows:
600A to 4D1
800A to 4D2
400A to 300kVA Transformer
600A to Chillers
800A to 4D3
400A to 4D4

Rating	Installed	Design Life	Updated
5 - Good	2000	40	MAR-12

Capacity Size	Capacity Unit
2000A, 277/480V	N/A

Event: Replace Service and Distribution Switchboard

Type	Year	Cost	Priority
Lifecycle Replacement	2040	$275,000	Unassigned

Updated: MAR-12

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1965 Section

The 277/480V, 3 phase, 4 wire panelboards (by Square D) include:
- Distribution Panelboard, 4D1, rated 600A with distribution breakers ranging 50A - 100A
- Distribution Panelboard, 4D2, rated 800A with distribution breakers ranging 50A - 300A
- Branch Circuit Palboards, rated 100A, with various circuit capacities, including 2 emergency power panels.

The 120/208V, 3 phase, 4 wire panelboards (by Square D) includes:
- Distribution Panelboard, 2D1, rated 1000A, with self-contained voltmeters and ammeters and distribution breakers ranging 100A - 225A
- Distribution Panelboard, 2D2, rated 600A, with distribution breakers ranging 70A - 150A.
- Branch Circuit Panelboards, rated 100A or 225A, with various circuit capacities, 30% with contactors, including 2 emergency panels.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Capacity Size	Capacity Unit
Varies	N/A

Aged distribution panel.

Event: Replace Distribution Panelboards (2 - 277/480V & 2 - 120/208V) and Branch Circuit Panelboards (18 - 277/480V & 38 - 120/208V)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$270,000	Unassigned

Updated: MAR-12

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1968 Section

The 277/480V, 3 phase, 4 wire panelboards (by FPE) include:
- Distribution Panelboard, 4D3, rated 800A with distribution breakers ranging 70A - 400A
- Distribution Panelboard, 4D4, rated 400A with 3 - 100A & 1 - 225A distribution breakers.
- Branch Circuit Palboards, rated 225A, with various circuit capacities.

The 120/208V, 3 phase, 4 wire panelboards (by FPE) includes:
- Distribution Panelboard, 2D3, rated 800A, with self-contained Voltmeters and ammeters and distribution breakers ranging 50A - 150A
- Distribution Panelboard, 2D4, rated 600A, with 2 - 50A & 2 - 100A distribution breakers.
- Branch Circuit Panelboards, rated 225A, with various circuit capacities, 50% with contactors.
- Branch Circuit Panelboard, rated 100A, 120/240V, single phase, 3 wire, 12 circuit capacity.

Rating	Installed	Design Life	Updated
4 - Acceptable	1983	30	MAR-12

Capacity Size	Capacity Unit
Varies	N/A

Event: Replace Distribution Panelboards (2 - 277/480V & 2 - 120/208V) and Branch Circuit Panelboards (5 - 277/480V, 15 - 120/208V & 1 - 120/240V 1Ph)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$115,000	Unassigned

Updated: MAR-12

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1982 Renovation - Welding Shop

Branch circuit panelboards (by FPE) in the Welding Shop are:
- 225A, 277/480V, 3 phase, 4 wire panelboard with 6 - 3 pole breakers.
- 225A, 120/208V, 3 phase, 4 wire, 42 circuit capacity panelboards with remote contactors.

Branch circuit panelboards in other areas are Stab-Lok panels, by Square D and FPE, 100A, 120/208V, 3 phase, 4 wire with 24 or 30 circuit capacities.

Rating	Installed	Design Life	Updated
5 - Good	1982	30	MAR-12

Capacity Size	Capacity Unit
Varies	N/A

Event: Replace Branch Circuit Panelboards (1 - 277/480V, 2 - 120/208V w Contactors & 4 - 120/208V Stab-Loks)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$25,000	Unassigned

Updated: MAR-12

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 2011 Renovation - Library

Branch circuit panelboard for the Library Renovation is a double panel (by Square D), located in the Storage Room, rated 225A, 120/208V, 3 phase, 4 wire with 84 circuit capacity.
Branch circuit panelboards in other areas, installed a few years earlier, are Stab-Lok panels (by FPE), rated 100A, 120/208V, 3 phase 4 wire, 24 circuit capacity.

Rating	Installed	Design Life	Updated
6 - Excellent	2011	30	MAR-12

Capacity Size	Capacity Unit
Varies	N/A

Event: Replace Branch Circuit Panelboards (1 - Double Panel & 3 - Stab-Loks)

Type	Year	Cost	Priority
Lifecycle Replacement	2041	$15,000	Unassigned

Updated: MAR-12

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

The Motor Control Centres are 5 section, floor mounted, 480V, 3 phase, custom designed MCC, by Square D:
- The Boiler Room MCC has 25 - combination magnetic starters, 2 - circuit breakers and a full length control terminal section.
- The Gymnasium MCC has 12 - combination magnetic starters, 5 manual starters and a full length control terminal section.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	30	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Motor Control Centres (2 - 5 section MCCs c/w starters and auxiliary equipment)

Concern:
The equipment in the MCCs is obsolete, replacement parts are no longer available.
Recommendation:
Replace MCCs with new starters and auxiliary equipment.
Consequences of Deferral:
Prolonged outage in the event of failure.

Type	Year	Cost	Priority
Failure Replacement	2012	$110,000	High

Updated: MAR-12


AGED SQUARE D MOTOR CONTROL CENTRE

D5010.07.02 Motor Starters and Accessories** - 1965 and 1968

Individual combination magnetic starters and magnetic starters (by Square D) are also used for the control of 480V or 208V 3 phase motors.
Toggle type manual starters with overload relays, with or without pilot lights are used for the control of 120V single phase motors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Magnetic Starters (10) and Manual Starters (18)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$23,000	Unassigned

Updated: MAR-12

D5010.07.02 Motor Starters and Accessories** - 1982 Renovation - Welding Shop

Magnetic contactors (by Allen Bradley) with pushbutton controls serve as manual starters for 208V, 3 phase motors. Manual starters for 120V, single phase motors are the toggle type with overload relays and pilot lights.

Rating	Installed	Design Life	Updated
5 - Good	1982	30	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace 3 Pase Manual Starters (6) and Single phase Manual Starters (4)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$7,000	Unassigned

Updated: MAR-12

D5010.07.03 Variable Frequency Drives**

Variable Frequency Drive for use with the cooling tower is a solid state, PWM Technology Drive by ABB.

Rating	Installed	Design Life	Updated
6 - Excellent	2007	30	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Variable Frequency Drive

Type	Year	Cost	Priority
Lifecycle Replacement	2037	$12,000	Unassigned

Updated: MAR-12

D5020.01 Electrical Branch Wiring*

The wiring method is cables in conduit, concealed in finished areas and surface mounted in utility areas. Recent installations have utilized pac poles to bring wiring from the ceiling to desk levels.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

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

Line voltage switches of both voltages (120V & 277V) are used throughout the School typically for local control. Group switching, mainly 277V lighting, is by low voltage switching with the relay cabinet adjacent to the 277/480V panel.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5020.02.02.01 Interior Incandescent Fixtures*

The lamps of recessed incandescent downlights, track lights and pendant mounted globes are being replaced with compact fluorescent. The low voltage track lights in the Student Career Services Centre will remain, so will those in the newly renovated Library.
Industrial type incandescent fixtures in the Boiler Room will be replaced by fluorescent strip lights similar to those in the work shops.

Rating	Installed	Design Life	Updated
5 - Good	2011	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5020.02.02.02 Interior Fluorescent Fixtures**

The fluorescent lighting system is in the process of converting to the energy efficient type of electronic ballasts and T8 lamps. Fixtures remain to be the 2 X 4 recessed type (including the air-handling type), surface mounted with wraparound acrylic lenses, direct/indirect lights of the more recent installations and valances, and industrial strip lights with reflectors and, in utility rooms, with wireguards.
The gymnasium lights were replaced with the 6-T5 lamp Gymnasium Lights with electronic ballasts and polycarbonate lenses in 2007.

Rating	Installed	Design Life	Updated
6 - Excellent	2011	30	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Fluorescent Fixtures (5000)

Type	Year	Cost	Priority
Lifecycle Replacement	2041	$1,250,000	Unassigned

Updated: MAR-12

D5020.02.03.01 Emergency Lighting Built-in*

Selected fluorescent lighting fixtures - mostly in the public areas - are connected to the emergency power as emergency and night lighting.

Rating	Installed	Design Life	Updated
5 - Good	2011	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5020.02.03.02 Emergency Lighting Battery Packs**

Emergency lighting battery packs with integral lighting heads are provided in areas where built-in emergency lighting is absent - Student Career Services Centre, Theatre Control Booth, Custodian Office, Upper Gymnasium Exercise Rooms and Fan Room in the Gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	20	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Emergency Lighting Battery Packs (6)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$3,000	Unassigned

Updated: MAR-12

D5020.02.03.03 Exit Signs*

The School is in the process of replacing the exit lights with state-of-the-art type exit light with LED lamps. Exit lights are connected to the emergency power system.

Rating	Installed	Design Life	Updated
6 - Excellent	2011	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5020.02.05 Special Purpose Lighting*

High intensity halogen stage lighting system of spot and floodlights, with on-site dimming control, is provided in the Drama Room.

Rating	Installed	Design Life	Updated
5 - Good	1996	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5020.02.10 Theatrical Lighting*

A professional quality theatrical lighting system is present in the Theatre, including stage lights, house lights, dimming racks and control terminal in the control booth.

Rating	Installed	Design Life	Updated
5 - Good	1999	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5020.03.01.03 Exterior Metal Halide Fixtures*

Pendant mounted, open reflector metal halide fixtures are provided in the gazebo. The pole lights in the south parking lots have been converted to metal halide from mercury vapour.

Rating	Installed	Design Life	Updated
5 - Good	2002	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

High pressure sodium wall and under canopy fixtures are provided at exit and entrance locations - to replace the former incandescent soffit lighting. Floodlights were installed, since 2002, on the roof along the perimeter of the building to supplement the parking lot lighting and provide illumination along the footpaths.

Rating	Installed	Design Life	Updated
4 - Acceptable	2010	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

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

The exterior lighting is photoelectric cell and time clock controlled with manual override.

Rating	Installed	Design Life	Updated
4 - Acceptable	1999	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5030.01 Detection and Fire Alarm**

The single stage fire alarm system is an Edwards, EST3 addressable system. The main fire alarm control panel and event printer are located at the entrance of the Receivers Office. The remote alphanumeric annunciator, without a graphic, is located in the corridor of the main entrance. The system uses manual stations, heat and smoke detectors as detection devices and audio/visual (bell/strobe) signaling devices. Duct mounted smoke detection is provided for air handling systems.

Rating	Installed	Design Life	Updated
4 - Acceptable	1999	25	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Fire Alarm System (Control Panel and Field Devices)

Type	Year	Cost	Priority
Lifecycle Replacement	2024	$350,000	Unassigned

Updated: MAR-12

D5030.02.01 Door Answering*

The call button is located at the main entrance and signals via the public address system.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5030.02.02 Intrusion Detection**

The Intrusion Detection System is a MaxSys system by DSC with the control panel located in the Custodian's office. The system uses primarily infrared motion detectors supplemented by door contacts. There are sub-systems within the main School system, each with its own coded keypads. Sub-systems include the Boiler Room, Computer Rooms, Music Room, General Office and the Gymnasium.

Rating	Installed	Design Life	Updated
5 - Good	2006	25	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Intrusion Detection System (Control Panel and Field Devices)

Type	Year	Cost	Priority
Lifecycle Replacement	2031	$75,000	Unassigned

Updated: MAR-12

D5030.02.03 Security Access**

A Keyscan card access system is provided for access to the computer rooms. The control panel for the system is located in the Storage Room in the General Office.

Rating	Installed	Design Life	Updated
5 - Good	2000	25	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Card Access System (Control Panel and Card Reader)

Type	Year	Cost	Priority
Lifecycle Replacement	2025	$3,500	Unassigned

Updated: MAR-12

D5030.02.04 Video Surveillance**

A P/C based video surveillance camera system, with 23 interior and exterior cameras, is provided at the facility. The system, complete with automatic Digital Video Recording (DVR), by Sprite, with 2-16 channel capacity and a 16 screen monitor, is located in the Communications Room behind the General Office.

Rating	Installed	Design Life	Updated
5 - Good	2001	25	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Video Surveillance System (Headend Equipment and 23 cameras)

Type	Year	Cost	Priority
Lifecycle Replacement	2026	$40,000	Unassigned

Updated: MAR-12

D5030.03 Clock and Program Systems*

The clocks are battery powered clocks of various manufacture. The Simplex 2350 Master Time System, located in the Communications Room in the General Office, is now used to control the class change signals only.

Rating	Installed	Design Life	Updated
4 - Acceptable	1990	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5030.04.01 Telephone Systems*

The telephone system is the Meridian system by Nortel. Telephone and intercom services are provided to the Administrative and teaching staff as well as to the classrooms. The telephone exchange is located in a closet in the Custodian's Office.

Rating	Installed	Design Life	Updated
5 - Good	1998	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5030.04.05 Local Area Network Systems*

Switching and server equipment with SuperNet entry, backed up by 3-1500W UPS, is located in the Communications Room in the General Office. There are 3 other switcher locations. Colour coded Category 5e cables are used for horizontal distribution, fibreoptic to switchers. In addition to the computer rooms, data outlets are provided to all teaching and administration staff, Library and every classroom, where Smart Boards are provided. Wireless transmission (WiFi) is available throughout the school.

Rating	Installed	Design Life	Updated
5 - Good	2006	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

D5030.05 Public Address and Music Systems**

The public address system has been upgraded in 1988 to the Rauland Pro105 console, retaining the loudspeakers from the original construction. Interfacing with the telephone system, the Rauland system provides public address throughout the school, and signals for both the class changes and door answering.

Rating	Installed	Design Life	Updated
4 - Acceptable	1988	20	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Public Address System (Headend Equipment and field Devices)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$45,000	Unassigned

Updated: MAR-12

D5030.05 Public Address and Music Systems** - Gymnasium

A professional quality sound reinforcement system is provided for the large Gymnasium for special events with amplifiers by TOA, auxiliary inputs and wireless microphones and speaker cluster.
The small Gymnasium has a portable system with separate wall mounted loudspeakers.

Rating	Installed	Design Life	Updated
6 - Excellent	2010	20	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace Gymnasium Sound Reinforcement Systems (2)

Type	Year	Cost	Priority
Lifecycle Replacement	2030	$60,000	Unassigned

Updated: MAR-12

D5030.06 Television Systems*

A limited cable television distribution system is present in the School with service from Shaw. Large screen television sets are provided at the entrance of the Gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1986	0	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

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

The emergency generator is a natural gas, air cooled engine generator set manufactured by Kohler, rated 40kW (50kVA), 277/480V, 3 phase, 4 wire. The transfer switch is an automatic transfer switch by Square D, comprised of 2 - 3 pole, 100A contactors.
Emergency loads include emergency and exit lighting, some essential communication and control equipment.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	35	MAR-12

Capacity Size	Capacity Unit
N/A	N/A

Event: Replace 40 kW Natural Gas Generator and Transfer Switch.

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$80,000	Unassigned

Updated: MAR-12

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1010.06 Commercial Laundry and Dry Cleaning Equipment*

2 washing machines and 2 dryers in laundry room.

Rating	Installed	Design Life	Updated
4 - Acceptable	1980	0	MAR-12

E1020.03 Theatre and Stage Equipment*

Curtains and risers

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

E1030.01 Vehicle Service Equipment*

Hydraulic vehicle service lifts in the automotive shop.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

E1090.03 Food Service Equipment*

The cafeteria has a complete kitchen facility with a servery area, wood & stainless steel tables, built in ovens, refrigerators, deep fryers, fume-hoods and several smaller appliances. The kitchen facility is leased and maintained by an independent caterer.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

E1090.04 Residential Equipment*

The cooking labs are equipped with refrigerators, stoves, microwaves and several small kitchen appliances.
Several classrooms have refrigerators and staff rooms have refrigerators, stoves and microwaves.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

E1090.07 Athletic, Recreational, and Therapeutic Equipment*

- Electronic scoreboard, basketball backboards in the gymnasiums.
- Full range of exercise equipment in the fitness centre

Rating	Installed	Design Life	Updated
5 - Good	1965	0	MAR-12

E2010.02 Fixed Casework**

Most classrooms are equipped with custom wood shelving units and/or painted cabinets.
Science laboratories are equipped with upper wood cabinets, lower cupboards with plastic laminate counter-tops, wood shelving. Other vocation education areas, such as art, communications and music rooms all have fixed storage wood cabinets.
Glass display cabinets are located in the corridors & entrance area.
The change rooms & washrooms have plywood vanities with a plastic laminate finish.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	35	MAR-12

Event: Repair Casework - (160m2)

Concern:
Plastic laminate counter tops are delaminating and finish on cabinet fronts is worn.

Recommendation:
Repair defective counter tops and refinish other surfaces where required.

Type	Year	Cost	Priority
Repair	2013	$16,000	Medium

Updated: MAR-12

Event: Replace Casework - (950m)

Recommendation:
Cost assumes 750m of lab benches and reception counters and 200m of vanities, lower cabinets with counters and shelf units.

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$700,000	Unassigned

Updated: MAR-12

E2010.05 Fixed Multiple Seating**

Wood auditorium seats the auditorium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1985	35	MAR-12

Event: Replace fixed seating - (270 seats)

Type	Year	Cost	Priority
Lifecycle Replacement	2020	$105,000	Unassigned

Updated: MAR-12

E2020.02.03 Furniture*

Acrylic chairs with steel legs; plywood desks and tables with plastic laminate finish and steel legs; wood work tables. Steel computer desks.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

F1010.02.05 Grandstands and Bleachers**

Bleachers on retractable metal frames in the south gymnasium.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-12

Event: Replace Bleachers - (280 seats)

Type	Year	Cost	Priority
Lifecycle Replacement	2015	$200,000	Unassigned

Updated: MAR-12

F1040.06 Other Special Facilities*

Time-out room off staff room.

Rating	Installed	Design Life	Updated
4 - Acceptable	2000	0	MAR-12

S8 SPECIAL ASSESSMENT

K4010.01 Barrier Free Route: Parking to Entrance*

There is barrier free access from the south-west parking lot to the south building entrance. Signage for a designated handicap parking space is provided.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

K4010.02 Barrier Free Entrances*

A power operated door is provided at the north east exit #C15.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

K4010.03 Barrier Free Interior Circulation*

Barrier free access is provided to all areas, except the mezzanines in the shop areas and at the gymnasium.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	0	MAR-12

Event: Install Barrier Free Lifts - (2)

Concern:
To conform to current standards, barrier free access should be provided to areas used by students such as the mezzanine in the automotive area and the gymnasium mezzanine used for gymnastics.

Recommendation:
Install barrier free lifts for access to mezzanines.

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2013	$60,000	Low

Updated: MAR-12

K4010.04 Barrier Free Washrooms*

Several washrooms have been provided with barrier free elements.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	0	MAR-12

Event: Upgrade Washrooms to Barrier Free Standards. (8 washrooms)

Concern:

The existing designated barrier free washrooms do not comply to current standards with respect to grab bars, height of toilets.

Recommendation:

Upgrade washrooms to meet barrier free standards.

Type	Year	Cost	Priority
Barrier Free Access Upgrade	2012	$9,600	Low

Updated: MAR-12

K4030.01 Asbestos*

An undated list, reported to have been prepared by PHH Environmental in 2000 indicates the presence of asbestos in floor tiles and on mechanical equipment. The list indicates most of the asbestos containing materials need only be removed on a low priority basis. A maintenace record indicates approximately $12,000 was spent on asbestos abatement in 2002 and 2007 however the subject of this expenditure is not known.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

K4030.02 PCBs*

Based on the age of the building, sources of potential PCBs include ballasts in fluorescent light fixtures.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

K4030.04 Mould*

No mould known or reported

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-07

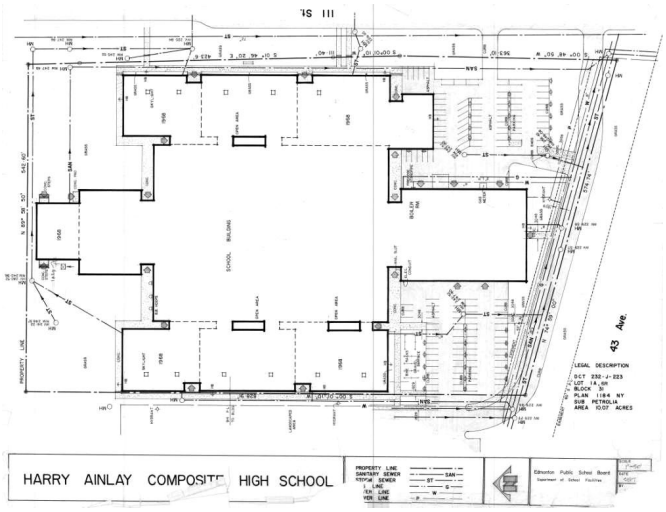
K4030.09 Other Hazardous Materials*

No other hazardous materials known or reported.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-12

K5010.01 Site Documentation*

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	MAR-12

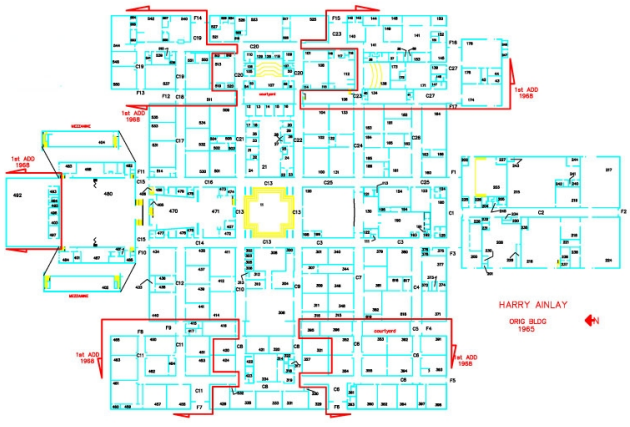


SITE PLAN

K5010.02 Building Documentation*

This evaluation was undertaken on October 29, 2011 (site), November 30 and December 1, 2011 (building) by J. Henoch of HENOCH ARCHITECT with sub consultants L. Riess, P.Eng. (mechanical) and B. Cheung, P. Eng. (electrical) accompanied by the building custodian and personnel from Edmonton Public School Board.
At the time of the evaluation original construction drawings were not available (being digitized) therefore some building construction has not been verified and where costs depend on an estimate of quantity of materials, these numbers should be considered only "order of magnitude".
The extent of the roof evaluation was limited because of the presence of snow at the time of the inspection.
Where referenced, room numbers are those provided by Facilities Services, Edmonton Public Schools.

Rating	Installed	Design Life	Updated
4 - Acceptable	0	0	MAR-12



FLOOR PLAN